



**MAYO CLINIC
LABORATORIES**

Rochester 2025 Test Catalog

Laboratory Reference Edition

Sorted By Test Name

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Definition of Specimen "Minimum Volume"

Defines the amount of specimen required to perform an assay once, including instrument and container dead space. Submitting the minimum specimen volume makes it impossible to repeat the test or perform confirmatory or perform reflex testing. In some situations, a minimum specimen volume may result in a QNS (quantity not sufficient) result, requiring a second specimen to be collected.

Quality Framework Policies

Mayo Clinic Laboratories

PURPOSE

Mayo Clinic Laboratories is a reference laboratory operating within Mayo Clinic's Department of Laboratory Medicine and Pathology (DLMP). Mayo Clinic Laboratories specializes in providing esoteric laboratory testing services to customers across the United States and around the world. This document provides policy guidance on an expanse of topics for internal and external customers.

POLICY STATEMENTS

Animal Specimens

Mayo Clinic Laboratories does not accept animal specimens for laboratory testing.

Business Continuity and Contingency Planning

In the event of a local, regional, or national disaster, Mayo Clinic and Mayo Clinic Laboratories performing sites have comprehensive contingency plans in place in each location to ensure that the impact on laboratory practice is proactively addressed. With test standardization between our performing sites and medical practice locations throughout the country, we have worked to ensure that patient care will not be compromised.

Cancellation of Tests

Cancellations received prior to test setup will be honored at no charge. Requests received following test setup cannot be honored. A report will be issued automatically and charged appropriately.

Chain-of-Custody

Chain-of-custody, a record of disposition of a specimen to document the individuals who collected it, handled it, and performed the analysis, is necessary when results are to be used in a court of law. Mayo Clinic Laboratories has developed packaging and shipping materials that satisfy legal requirements for chain-of-custody. This service is only offered for drug testing.

Compliance Policies

Mayo Clinic Laboratories is committed to compliance with applicable laws and regulations such as the Clinical Laboratory Improvement Amendments (CLIA). Regulatory agencies that oversee our compliance include, but are not limited to, the Centers for Medicare and Medicaid Services (CMS), the Food and Drug Administration (FDA), and the Department of Transportation (DOT). Mayo Clinic Laboratories develops, implements, and maintains policies, processes, and procedures throughout our organization which are designed to meet relevant requirements. We expect clients utilizing our services will ensure their compliance with patient confidentiality, diagnosis coding, anti-kick back statutes, professional courtesy, CPT-4 coding, CLIA-approved proficiency testing, and other similar regulatory requirements. Also see "Accreditation and Licensure," "HIPAA Compliance," and "Reportable Disease."

Confidentiality of Results

Mayo Clinic Laboratories is committed to maintaining confidentiality of patient information. To ensure Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the College of American Pathologists (CAP) compliance for appropriate release of patient results, Mayo Clinic Laboratories has adopted the following policies:

Phone Inquiry Policy—One of the following unique identifiers will be required:

- Mayo Clinic Laboratories order ID number for specimen; **or**
- Client account number (assigned by Mayo Clinic Laboratories) along with patient name; **or**

- Client accession ID number interfaced to Mayo Clinic Laboratories; **or**
- Identification by individual that he or she is, in fact, “referring physician” identified on requisition form by Mayo Clinic Laboratories client.

Mayo Clinic Laboratories is authorized to release results to ordering physicians or other health care providers responsible for the individual patient’s care. Patients or a patients’ personal representative requesting results can do so via the following link: <https://www.mayocliniclabs.com/customer-service/patient-reports.html>.

Critical Values

The “Critical Values Policy” of the Department of Laboratory Medicine and Pathology (DLMP), Mayo Clinic, Rochester, Minnesota is described below. These values apply to Mayo Clinic patients as well as external clients of Mayo Clinic Laboratories. Clients should provide “Critical Value” contact information to Mayo Laboratory Inquiry (MLI) to facilitate call-backs. To standardize this process, a customized form is available at [mayocliniclabs.com](https://www.mayocliniclabs.com).

Definition of Critical Value—A critical value is defined as a value that represents a pathophysiological state at such variance with normal (expected values) as to be life-threatening unless something is done promptly and for which some corrective action could be taken.

Abnormals are Not Considered Critical Values— Most laboratory tests have established reference ranges, which represent results that are typically seen in a group of healthy individuals. While results outside these reference ranges may be considered abnormal, “abnormal” results and “critical values” are not synonymous. Analytes on the DLMP Critical Values List represent a subgroup of tests that meet the above definition.

Action Taken when a Result is Obtained that Exceeds the Limit Defined by the DLMP Critical Values List—In addition to the normal results reporting (e.g., fax, interface), Mayo Clinic Laboratories’ staff telephone the ordering physician or the client-provided contact number within 60 minutes following laboratory release of the critical test result(s). In the event that contact is not made within the 60-minute period, we continue to telephone until the designated party is reached and the result is conveyed in compliance and adherence to the CAP.

Semi-Urgent Results— Semi-Urgent Results are defined by Mayo Clinic as those infectious disease-related results that are needed promptly to avoid potentially serious health consequences for the patient (or in the case of contagious diseases, potentially serious health consequences to other persons exposed to the patient) if not acknowledged and/or treated by the physician. While not included on the Critical Values List, this information is deemed important to patient care in compliance and adherence to the CAP.

To complement Mayo Clinic Laboratories normal reporting mechanisms (e.g., fax, interface), Mayo Clinic Laboratories’ staff will telephone results identified as semi-urgent findings to the ordering facility within 2 hours following laboratory release of the result(s). In the event that contact is not made within the 2-hour period, we will continue to telephone until the responsible party is reached and the result is conveyed. In addition, in most instances, you will see the comment **SIGNIFICANT RESULT** appear on the final report.

For information regarding the Mayo Clinic Critical Value List, contact Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 or visit [mayocliniclabs.com](https://www.mayocliniclabs.com).

Disclosures of Results

Under federal regulations, we are only authorized to release results to ordering physicians or other health care providers responsible for the individual patient's care. Third parties requesting results are directed to the ordering facility.

Mayo Clinic Laboratories is authorized to release results to ordering physicians or other health care providers responsible for the individual patient's care. Patients or a patients' personal representative requesting results can do so via the following link: <https://www.mayocliniclabs.com/customer-service/patient-reports.html>.

Environmental Specimens

Mayo Clinic Laboratories does not accept environmental specimens for laboratory testing.

Extracted Specimens

Mayo Clinic Laboratories will accept extracted nucleic acid for clinical testing, provided it is an acceptable specimen source for the ordered test **only** as listed in the Laboratory Test Catalog, and if the isolation was performed in a CLIA-certified laboratory or a laboratory meeting equivalent requirements as determined by the CAP and/or the CMS.

Framework for Quality

"Framework for Quality" is the foundation for the development and implementation of the quality program for Mayo Clinic Laboratories. Our framework builds upon the concepts of quality control and quality assurance providing an opportunity to deliver consistent, high-quality and cost-effective service to our clients. In addition, our quality program enhances our ability to meet and exceed the requirements of regulatory/ accreditation agencies and provide quality service to our customers.

A core principle at Mayo Clinic Laboratories is the continuous improvement of all processes and services that support the care of patients. Our continuous improvement process focuses on meeting the needs of you, our client, to help you serve your patients.

The Mayo Clinic Department of Laboratory Medicine and Pathology Quality Management System (DLMP QMS) is composed of twelve (12) "Quality System Essentials", or QSEs. The policies, processes, and procedures associated with the QSEs can be applied to all operations in the path of workflow (e.g., pre-analytical, analytical, and post-analytical). Performance is measured through active monitoring of activities in the path of workflow and comparing performance through benchmarking internal and external quality indicators and proficiency testing. The DLMP QMS is the basis for all that we do and is integrated into our daily work processes.

Data generated by quality indicators drives process improvement initiatives to seek resolutions to system-wide problems. Mayo Clinic Laboratories utilizes Failure Modes and Effects Analysis (FMEA), Plan Do Study Act (PDSA), LEAN, Root Cause Analysis, and Six Sigma quality improvement tools to determine appropriate remedial, corrective, and preventive actions.

Quality Indicators—Mayo Clinic Laboratories produces hundreds of Key Performance Indicators (KPI) for our business and operational areas, and we review them regularly to ensure that we continue to maintain our high standards. A sampling of these metrics includes:

- Pre-analytic performance indicators
 - Incoming defects*
 - Lost specimens*
 - MayoTrac™ compliance
 - On-time delivery
 - Specimen identification*

- Analytic performance indicators
 - Proficiency testing
 - Quality control
 - Turnaround (analytic) times
 - Quantity-not-sufficient (QNS) specimens*
- Post-analytic performance indicators
 - Revised reports*
 - Total Critical Results Notification Reports*
- Operational performance indicators
 - Incoming call resolution
 - Incoming call abandon rate
 - Call completion rate
 - Call in-queue monitoring
 - Customer complaints
 - Customer satisfaction surveys

*Measured using Six Sigma defects per million (dpm) method.

The system provides a planned, systematic program for defining, implementing, monitoring, and evaluating our services.

HIPAA Compliance

Mayo Clinic Laboratories is fully committed to compliance with all privacy, security, and electronic transaction code requirements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). All services provided by Mayo Clinic Laboratories that involve joint efforts will be done in a manner which enables our clients to be HIPAA and the College of American Pathologists (CAP) compliant.

Informed Consent Certification

Submission of an order for any tests contained in this catalog constitutes certification to Mayo Clinic Laboratories by ordering physician that: (1) ordering physician has obtained “Informed Consent” of subject patient as required by any applicable state or federal laws with respect to each test ordered; and (2) ordering physician has obtained from subject patient authorization permitting Mayo Clinic Laboratories to report results of each test ordered directly to ordering physician.

On occasion, we forward a specimen to an outside reference laboratory. The laws of the state where the reference laboratory is located may require written informed consent for certain tests. Mayo Clinic Laboratories will request that ordering physician pursue and provide such consent. Test results may be delayed or denied if consent is not provided.

Non-Biologic Specimens

Due to the inherent exposure risk of non-biologic specimens, their containers, and the implied relationship to criminal, forensic, and medico-legal cases, Mayo Clinic Laboratories does not accept nor refer non-biologic specimen types. Example specimens include unknown solids and liquids in the forms of pills, powder, intravenous fluids, or syringe contents.

Patient Safety Goals

The Joint Commission National Patient Safety Goal #1 is to improve the accuracy of patient identification by using at least two (2) patient identifiers when providing care, treatment, or services.

Mayo Clinic Laboratories uses multiple patient identifiers to verify the correct patient is matched with the correct specimen and the correct order for the testing services. As a specimen is received at Mayo Clinic Laboratories, the client accession number, patient first and last name, and patient age and date of birth are verified by comparing the labels on the specimen tube or container with the electronic order and any paperwork (batch sheet or form) which may accompany the specimen to be tested. When discrepancies are identified, Mayo Laboratory Inquiry will call the client to verify discrepant information to assure Mayo Clinic Laboratories is performing the correct testing for the correct patient. When insufficient or inconsistent identification is submitted, Mayo Clinic Laboratories will recommend that a new specimen be obtained, if feasible. In cases where an irreplaceable specimen is mislabeled, additional conditions must be met prior to testing.

In addition, Anatomic Pathology consultation services require the Client Pathology Report. The pathology report is used to match the patient name, patient age and/or date of birth, and pathology case number. Since tissue blocks and slides have insufficient space to print the patient name on the block, the pathology report provides Mayo Clinic Laboratories another mechanism to confirm the patient identification with the client order and labels on tissue blocks and slides.

Parallel Testing (also called Comparison Testing)

Parallel testing may be appropriate in some cases to re-establish patient baseline results when converting to a new methodology at Mayo Clinic Laboratories. Contact your Hospital Account Executive at 800-533-1710 or 507-266-5700 for further information. Specific planning is required prior to implementation.

Proficiency Testing

Mayo Clinic Laboratories are College of American Pathologists (CAP)-accredited, CLIA-licensed laboratories that voluntarily participate in many diverse external and internal proficiency testing programs. It is Mayo Clinic Laboratories' expectation that clients utilizing our services will adhere to CLIA requirements for proficiency testing (42 CFR 493.801). This includes a prohibition of discussion about proficiency testing samples or results and sending of proficiency testing materials to Mayo Clinic Laboratories during the active survey period.

Mayo Clinic Laboratories' proficiency testing includes participation in CMS-approved programs. Mayo Clinic Laboratories also performs alternative assessment using independent state, national, and international programs when proficiency testing is not available. Mayo Clinic Laboratories also conducts comparability studies to ensure the accuracy and reliability of patient testing, when necessary. We comply with the regulations set forth in Clinical Laboratory Improvement Amendments (CLIA-88), the Occupational Safety and Health Administration (OSHA), or the Centers for Medicare & Medicaid Services (CMS).

It is Mayo Clinic Laboratories' expectation that clients utilizing our services will adhere to CLIA requirements for proficiency testing including a prohibition on discussion about samples or results and sharing of proficiency testing materials with Mayo Clinic Laboratories during the active survey period.

Radioactive Specimens

Specimens from patients receiving radioactive tracers or material should be labeled as such. All incoming shipments arriving at Mayo Clinic Laboratories are routed through a detection process in receiving to determine if the samples have any levels of radioactivity. If radioactive levels are detected, the samples are handled via an internal process that assures we do not impact patient care and the safety of our staff. This radioactivity may invalidate the results of radioimmunoassay (RIA).

Record Retention

Mayo Clinic Laboratories retains all test requisitions and patient test results at a minimum for the retention period required to comply with and adhere to the CAP, CLIA and New York State (NYS) requirements. A copy of the original report can be reconstructed including reference ranges, interpretive comments, flags, and footnotes with the source system as the Department of Laboratory Medicine's laboratory information system.

Referral of Tests to Another Laboratory

Mayo Clinic Laboratories forwards tests to other laboratories as a service to its clients. This service should in no way represent an endorsement of such test or referral laboratory or warrant any specific performance for such test.

We have established collaborative relationships with more than 140 laboratories within the United States. Outside vendors are selected on the basis of certifications, service, turnaround time, methodology, reference range and price. Laboratory qualifications are reviewed by our internal operations and quality teams. A recommendation is forwarded to our medical director for final consideration as to compliance with and adherence to College of American Pathologists (CAP) Laboratory General Checklist (GEN.41350). Once selected, each laboratory is monitored to ensure that turnaround time is prompt and certain customer service criteria are met. The referral laboratories must requalify every two years, or as their test offerings change.

Reflex Testing

Mayo Clinic Laboratories identifies tests that reflex when medically appropriate. In many cases, Mayo Clinic Laboratories offers components of reflex tests individually as well as together. Clients should familiarize themselves with the test offerings and make a decision whether to order a reflex test or an individual component and only order test offerings based on medical necessity. Clients, who order a reflex test, can request to receive an “Additional Testing Notification Report” which indicates the additional testing that has been performed. This report will be faxed to the client. Clients who wish to receive the “Additional Testing Notification Report” should contact their Hospital Account Executive or Regional Service Representative. Do not send reflex testing on proficiency testing samples to Mayo Clinic Laboratories before the Proficiency Testing submission deadline.

Reportable Disease

Mayo Clinic Laboratories, in compliance with and adherence to the College of American Pathologists (CAP) Laboratory General Checklist (GEN. 41316) strives to comply with laboratory reporting requirements for each state health department regarding reportable disease conditions. We report by mail, fax, and/or electronically, depending upon the specific state health department regulations. Clients shall be responsible for compliance with any state specific statutes concerning reportable conditions, including, but not limited to, birth defects registries or chromosomal abnormality registries. This may also include providing patient address/demographic information. Mayo Clinic Laboratories’ reporting does not replace the client or physician responsibility to report as per specific state statutes.

Request for Physician Name and Number

Mayo Clinic Laboratories endeavors to provide high quality, timely results so patients are able to receive appropriate care as quickly as possible. While providing esoteric reference testing, there are times when we need to contact the ordering physician directly. The following are 2 examples:

- When necessary to the performance of a test, the ordering physician’s name and phone number are requested as part of “Specimen Required.” This information is needed to allow our physicians to make timely consultations or seek clarification of requested services. If this information is not provided at the time of specimen receipt, we will call you to obtain the information. By providing this information up front, delays in patient care are avoided.
- In some situations, additional information from ordering physician is necessary to clarify or interpret a test result. At that time, Mayo Clinic Laboratories will request physician’s name and phone number so that one of our staff can consult with the physician.

We appreciate your rapid assistance in supplying us with the ordering physician’s name and phone number when we are required to call. Working together, we can provide your patients with the highest quality testing services in the shortest possible time.

Special Handling

Mayo Clinic Laboratories serves as a reference laboratory for clients around the country and world. Our test information, including days and time assays are performed as well as analytic turnaround time, is included under each test listing in the Test Catalog on mayocliniclabs.com. Unique circumstances may arise with a patient resulting in a physician request that the specimen or results receive special handling. There are several options available. These options can only be initiated by contacting Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 and providing patient demographic information.

There is a nominal charge associated with any special handling.

- **Hold:** If you would like to send us a specimen and hold that specimen for testing pending initial test results performed at your facility, please call Mayo Laboratory Inquiry. We will initiate a hold and stabilize the specimen until we hear from you.
- **Expedite:** If you would like us to expedite the specimen to the performing laboratory, you can call Mayo Laboratory Inquiry and request that your specimen be expedited. Once the shipment is received in our receiving area, we will deliver the specimen to the performing laboratory for the next scheduled analytic run. We will not set up a special run to accommodate an expedite request.
- **STAT:** In rare circumstances, STAT testing from the reference laboratory may be required for patients who need immediate treatment. These cases typically necessitate a special analytic run to turn results around as quickly as possible. To arrange STAT testing, please have your pathologist, physician, or laboratory director call Mayo Laboratory Inquiry. He/she will be connected with one of our medical directors to consult about the patient's case. Once mutually agreed upon that there is a need for a STAT, arrangements will be made to assign resources to run the testing on a STAT basis when the specimen is received.

Specimen Identification Policy

Mayo Clinic Laboratories uses a minimum of two patient-specific identifiers to verify the correct patient is matched with the correct specimen and the correct order for testing services. As a specimen is received at Mayo Clinic Laboratories, the patient's first and last name, date of birth, medical record number, and client accession number are verified by comparing the labels on the specimen tube or container with the electronic order and any paperwork (batch sheet or form) that may accompany the specimen to be tested. When discrepancies are identified, the Mayo Laboratory Inquiry Call Center will telephone the client to verify discrepant information to assure Mayo Clinic Laboratories is performing the correct testing for the correct patient. Specimens are considered mislabeled when there is a mismatch between the person-specific identifiers on the specimen and information accompanying the specimen (e.g. computer system, requisition form, additional paperwork). When insufficient or inconsistent identification is submitted, Mayo Clinic Laboratories will recommend that a new specimen be obtained.

In addition, Anatomic Pathology consultation services require the client pathology report. The pathology report is used to match patient name, patient age and/or date of birth and pathology case number. Since tissue blocks and slides have insufficient space to print the patient name on the block, the pathology report provides Mayo Clinic Laboratories another mechanism to confirm the patient identification with the client order and labels on tissue blocks and slides.

Specimen Rejection

All tests are unique in their testing requirements. To avoid specimen rejection or delayed turnaround times, please check the "Specimen Required" field within each test. You will be notified of rejected or problem specimens upon receipt.

Please review the following conditions prior to submitting a specimen to Mayo Clinic Laboratories:

- Full 24 hours for timed urine collection
- pH of urine
- Lack of hemolysis/lipemia

- Specimen type (plasma, serum, whole blood, etc.)
- Specimen volume
- Patient information requested
- Proper identification of patient/specimen
- Specimen container (metal-free, separation gel, appropriate preservative, etc.)
- Transport medium
- Temperature (ambient, frozen, refrigerated)

Specimen Volume

The “Specimen Required” section of each test includes the preferred volume, but the “Specimen Minimum Volume” is also provided. Preferred volume has been established to optimize testing and allows the laboratory to quickly process specimen containers, present containers to instruments, perform test, and repeat test, if necessary. Many of our testing processes are fully automated; and as a result, this volume allows hands-free testing and our quickest turnaround time (TAT). Since patient values are frequently abnormal, repeat testing, dilutions, or other specimen manipulations often are required to obtain a reliable, reportable result. Our preferred specimen requirements allow expeditious testing and reporting.

When venipuncture is technically difficult or the patient is at risk of complications from blood loss (e.g., pediatric or intensive care patients), smaller volumes may be necessary. Specimen minimum volume is the amount of sample necessary to provide a clinically relevant result as determined by the Testing Laboratory.

When patient conditions do not mandate reduced collection volumes, we ask that our clients submit preferred volume to facilitate rapid, cost-effective, reliable test results. Submitting less than preferred volume may negatively impact quality of care by slowing TAT, increasing the hands-on personnel time (and therefore cost) required to perform test.

Mayo Clinic Laboratories makes every possible effort to successfully test your patient’s specimen. If you have concerns about submitting a specimen for testing, please call Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700. Our staff will discuss the test and specimen you have available. While in some cases specimens are inadequate for desired test, in other cases, testing can be performed using alternative techniques.

Supplies

Shipping boxes, specimen vials, special specimen collection containers, and request forms are supplied without charge. Supplies can be requested using one of the following methods: use the online ordering functionality available at mayocliniclabs.com/supplies or call Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700.

Test Classifications

Analytical tests offered by Mayo Clinic Laboratories are classified according to the FDA labeling of the test kit or reagents and their usage. Where appropriate, analytical test listings contain a statement regarding these classifications, test development, and performance characteristics.

Test Development Process

Mayo Clinic Laboratories is dedicated to providing clinically useful, cost-effective testing strategies for patient care. Development, validation and implementation of new and improved laboratory methods are major components of that commitment. We have launched a standardized test life cycle process (TLCP) which includes seven specific phases of the test life cycle process (test design, development, verification, validation, launch, maintenance and test retirement). This process streamlines all development operations and activities and aligns with FDA test development definitions. Assays utilized at Mayo Clinic, whether laboratory developed or FDA cleared/approved/exempt, undergo verification and validation before the test becomes available for clinical use, including (as applicable):

- Accuracy
- Precision
- Sensitivity

- Specificity and interferences
- Reportable range
- Linearity
- Specimen stability
- Specimen type comparisons
- Urine preservative stability studies
- Comparative evaluation
- Reference values*
- Workload recording
- Limitations of the assay
- Clinical utility and interpretation (written by Mayo Clinic medical experts, available electronically - MayoAccess™)

*Reference values provided by Mayo Clinic Laboratories are derived from studies performed in our laboratories. If reference values are obtained from other sources, the source is indicated in the "Reference Values" field.

Test Result Call-Backs

Results will be phoned to a client when requested from the client (either on Mayo Clinic Laboratories request form or from a phone call to Mayo Clinic Laboratories from the client). See also Critical Values.

Time-Sensitive Specimens

Please contact Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 prior to sending a specimen for testing of a time-sensitive nature. Relay the following information: facility name, account number, patient name and/or Mayo Clinic Laboratories accession number, shipping information (i.e., courier service, FedEx®, etc.), date to be sent, and test to be performed. Place specimen in a separate Mayo Clinic Laboratories temperature appropriate bag. Please write "Expedite" in large print on outside of bag.

Turnaround Time (TAT)

Mayo Clinic Laboratories extensive test menu reflects the needs of our own health care practice. We are committed to providing the most expedient TAT possible to improve diagnosis and treatment. We consider laboratory services as part of the patient care continuum wherein the needs of the patient are paramount. In that context, we strive to fulfill our service obligations. Our history of service and our quality metrics will document our ability to deliver on all areas of service including TAT.

Mayo Clinic Laboratories defines TAT as the analytical test time (the time from which a specimen is received at the testing location to time of result) required and is listed for each test as "Report Available". TAT is monitored continuously by each performing laboratory site within the Mayo Clinic Department of Laboratory Medicine and Pathology. For the most up-to-date information on TAT for individual tests, please visit us at mayocliniclabs.com or contact Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700.

Unlisted Tests

Mayo Clinic Laboratories does not list all available test offerings in the catalog. New procedures are developed throughout the year; therefore, some tests are not listed in this catalog. Although we do not usually accept referred tests of a more routine type, special arrangements may be made to provide your laboratory with temporary support during times of special need such as sustained instrumentation failure. For information about unlisted tests, please call Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700.

POLICY NOTE:

Review MCL Framework for Quality document simulatiously with this policy:
<https://www.mayocliniclabs.com/it-mmfiles/quality-and-compliance.pdf>.

DHVD
8822

1,25-Dihydroxyvitamin D, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred for 4 hours but not required. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82652

SFUNG
604094

1,3-Beta-D-Glucan (Fungitell), Serum

Specimen Requirements: Container/Tube: Serum gel (red top tube is not acceptable) Specimen Volume: 1 mL Collection Instructions: 1. Avoid exposure of specimen to atmosphere to prevent environmental contamination of the sample. 2. Centrifuge and send entire specimen in original collection tube. Do not aliquot or open tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	SERUM GEL TUBE
	Frozen	30 days	SERUM GEL TUBE

CPT Code Information: 87449

DOCS
46919

11-Deoxycorticosterone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Morning (8 a.m.) specimen is preferred. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days
	Ambient	7 days

CPT Code Information: 82633

DCORT
46920

11-Deoxycortisol, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Morning (8 a.m.) specimen is preferred. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82634

F11DX
75673

11-Desoxycortisol

Specimen Requirements: Collection Container/Tube: Red-Top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Serum must be separated from cells within 45 minutes of venipuncture. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.2 mL (Note: Minimum volume does not allow for repeat analysis)

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code Information: 82634

THCMX
62744

11-nor-Delta-9-Tetrahydrocannabinol-9-Carboxylic Acid (Carboxy-THC) Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain-of-Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: Specimens that arrive with a broken seal do not meet the chain of custody requirements.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Refrigerated	21 days
	Ambient	14 days

CPT Code Information: 80349; G0480 (if appropriate);

THCM
84284

11-nor-Delta-9-Tetrahydrocannabinol-9-Carboxylic Acid (Carboxy-THC) Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Refrigerated	21 days
	Ambient	14 days

CPT Code Information: G0480; 80349 (if appropriate for select payers);

17OHP
81151

17-Hydroxypregnenolone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Refrigerated	28 days

CPT Code Information: 84143

OHPG
9231

17-Hydroxyprogesterone, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 83498

FHC18
75675

18-Hydroxycorticosterone, Serum

Specimen Requirements: Preferred: Red top Acceptable: SST Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Serum must be separated from cells within 45 minutes of venipuncture. Centrifuge and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL (NOTE: Minimum volume does not allow for repeat analysis.)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Ambient	24 hours
	Refrigerated	24 hours

CPT Code Information: 82542

GLIOF
35272

1p/19q Deletion in Gliomas, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Six consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Four consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291- DNA probe, each (first probe set), Interpretation and report; 88271x2- DNA probe, each; each additional probe set (if appropriate); 88271x1- DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2- DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3- DNA probe, each; coverage for sets containing 5

probes (if appropriate); 88274- w/modifier 52- Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274- Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate);

JGLIF
615002

1p/19q Glioma Deletions, FISH, Tissue

Specimen Requirements:

Specimen Minimum Volume: Tissue slides: 2 consecutive unstained and 1 hematoxylin and eosin stained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred) Refrigerated	

CPT Code Information: 88377 x 2 (2 probe sets)

BPGMM
63208

2,3-Bisphosphoglycerate Mutase, Full Gene Sequencing Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Patient Preparation: Bone marrow transplants preclude accurate germline and genetic variant analysis. Inform the laboratory if this patient has undergone bone marrow transplantation. On rare occasions transfusion of blood products can preclude accurate genetic variant analysis, and results should be interpreted with caution if performed after recent transfusion (within 4 months). Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD), green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in the original tube. Do not aliquot Specimen Stability Information: Ambient 14 days (preferred)/Refrigerate 30 days Specimen Type: Extracted DNA from whole blood Container/Tube: 1.5 to 2 mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Provide volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL; Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

23BPT
606357

2,3-Dinor 11 Beta-Prostaglandin F2 Alpha, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Patients taking aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs) may have decreased concentrations of prostaglandin F2 alpha. If medically feasible, for 2 weeks before specimen collection, patient should not take aspirin and for 72 hours before specimen collection, patient should not take NSAIDs. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine refrigerate for 24 hours. 2. No preservative preferred. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	8 hours

CPT Code Information: 84150

23BPR
606356

2,3-Dinor 11 Beta-Prostaglandin F2 Alpha, Random, Urine

Specimen Requirements: Patient Preparation: Patients taking aspirin or nonsteroidal anti-inflammatory drugs (NSAIDs) may have decreased concentrations of prostaglandin F2 alpha. If medically feasible, for 2 weeks before specimen collection, patient should not take aspirin and for 72 hours before specimen collection, patient should not take NSAIDs. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	8 hours

CPT Code Information: 84150; 82570;

2HGA
614603

2-Hydroxyglutaric Acid Chiral Analysis, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Tube, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If the collection volume appears insufficient, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for test. Collection Instructions: 1. Collect a random urine specimen (first morning void preferred) 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	416 days
	Ambient	14 days
	Refrigerated	14 days

CPT Code Information: 83921 x 2

2OHGP
608030

2-Hydroxyglutaric Aciduria Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information:

Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spots, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

21DOC
89477

21-Deoxycortisol, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Morning (8 a.m.) specimen is preferred. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days
	Ambient	14 days

CPT Code Information: 82542

21OH
607788

21-Hydroxylase Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel

Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial to remove from cells or gel prior to shipping.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 83516

CYPZ
37445

21-Hydroxylase Gene, CYP21A2, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days (preferred)/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen, 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 µL at a concentration of 75 ng/µL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report. Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Preferred: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated

(preferred) <24 hours/Ambient <24 hours Additional information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Prenatal cultured fibroblasts (eg, products of conception), amniocytes, or other confluent cultured cells. This does not include cultured chorionic villi. Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid or CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405-CYP21A2 (cytochrome P450, family 21, subfamily A, polypeptide2) (eg, steroid 21-hydroxylase isoform, congenital adrenal hyperplasia), full gene sequence ; 81402-CYP21A2 (cytochrome P450, family 21, subfamily A, polypeptide2) (eg, congenital adrenal hyperplasia, 21-hydroxylase deficiency), common variants (eg, IVS2-13G, P30L, I172N, exon 6 mutation cluster [I235N, V236E, M238K], V281L, L307FfsX6, Q318X, R356W, P453S, G110VfsX21, 30-kb deletion variant); 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline

[eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

DD22F
35246

22q11.2 Deletion/Duplication, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 4 mL Collection Instructions 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Other anticoagulants are not recommended and are harmful to the viability of the cells. 4. Cord blood is acceptable Additional Information: 1. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 2. Specimen cannot be frozen. Acceptable: Specimen Type: Fixed cell pellet Container/Tube: Sterile container with a 3:1 fixative (methanol:glacial acetic acid) Specimen Volume: Entire specimen Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 to 25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 12 mL. 4. If ordering with CHRAF / Chromosome Analysis, Amniotic Fluid, submit a minimum of 12 mL. 5. If ordering with both CMAP and CHRAF, submit a minimum of 26 mL. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 4. Specimen cannot be frozen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 to 25 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (such as CVS Media (RPMI) and Small Dish (T095)). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. 4. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 12 mg. 5. If ordering with CHRCV / Chromosome Analysis, Chorionic Villus Sampling, submit a minimum of 12 mg. 6. If ordering with both CMAP and CHRCV, then submit a minimum of 26 mg. Additional Information: 1. Label each container with the specimen type, patient's name, and laboratory control number. 2. Specimen cannot be frozen. Specimen Type: Products of conception or stillbirth Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, sterile RPMI transport media, or normal saline Specimen Volume: 1 cm³ of placenta (including 20 mg of chorionic villi) and a 1 cm³ biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Do not handle specimen with hands. 2. If a fetus cannot be specifically identified, collect 50-mg villus material or tissue that appears to be of fetal origin. Additional Information: 1. Do not send the entire fetus. 2. If a fetus is sent, please provide a parental release form or complete the Final Disposition of Fetal/Stillborn Remains form and send it with the fetus. (A copy of this form can be found in Special Instructions.) Please note that completion of the form requires a parent's signature. 3. Specimen cannot be frozen. 4. While fresher specimens prepared as described above are preferred, we can attempt analysis on specimens that have been in less-than-ideal conditions. 5. Label each container with the specimen type, patient's name, and laboratory control number. Specimen Type: Autopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, sterile RPMI transport media, or normal saline. Specimen Volume: 1 cm³ biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Additional Information: 1. Label each container with the specimen type, patient's name, and laboratory control number. 2. Specimen cannot be frozen. Specimen Type: Skin biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, sterile RPMI transport media, or normal saline. Specimen Volume: 1 cm³ biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an

antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Additional Information: 1. Label each container with the specimen type, patient's name, and laboratory control number. 2. Specimen cannot be frozen.

Specimen Minimum Volume: Amniotic fluid: 5 mL; Autopsy, skin biopsy: 4 mm; Whole blood: 2 mL; Chorionic villi: 5 mg; Fixed cell pellet: 1 pellet; Products of conception: 1 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

25HDN
83670

25-Hydroxyvitamin D2 and D3, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of specimen collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82306

2425D
63416

25-Hydroxyvitamin D:24,25-Dihydroxyvitamin D Ratio, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82306; 82542;

HMGCR
607414

3-Hydroxy-3-Methylglutaryl Coenzyme-A (HMG-CoA) Reductase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82397

3MT
65157

3-Methoxytyramine, 24 Hour, Urine

Specimen Requirements:

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 82542

3MGAP
608034

3-Methylglutaconic Aciduria Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spots, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

F5NUL 57285

5'Nucleotidase

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: SST or Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a serum gel tube(s), plain red-top tube(s) is acceptable. 2. Centrifuge and send 1 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	4 hours

CPT Code Information: 83915

FLUC 82741

5-Flucytosine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum for a peak level should be collected 1 to 2 hours after oral dose, 1 hour after intramuscular dose, or 30 minutes after intravenous infusion. Trough specimens should be collected immediately prior to next scheduled dose. 2. Within 2 hours of collection, centrifuge, and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

HIAA
9248

5-Hydroxyindoleacetic Acid, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Some medications could interfere with test results. If medically feasible, for 48 hours before specimen collection, patient should not take the following medications: -Acetaminophen (Tylenol or generic versions) -Tryptophan containing supplements 2. For 48 hours prior to, as well as during, the urine collection, the patient should limit the following to one serving per day: -Fruits -Vegetables -Nuts -Caffeinated beverages or foods Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children younger than 5 years. 2. Collect a 24-hour urine specimen. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	56 days
	Frozen	365 days

CPT Code Information: 83497

HIAAP
619735

5-Hydroxyindoleacetic Acid, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	60 days
	Refrigerated	72 hours

CPT Code Information: 83497

HIAAR
616090

5-Hydroxyindoleacetic Acid, Random, Urine

Specimen Requirements: Patient Preparation: 1. Some medications could interfere with test results. If medically feasible, for 48 hours before specimen collection, patient should not take the following medications: -Acetaminophen (Tylenol or generic versions) -Tryptophan containing supplements 2. For 48 hours prior to the urine collection, the patient should limit the following to one serving per day: -Fruits -Vegetables -Nuts -Caffeinated beverages or foods Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Store and send refrigerate

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	56 days
	Frozen	365 days

CPT Code Information: 83497

F5M
57101

5-Methyltetrahydrofolate

Specimen Requirements: Medical Neurogenetics collection kit (T657) required. Each collection kit contains 5 microcentrifuge tubes. COLLECTION PROTOCOL: 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the sample integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL - If sample's not blood contaminated, the tubes should be placed on dry ice at bedside - If sample's are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen - Store samples at -80 until they can be shipped 2) Complete Medical Neurogenetics, LLC request form. Include test required, sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside a specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	CSF KIT	

CPT Code Information: 82542

MAMMX
62732

6-Monoacetylmorphine (6-MAM) Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: 1. Collect entire random meconium specimen. 2. Send specimen frozen. When refrigerated, a significant percentage of 6-monoacetylmorphine will convert to morphine in less than 24 hours. Additional Information: Specimen that arrives with a broken seal does not meet the chain-of-custody requirements.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen	14 days

CPT Code Information: 80356; G0480 (if appropriate);

6MAMM
89659

6-Monoacetylmorphine (6-MAM), Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: 1. Collect entire random meconium (newborn's first bowel movements) specimen. 2. Send specimen frozen. Additional Information: When refrigerated, a significant percentage of 6-monoacetylmorphine (MAM) will convert to morphine in less than 24 hours.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen	14 days

CPT Code Information: G0480; 80356 (if appropriate for select payers);

6MAMU
89605

6-Monoacetylmorphine Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: G0480; 80356 (if appropriate for select payers);

6MAMX
62708

6-Monoacetylmorphine, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80356; G0480 (if appropriate);

F68KD
91494

68kD (hsp-70) antibodies by Line Blot

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 2.0 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	5 days
	Ambient	48 hours

CPT Code Information: 84182

7AC4
607699

7AC4, Bile Acid Synthesis, Serum

Specimen Requirements: Patient Preparation: 1. Patient must fast for at least 12 hours prior to collection; fasting morning specimen is preferred. 2. Patient should not be taking bile acid sequestrants for 24 hours prior to collection or statins for 5 days prior to collection. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot 1 mL of serum into plastic vial. 2. Send specimen frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	72 hours
	Ambient	24 hours

CPT Code Information: 82542

A1R
113437

A1 Antigen Subtype, Blood

Specimen Requirements: Container/Tube: Pink top (EDTA) Specimen Volume: 6 mL Pediatric Volume: 2 mL blood in 6 mL pink-top (EDTA) tube Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Ambient	72 hours

CPT Code Information: 86905

RTQPC
620307

Abnormal Prion Protein, Real-Time Quaking Induced Conversion, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see: CJDE / Creutzfeldt-Jakob Disease Evaluation, Spinal Fluid RPDE / Rapidly Progressive Dementia Evaluation, Spinal Fluid

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	BlueTop SARSTEDT
	Refrigerated	14 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CPT Code Information: 84999

ABONR
113498

ABO/Rh Newborn, Blood

Specimen Requirements: Container/Tube: Pink top (EDTA Micro tube) Specimen Volume: 0.5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	10 days
	Ambient	4 days

CPT Code Information: 86900; 86901;

ABOMR 113490

ABO/Rh, Blood

Specimen Requirements: Container/Tube: Pink top (EDTA) Specimen Volume: 6 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. **Additional Information:** Blood for this test cannot be shared with other tests. Submit specimen for this test in its own vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	10 days
	Ambient	4 days

CPT Code Information: 86900-ABO; 86901-Rh;

ACAC 82757

Acacia, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial **Specimen Volume:** 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ACARP
64717

Acanthamoeba species Molecular Detection, PCR, Ocular

Specimen Requirements: The preferred specimen for this test is corneal scraping or biopsy. Submit only 1 of the following specimens: Specimen Type: Fresh tissue Sources: Ocular Container/Tube: Sterile container Specimen Volume: 5-10 mm(3) Collection Instructions: Submit tissue in a sterile container with 1 mL of sterile saline, minimal essential media (MEM), or viral transport media. Preferred Paraffin-Embedded Tissue Block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Ocular Container/Tube: Tissue block Collection Instructions: Submit a FFPE tissue block to be cut and returned. Acceptable Paraffin-Embedded Tissue Block: Specimen Type: Formalin-fixed, paraffin-embedded tissue (FFPE) section Sources: Ocular Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Type: Scrapings Sources: Eye, ocular, cornea Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect corneal scrapings using a scalpel or other sharp device to remove the outer layer of cells from the eye. 2. Swish the collection device in 1 mL of sterile saline, MEM, or viral transport media. 3. Remove the scalpel blade or sharp device from the collection container before submitting to the lab. 4. Specimens containing scalpel blades will be canceled. Specimen Type: Swabs Sources: Eye, ocular, cornea Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Swab must be placed into viral transport media and submitted with the specimen. 2. Specimens received without swabs will be canceled. Additional Information: Swabs are not the preferred specimen for this test and may yield false-negative results. Specimen Type: Contact lenses Container/Tube: Sterile container Specimen Volume: Entire collection Collection Instructions: 1. Place entire contact lens in a sterile container with 1 mL sterile saline, viral transport media, or MEM. 2. Right and left lenses must be submitted individually using multiple sterile containers or in the original contact lens case. A separate order must be created for each lens being tested. 3. Indicate Right or Left in the specimen source. Specimen Type: Contact lens cases without lenses Container/Tube: Sterile container Specimen Volume: 1 mL solution or entire case Additional Information: 1. Depending on the type of case submitted, it may be necessary to test right and left chambers individually. A separate order must be created for each chamber being tested. 2. Indicate Right or Left in the specimen source.

Specimen Minimum Volume: Scrapings: 0.5 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

ACAR
82850

Acarus siro, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ACMA
37030

Acetaminophen, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	24 hours

CPT Code Information: 80143

FACES
75388

Acetoacetate, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. 2. Centrifuge and send 3 mL of serum frozen in a plastic, preservative-free vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 82010

FCDU3
75778

Acetyl Fentanyl, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

ARBI
8338

Acetylcholine Receptor (Muscle AChR) Binding Antibody, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86041

ACMFS
610029

Acetylcholine Receptor Modulating Antibody, Flow Cytometry Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: MGLE / Myasthenia Gravis/Lambert-Eaton Myasthenic Syndrome Evaluation, Serum MGMR / Myasthenia Gravis Evaluation with Muscle-Specific Kinase (MuSK) Reflex, Serum PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86043

ACHE
9287

Acetylcholinesterase, Amniotic Fluid

Specimen Requirements: Container/Tube: Amniotic fluid container Specimen Volume: 1 mL Collection Instructions: Specimen must be collected between 14 to 21 weeks gestation; 14 to 18 weeks is preferred.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)	365 days	
	Frozen	365 days	
	Ambient	14 days	

CPT Code Information: 82013

ASCL1
71355

Achaete-Scute Homolog 1 (ASCL1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GAAWR Acid Alpha-Glucosidase Reflex, Leukocytes

606281

Specimen Requirements: Only orderable as a reflex. For more information see LSD6W / Lysosomal Storage Disorders, Six-Enzyme Panel, Leukocytes.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82542

GAAW Acid Alpha-Glucosidase, Leukocytes

606267

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

ASMW
606264

Acid Sphingomyelinase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

SAFB
8213

Acid-Fast Smear for Mycobacterium, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87206; 87176-Tissue processing (if appropriate); 87015-Mycobacteria culture, concentration (if appropriate);

SMACN
70551

Actin, Smooth Muscle (SMActin) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ACT
8221

Actinomyces Culture, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	72 hours

CPT Code Information: 87075-Actinomyces culture; 62258-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe identification by sequencing (if appropriate); 87176-Tissue processing (if appropriate);

APMSC
602182

Activated Partial Thromboplastin Time (APTT) Mix 1:1, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85732

APTSC
602172

Activated Partial Thromboplastin Time (APTT), Plasma

Specimen Requirements: Only orderable as part of a special coagulation profile or as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85730

APTP
40935

Activated Partial Thromboplastin Time, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma and centrifuge plasma again. 2. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen (preferred)	30 days
	Ambient	4 hours

CPT Code Information: 85730

APCRV
81967

Activated Protein C Resistance V (APCRV), Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85307

APCRR
60547

Activated Protein C Resistance V, with Reflex to Factor V Leiden, Blood and Plasma

Specimen Requirements:

Specimen Minimum Volume: Plasma: 0.5 mL; Whole blood: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days
Whole blood	Ambient (preferred)	14 days
	Frozen	14 days
	Refrigerated	14 days

CPT Code Information: 85307

COGMF
113528

Acute Myeloid Leukemia (AML), Children's Oncology Group Enrollment Testing, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88275, 88291-FISH Probe, Analysis, Interpretation; 1 probe set; 88271 x 2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

AMLAF
609517

Acute Myeloid Leukemia (AML), FISH, Adult, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot.

Specimen Minimum Volume: Whole blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x8, 88275x4, 88291x1-FISH Probe, Analysis, Interpretation; 4 probe sets; 88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate);

JAMLM
620194

Acute Myeloid Leukemia (AML), FISH, Bone Marrow

Specimen Requirements: Container/Tube: Green top (Sodium Heparin) or yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 88377 (if 1 probe set); 88377 x 2 (if 2 probe sets); 88377 x 3 (if 3 probe sets); 88377 x 4 (if 4 probe sets); 88377 x 5 (if 5 probe sets); 88377 x 6 (if 6 probe sets); 88377 x 7 (if 7 probe sets);

AMLPF 609527

Acute Myeloid Leukemia (AML), FISH, Pediatric, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot.

Specimen Minimum Volume: Whole blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x26, 88275x13, 88291 x1-FISH Probe, Analysis, Interpretation; 13 probe sets; 88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate);

AMLMF 614202

Acute Myeloid Leukemia (AML), Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88275x1, 88291x1- FISH Probe, Analysis, Interpretation; 1 probe set; 88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate);

APGP
608015

Acute Porphyria Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spots, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81406 x 2; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 81479 (if appropriate for government payers);

AHEP
56105

Acute Viral Hepatitis Profile, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot 2 mL serum into a plastic vial labeled as SST Serum, and ship frozen (preferred).

Specimen Minimum Volume: 1.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 80074 (if all 4 initial tests are performed); 86709 (if all 4 are not performed); 86705 (if all 4 are not performed); 87340 (if all 4 are not performed); 86803 (if all 4 are not performed); 87522 (if appropriate); 87341 (if appropriate);

FACYS
75396

Acyclovir, Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Plasma Collection Container/Tube: Lavender top or pink top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in an EDTA (lavender top or pink top) tube(s). Plasma gel tube is not acceptable. 2. Centrifuge and send 1 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	30 days
	Frozen	120 days
	Ambient	30 days

CPT Code Information: 80299

ACRN
82413

Acylcarnitines, Quantitative, Plasma

Specimen Requirements: Patient Preparation: Collect specimen just prior to a scheduled meal or feeding. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.04 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	92 days
	Refrigerated	64 days
	Ambient	8 days

CPT Code Information: 82017

ACRNS
60644

Acylcarnitines, Quantitative, Serum

Specimen Requirements: Patient Preparation: Collect specimen just prior to a scheduled meal or feeding. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.04 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	60 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: 82017

AGU20
608909

Acylglycines, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing. Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	416 days
	Refrigerated	9 days

CPT Code Information: 82542

ABADL
620311

Adalimumab Antibody, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see ADALP / Adalimumab Quantitative Antibody, Serum. Patient Preparation: For 12 hours before specimen collection, it is recommended that the patient not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 83520

INTAD
620312

Adalimumab Panel, Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

ADALP
620309

Adalimumab Quantitative with Antibody, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.0 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80145; 83520;

ADALX
64863

Adalimumab Quantitative with Reflex to Antibody, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80145; 83520 (if appropriate);

QNADL
620310

Adalimumab Quantitative, Serum

Specimen Requirements: Only orderable as part of profile. For more information see ADALP / Adalimumab Quantitative with Antibody, Serum. Patient Preparation: For 12 hours before specimen collection, it is recommended that the patient not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80145

ADAMS
620816

ADAMTS13 Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

CPT Code Information: 85397

ADAMP
620815

ADAMTS13 Activity with Reflex Inhibitor Profile, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

CPT Code Information: 85397; 85335 (if appropriate);

ADMB
620817

ADAMTS13 Inhibitor Bethesda Titer, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

CPT Code Information: 85335

ADMI
621149

ADAMTS13 Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see ADAMP / ADAMTS13 Activity with Reflex Inhibitor Profile, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

AADAM
620818

ADAMTS13 Profile Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see ADAMP / ADAMTS13 Activity with Reflex Inhibitor Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

APBCS
615861

Adaptor Protein 3 Beta2 (AP3B2) Antibody, Cell-Binding Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum -DYS2 / Dysautonomia, Autoimmune/Paraneoplastic Evaluation, Serum -GID2 / Gastrointestinal Dysmotility, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

APBCC
615860

Adaptor Protein 3 Beta2 (AP3B2) Antibody, Cell-Binding Assay, Spinal Fluid

Specimen Requirements: Only orderable as a part of a profile. For more information see MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

APBTS
616109

Adaptor Protein 3 Beta2 (AP3B2) Antibody, Tissue Immunofluorescence Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum -DYS2 / Dysautonomia, Autoimmune/Paraneoplastic Evaluation, Serum -GID2 / Gastrointestinal Dysmotility, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

APBTC
616110

Adaptor Protein 3 Beta2 (AP3B2) Antibody, Tissue Immunofluorescence Titer, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see: -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

ADMPU
615908

Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine container Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Submitting less than 30 mL may compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test.

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 80307; G0482; G0483 (if appropriate for select payers); 80347 (if appropriate for select payers); 80364 (if appropriate for select payers); 80326 (if appropriate for select payers); 80323 (if appropriate for select payers);

ADSTM
62206

Additional Flow Stimulant (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 86353

AGSTM
62208

Additional Flow Stimulant, LPAGF (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 86353

MGSTM
62207

Additional Flow Stimulant, LPMGF (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 86353

XSRM
607838

Additional Sample for Reflex Oligoclonal Banding, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: -MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid -OLIG / Oligoclonal Banding, Serum and Spinal Fluid Specimen Type: Serum Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot serum in plastic vial within 2 hours of collection. 2. Label specimen as serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Ambient	14 days
	Refrigerated	14 days

VID2
45455

Additional Testing Virus Ident (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87253

FADCF
75666

Adenosine Deaminase in CSF

Specimen Requirements: Collect CSF in a leak-proof container. Centrifuge specimen at room temperature and send 0.5 mL frozen.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 84311

FADFL
75665

Adenosine Deaminase in Peritoneal Fluid

Specimen Requirements: Specimen Type: Peritoneal fluid (Ascites, Paracentesis) Container/Tube: Standard transport container Specimen volume: 0.5 mL Collection Instructions: Collect Peritoneal Fluid in a leak-proof container. Centrifuge specimen at room temperature, transfer 0.5 mL peritoneal fluid to

plastic vial and Ship frozen. The specimen must remain frozen until received at the performing lab.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Peritoneal	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 84311

FADDP
75667

Adenosine Deaminase, Pericardial Fluid

Specimen Requirements: Specimen Type: Pericardial Fluid Sources: Pericardial Fluid Container/Tube: Standard Transport Tube Specimen Volume: 0.5 mL Collection Instructions: Collect Pericardial Fluid in a leak-proof container. Centrifuge specimen at room temperature, transfer 0.5 mL pericardial fluid to plastic vial and freeze. Note: Specimen must remain frozen until received at performing lab.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 84311

FADPF
75664

Adenosine Deaminase, Pleural Fluid

Specimen Requirements: Specimen Type: Pleural Fluid Sources: Pleural Fluid Container/Tube: Standard Transport Tube Specimen Volume: 0.5 mL Collection Instructions: Collect Pleural fluid in a leak proof container; centrifuge specimen at room temperature, transfer 0.5 mL to standard tube and freeze. Ship frozen. Note: Specimen must remain frozen until received at performing lab.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Pleural Fluid	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 84311

FADBC Adenosine Deaminase, RBC

75553

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in a lavender-top (EDTA), or green-top (sodium or lithium heparin) tube(s). Send 1 mL EDTA or Sodium or Lithium heparin whole blood refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	15 days
	Ambient	15 days

CPT Code Information: 84311

ADVQU Adenovirus DNA Detection and Quantification, Plasma

622150

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL (plasma) Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87799

ADV
70352

Adenovirus Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LADV
89074

Adenovirus, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Pleural, peritoneal, ascites, pericardial, or amniotic Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Stool Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: 1 g Specimen Type: Swab Sources: Nasal, throat, respiratory, genital, or ocular Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT, M4, M5, Bartels, or Jiangsu) and E-Swab or Culturette Specimen Volume: Entire specimen Collection Instructions: Place swab back into a multimicrobe media. Specimen Type: Tissue Supplies: M4-RT (T605) Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, M5, Bartels, or Jiangsu) Specimen Volume: Entire collection Collection Instructions: Collect fresh tissue specimen. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: Body fluid and respiratory specimens: 0.5 mL Spinal fluid and urine: 0.3 mL Stool: 0.5 g Swab or Tissue: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

AKC
608421

Adenylate Kinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657

AK1
607455

Adenylate Kinase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) or yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657

ACC
604986

Adrenal Mass Panel, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for a full 24 hours (required)

and record the total volume. 2. Do not add preservatives. Specimens containing preservatives will be canceled. 3. Entire 24 hour collection must be mixed well prior to aliquoting into a 5 mL plastic tube. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	90 days
	Refrigerated	14 days

CPT Code Information: 0015M

ACTHI 70351

Adrenocorticotrophic Hormone (ACTH) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ACTH 8411

Adrenocorticotrophic Hormone, Plasma

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Ice-cooled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Morning (7 a.m.-10 a.m.) specimen is desirable. 2. Collect with a pre-chilled lavender top (EDTA) tube and transport to the laboratory on ice. 3. Within 2 hours of collection centrifuge at refrigerated temperature and immediately separate plasma from cells. 4. Immediately freeze plasma.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	28 days
	Refrigerated	3 hours
	Ambient	2 hours

CPT Code Information: 82024

ADLTX
62710

Adulterants Survey, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-custody kit containing the specimen containers, seals, and documentation required. Specimen Volume: 1.5 mL Collection Instructions: Collect a random specimen without preservative in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 1.5 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information:

ADULT
29345

Adulterants Survey, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 1.5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: Submitting less than 1.5 mL may compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information:

ISAE
45246

Aerobe Identification by Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87153

AERMC
604916

Aeromonas Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Aeromonas Culture, Feces-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if

appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

ALAGP
618030

Alagille Syndrome Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81407; 81479; 81479 (if appropriate for government payers);

ALT
8362

Alanine Aminotransferase (ALT) (GPT), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 84460

ALB24
606718

Albumin, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate

specimen within 4 hours of completion of 24-hour collection. 3. Mix well before taking 4-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 82043

ALBFL
60622

Albumin, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 82042

RALB
603287

Albumin, Random, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 82043; 82570;**ALBR**
609731**Albumin, Random, Urine**

Specimen Requirements: Patient Preparation: Heavy exercise should be avoided prior to collection. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 82043; 82570;**RALB1**
606730**Albumin, Random, Urine**

Specimen Requirements: Only orderable as part of a profile. For more information see: -ALBR / Albumin, Random, Urine -RALB / Albumin, Random, Urine. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 82043

ALB
8436

Albumin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	150 days
	Frozen	120 days

CPT Code Information: 82040

ALBS1
610525

Albumin, Serum

Specimen Requirements: Only orderable as part of profile. For more information see: SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	120 days
	Ambient	7 days

CPT Code Information: 82040

ALBSF Albumin, Spinal Fluid

68001

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82042

A CR Albumin/Creatinine Ratio

606732

Specimen Requirements: Only orderable as part of a profile. For more information see: ALBR / Albumin, Random, Urine RALB / Albumin, Random, Urine.

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

FALBU Albuterol, Serum/Plasma

90309

Specimen Requirements:**Specimen Minimum Volume:** 1.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	30 days
	Frozen	365 days
	Ambient	30 days

CPT Code Information: 80299**ALS**
606872**Aldolase, Serum**

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Within 1 hour of collection, centrifuge and aliquot serum into a plastic vial. 2. Send refrigerated.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	60 days

CPT Code Information: 82085**ALDNA**
15150**Aldosterone with Sodium, 24 Hour, Urine**

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before testing. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Supplies: Sarstedt Aliquot Tube 5mL (T914) Container/Tube: 2 Plastic, 5-mL tubes Specimen Volume: 10 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children under the age of 5 years. This preservative is intended to achieve a pH of between approximately 2 and 4. 2. Collect urine for a full 24 hours (required) and record the total volume. 3. Place 5 mL of well mixed, 24-hour urine in plastic, 5-mL tube and label as Aldosterone. 4. Place 5 mL of well mixed, 24-hour urine in plastic, 5-mL tube and label as Sodium. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 82088-Aldosterone; 84300-Sodium;

ALDU
8556

Aldosterone, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before specimen collection. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Supplies: Urine tubes, 10 mL (T068) Container/Tube: Plastic, urine tube Specimen Volume: 10 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children under the age of 5 years. This preservative is intended to achieve a pH of between approximately 2 and 4. 2. Collect urine for a full 24 hours (required) and record the total volume. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82088

APIVC
65425

Aldosterone, Inferior Vena Cava, Plasma

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before specimen collection. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	28 days
	Ambient	4 days

CPT Code Information: 82088

AIVC
6503

Aldosterone, Inferior Vena Cava, Serum

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before testing. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 82088

APLAV
65427

Aldosterone, Left Adrenal Vein, Plasma

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before specimen collection. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	28 days
	Ambient	4 days

CPT Code Information: 82088

ALAV
6349

Aldosterone, Left Adrenal Vein, Serum

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before testing. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 82088

PALD
65424

Aldosterone, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	28 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 82088

APRAV
65426

Aldosterone, Right Adrenal Vein, Plasma

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before specimen collection. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	28 days
	Ambient	4 days

CPT Code Information: 82088

ARAV
6348

Aldosterone, Right Adrenal Vein, Serum

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before testing. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 82088

ALDS
8557

Aldosterone, Serum

Specimen Requirements: Patient Preparation: Spironolactone (Aldactone) should be discontinued for 4 to 6 weeks before testing. The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. See Renin-Aldosterone Studies for detailed instructions. 2. The recommended collection time is 8 a.m., after the patient is active for approximately 2 hours. Try to collect the specimen as close to that time as possible and no later than 10 a.m. 3. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 82088

FALPE
57945

Alfalfa (Medicago sativa) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 1.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

ALKT
619694

ALK Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual 81479

ALPI
622349

Alkaline Phosphatase Isoenzymes, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see ALKP / Alkaline Phosphatase, Total and Isoenzymes, Serum. Patient Preparation: Patient must fast for 8 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel

Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge the specimen. 2. For red top tubes, immediately aliquot into a plastic vial. 3. For serum gel tubes, serum may sit on gel refrigerated but must be aliquoted within 7 days.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 84080

ALP
8340

Alkaline Phosphatase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	60 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 84075

ALKP
622157

Alkaline Phosphatase, Total and Isoenzymes, Serum

Specimen Requirements: Patient Preparation: Patient must fast for 8 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge the specimen. 2. For red top tubes, immediately aliquot into a plastic vial. 3. For serum gel tubes, serum may sit on gel refrigerated but must be aliquoted within 7 days.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 84075; 84080;

FABP2
57698

Allergic Bronchopulmonary Aspergillosis Panel II

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 1.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86331; 86001; 86003; 82785;

ALLOI
88888

Allo-iso-leucine, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection (Filter Paper) Acceptable: Local newborn screening card, Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper, Postmortem Screening Card Specimen Volume: 2 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. At least 1 spot should be complete and unpunched. 3. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 4. Include type of feeding information on the collection card. 5. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 6. Do not expose specimen to heat or direct sunlight. 7. Do not stack wet specimens. 8. Keep specimen dry. Additional Information: 1. For collection instructions see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection

instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	59 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Refrigerated	59 days	FILTER PAPER

CPT Code Information: 82136

FALFG
57519

Almond Food IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

ALM
82882

Almond, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ALPS
82449

Alpha Beta Double-Negative T Cells for Autoimmune Lymphoproliferative Syndrome, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x2; 86359;

ALDEF
607710

Alpha Defensin, Lateral Flow Assay, Synovial Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plain red-top tube Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Synovial Fluid	Refrigerated	7 days

CPT Code Information: 83518

AFSH
71768

Alpha Follicle Stimulating Hormone Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

WAGDR
621361

Alpha Globin Cluster Locus Deletion/Duplication, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81269

AGDD
620985

Alpha Globin Cluster Locus Deletion/Duplication, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4

days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report. Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: Specimen can be tested only after culture. 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks are required to culture amniotic fluid before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Prenatal cultured amniocytes. This does not include cultured chorionic villi. Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: Specimen can be tested

only after culture. 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi (cultured) Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81269; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate) ; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

WASEQ
61362

Alpha Globin Gene Sequencing, Varies

Specimen Requirements:

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81259-HBA1/HBA2; full sequence

FALG
57663

Alpha Lactalbumin IgG

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Preferred: Red top
Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection
Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send
0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FA1GP
57736

Alpha-1-Acid Glycoprotein

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82985

A1AFS
604982

Alpha-1-Antitrypsin Clearance, Feces and Serum

Specimen Requirements: Both feces and serum are required. Blood must be drawn during the
stool collection period. Specimen Type: Serum Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube: Red top or serum gel Submission Container/Tube: Plastic vial Specimen
Volume: 1 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a
plastic vial Specimen Type: Feces Supplies: Stool Containers - 24, 48, 72 Hour Kit (T291)
Container/Tube: Stool container Specimen Volume: Entire collection Collection Instructions: 1. Collect
a 24-hour fecal collection. 2. If no specimen is obtained within 24 hours, extend collection time to 48 to
72 hours. Document duration.

Specimen Minimum Volume: Homogenized feces: 1 mL; Serum: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Ambient	14 days
	Refrigerated	14 days
Serum	Frozen (preferred)	28 days
	Ambient	28 days
	Refrigerated	28 days

CPT Code Information: 82103 x 2**AATRP**
70350**Alpha-1-Antitrypsin Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**A1APP**
26953**Alpha-1-Antitrypsin Phenotype, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.25 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82103; 82104; ;

A1ALC
61767

Alpha-1-Antitrypsin Proteotype S/Z, LC-MS/MS, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.25 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82103; 82542; 82104 (if appropriate);

A1AF
182

Alpha-1-Antitrypsin, Random, Feces

Specimen Requirements: Supplies: -Stool container, Small (Random), 4 oz (T288) -Stool Collection Kit, Random (T635) Container/Tube: Stool container Specimen Volume: 5 g Collection Instructions: Collect a random fecal specimen.

Specimen Minimum Volume: Homogenized stool: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Ambient	14 days
	Refrigerated	14 days

CPT Code Information: 82103

AAT
8161

Alpha-1-Antitrypsin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82103

A124
610363

Alpha-1-Microglobulin, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No added preservative preferred. 3. Mix well before taking 4-mL aliquot. Additional Information: For multiple collections see Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 83883

RA1U
610364

Alpha-1-Microglobulin, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection

Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83883; 82570;

A2PI
602169

Alpha-2 Plasmin Inhibitor, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85410

A2M
9270

Alpha-2-Macroglobulin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83883

AAMY
82866

Alpha-Amylase, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For one allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

ALFP
70353

Alpha-Fetoprotein (AFP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

L3AFP
88878

Alpha-Fetoprotein (AFP) L3% and Total, Hepatocellular Carcinoma Tumor Marker, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum Gel Acceptable: Red Top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge

and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	5 days

CPT Code Information: 82107

AFP
8162

Alpha-Fetoprotein (AFP) Tumor Marker, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82105

AFPPT
61534

Alpha-Fetoprotein (AFP), Peritoneal Fluid

Specimen Requirements: Sources: Peritoneal, abdominal, ascites, paracentesis (peritoneal
washings are not acceptable) Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Peritoneal	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86316

MAFP1
113382

Alpha-Fetoprotein (AFP), Single Marker Screen, Maternal, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Do not collect specimen after amniocentesis as this could affect results. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Additional Information: 1. Collect blood between 15 weeks, 0 days and 22 weeks, 6 days. 2. Initial or repeat testing is determined in the laboratory at the time of report and will be reported accordingly. To be considered a repeat test for the patient, the testing must be within the same pregnancy and trimester, with interpretable results for the same test, and both tests are performed at Mayo Clinic.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 82105

AFPSF
8876

Alpha-Fetoprotein (AFP), Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 86316

AFPA
9950

Alpha-Fetoprotein, Amniotic Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 0.75 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 82106; 82013 (if appropriate);

FUCW
8814

Alpha-Fucosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

AGABS
89407**Alpha-Galactosidase, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper and Whatman Protein Saver 903 paper Specimen Volume: 2 blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 82657

AGAW
606261**Alpha-Galactosidase, Leukocytes**

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

AGAS
8784**Alpha-Galactosidase, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	24 hours

CPT Code Information: 82657

WASQR
47958

Alpha-Globin Gene Sequencing, Blood

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	14 days

CPT Code Information: 81259-HBA1/HBA2; full sequence

IDUAW
606276

Alpha-L-Iduronidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable:
Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions:
Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

ALFA
82897

Alpha-Lactalbumin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

MANN
62511

Alpha-Mannosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

APGH
9003

Alpha-Subunit Pituitary Tumor Marker, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	7 days

CPT Code Information: 82397

ASYN
70635

Alpha-Synuclein Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Submit: Formalin-fixed,
paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ASYN
622855

Alpha-Synuclein Protein Aggregates, Spinal Fluid

Specimen Requirements: Supplies: Sterile Specimen Tube, 6 mL (T485) Container/Tube:
Sterile polypropylene tube Note: Polypropylene collection tubes must be used. Specimen Volume: 1 mL
Collection Instructions: 1. Perform lumbar puncture and discard the first 1 to 2 mL of cerebrospinal
fluid (CSF). 2. Collect CSF directly into a sterile polypropylene tube. 3. Inspect specimen for visible
discoloration. Specimen must be clear and colorless to perform testing. Do not centrifuge. 4. Freeze
sample upright prior to placing in transport container.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	60 days
	Refrigerated	14 days

CPT Code Information: 0393U**ABCRS**
70636**Alpha/Beta Crystallin IHC, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**ALPRT**
70593**Alport (Collagen IV Alpha 5 and Alpha 2) Immunofluorescent Stain, Renal Biopsy**

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Unstained slides (unfixed) Source: Kidney tissue or skin tissue Slides: 1 Slide Collection Instructions: Submit 1 frozen tissue unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections should be 4-microns thick, centered on the slide, and shipped on dry ice. Acceptable: Specimen Type: Unfixed tissue block (O.C.T) Source: Kidney tissue or skin tissue Specimen Volume: Entire specimen Collection Instructions: 1. Embed in O.C.T. compound. 2. Freeze specimen and ship on dry ice. Acceptable: Specimen Type: Wet tissue Source: Kidney tissue or skin tissue Supplies: Renal Biopsy Kit (T231) Container/Tube: Renal Biopsy Kit, Zeus/Michel's Specimen Volume: Entire specimen Collection Instructions: 1. Collect specimens according to the instructions in Renal Biopsy Preparation Instructions. 2. If standard immunoglobulin and complement immunofluorescence has already been performed, ship the residual frozen tissue (must contain glomeruli) on dry ice.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
Special	Frozen	

CPT Code Information: 88346

ALPGP
618044

Alport Syndrome Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81407 ; 81408 x 2 ; 81479 (if appropriate for government payers);

FALPX
75156

Alprazolam (Xanax)

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL of plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346

ALTN
82910

Alternaria tenuis, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

AH50
88676

Alternative Complement Pathway, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

ALU
8828

Aluminum, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068)
Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert
Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and

Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82108

AL
8373

Aluminum, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 1.2 mL Collection Instructions: See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	METAL FREE
	Ambient	7 days	METAL FREE
	Frozen	7 days	METAL FREE

CPT Code Information: 82108

ALUCR
610838

Aluminum/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert

Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82570; 82108;

ALCU
610839

Aluminum/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ALUCR / Aluminum/Creatinine Ratio, Random, Urine. Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82108

FOXOF
35281

Alveolar Rhabdomyosarcoma (ARMS), 13q14 (FOXO1 or FKHR) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue

block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. ?? Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained? Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TFE3F
35319

Alveolar Soft Part Sarcoma (ASPS)/Renal Cell Carcinoma (RCC), Xp11.23 (TFE3), FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

Alzheimer Disease Evaluation, Spinal Fluid

Specimen Requirements: Supplies: Alzheimer's Disease Evaluation (ADEVL) Collection Kit (T836) CSF AD Biomarker Tubes (T833; also included in T836) Container/Tube: Preferred: Sarstedt CSF False Bottom Tube 63.614.625 (2.5 mL) Acceptable: Sarstedt 72.703.600 (1.5 mL) or Sarstedt 72.694.600 (2 mL) Specimen Volume: 1.5 to 2.5 mL Collection Instructions: 1. Perform lumbar puncture and discard the first 1 to 2 mL of cerebrospinal fluid (CSF). 2. Collect CSF directly into one of the listed collection tubes until the tube is at least 50% full.* 3. Send CSF specimen in original collection tube. Do not aliquot. Note: Polystyrene collection tubes are not acceptable. Exposure of CSF to polystyrene tubes may result in falsely low Abeta42 concentrations. For more information see Cautions. *The Alzheimer's Association consensus protocol for handling of CSF for clinical measurements of Abeta42 and tau recommends using the drip method for CSF collection and directly collecting into a low-bind polypropylene tube. Although some clinicians prefer the syringe pull method due to speed of collection, the drip method reduces the risk of Abeta42 binding to the plastic of any syringe used. 4. Collection instructions can also be found on Spinal Fluid Specimen Collection Instructions for Alzheimer Disease Evaluation (T967).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	BlueTop SARSTEDT
	Frozen	60 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CPT Code Information: AB42P-82234; PTAUP-84393; TTAUP-84394;

Amantadine (Symmetrel)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

PAMIK
37032

Amikacin, Peak, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80150

RAMIK
37033

Amikacin, Random, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80150

TAMIK
37031

Amikacin, Trough, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80150

AAMSD Amino Acids, Maple Syrup Urine Disease Panel, Plasma 60200

Specimen Requirements: Patient Preparation: Patient should fast a minimum of 4 hours; infants should have specimen collected before next feeding (2-3 hours without total parenteral nutrition if possible). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collect specimen and place on wet ice. Note: Thrombin-activated tubes should not be used for collection. 2. Centrifuge immediately or within 4 hours of collection if specimen is kept at refrigerated temperature. 3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	14 days

CPT Code Information: 82136

AAQP Amino Acids, Quantitative, Plasma 9265

Specimen Requirements: Patient Preparation: Patient should fast a minimum of 4 hours; infants should have specimen collected before next feeding (2-3 hours without total parenteral nutrition if possible). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collect specimen and place on wet ice. Note: Thrombin-activated tubes should not be used for collection.

2. Centrifuge immediately or within 4 hours of collection if the specimen is kept at refrigerated temperature. 3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	14 days

CPT Code Information: 82139

AAPD
60475

Amino Acids, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 2 mL
Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	70 days
	Refrigerated	14 days

CPT Code Information: 82139

AACSF
81934

Amino Acids, Quantitative, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.2 mL Collection
Instructions: Collect specimen from second collection vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen	14 days

CPT Code Information: 82139

AAUCD Amino Acids, Urea Cycle Disorders Panel, Plasma 60202

Specimen Requirements: Patient Preparation: Patient should fast a minimum of 4 hours; infants should have specimen collected before next feeding (2-3 hours without total parenteral nutrition if possible). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collect specimen and place on wet ice. Note: Thrombin-activated tubes should not be used for collection. 2. Centrifuge immediately or within 4 hours of collection if the specimen is kept at refrigerated temperature. 3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	14 days

CPT Code Information: 82136

AACYL Aminoacylase-1 Deficiency, Urine 621427

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing. Collection Instructions: 1. Collect a random urine specimen (first morning void preferred). 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	90 days
	Refrigerated	60 days

CPT Code Information: 82542

AIHL
609784

Aminoglycoside-Induced Hearing Loss, Targeted Variant Testing, Droplet Digital PCR, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient/Refrigerated/Frozen Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81401

ALADW
31895

Aminolevulinic Acid Dehydratase, Washed Erythrocytes

Specimen Requirements:

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time
Washed RBC	Frozen (preferred)	7 days
	Refrigerated	14 days
	Ambient	4 days

CPT Code Information: 82657

ALAD
88924

Aminolevulinic Acid Dehydratase, Whole Blood

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection. This is essential as ethanol suppresses aminolevulinic acid dehydratase activity, leading to false-positive results. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Specimen Volume: Full tube 4 mL Collection Instructions: Refrigerate specimen as soon as possible.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	7 days
	Ambient	4 days

CPT Code Information: 82657

ALAUR
61547

Aminolevulinic Acid, Urine

Specimen Requirements: Patient Preparation: Patient should not consume any alcohol for 24 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	45 days

CPT Code Information: 82135

AMIO
9247

Amiodarone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood no sooner than 12 hours (trough value) after last dose or immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: 80151

AMTRP
63506

Amitriptyline and Nortriptyline, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299

NH3V
35130

Ammonia, Plasma

Specimen Requirements:

Specimen Minimum Volume: See Specimen Collection

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	7 days
	Refrigerated	2 hours

CPT Code Information: 82140

AMMO
606643

Ammonium, 24 Hour, Urine

Specimen Requirements: Supplies: -Sarstedt 5 mL Aliquot Tube (T914) -Diazolidinyl Urea (Germall) 5.0 mL (T822) Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea (Germall) as preservative at start of collection or refrigerate specimen during and after collection. 2. Collect urine for 24 hours. 3. Aliquot urine into plastic vial. 4. Specimens with pH >8 may indicate bacterial contamination and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 82140

RAMBO
606709

Ammonium, Random, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 82140

AMOB Amobarbital, Serum

8325

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80299

FAMOX Amoxapine (Asendin) and 8-Hydroxyamoxapine

80450

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80335

AMOXY Amoxicillin, IgE, Serum

82663

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FAMP Amphetamine, Serum or Plasma

91171

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 80324

AMPMX
62712

Amphetamine-Type Stimulants Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Ambient	28 days
	Refrigerated	28 days

CPT Code Information: 80324; 80359; G0480 (if appropriate);

AMPHM
84371

Amphetamine-Type Stimulants Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 80324; 80359; G0480 (if appropriate);

FASCC
75109

Amphetamines Analysis, Serum

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 7 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307; 80324, 80359-if applicable;

AMPHX
62711

Amphetamines Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit containing the specimen containers, seals, and documentation required Specimen Volume: 5 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 5 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80325; 80359; G0480 (if appropriate);

AMPHU
8257

Amphetamines Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting

less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: G0480; 80325 (if appropriate for select payers); 80359 (if appropriate for select payers);

FCDU5
75780

Amphetamines, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

APHTS
618165

Amphiphysin Antibody Titer Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -SPPS / Stiff-Person Spectrum Disorders Evaluation, including Progressive Encephalomyelitis with Rigidity and Myoclonus, Serum -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

APHTC
618164

Amphiphysin Antibody Titer Assay, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -SPPC / Stiff-Person Spectrum Disorders Evaluation, including Progressive Encephalomyelitis with Rigidity and Myoclonus, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

FAMBS
75881

Amphotericin B Susceptibility Testing

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999 - Unlisted Microbiology Procedure (Refer to patient report to apply)

the appropriate CPT code in place of this unlisted CPT code based on specimen organism.); 87188 - mould-MIC microdilution or agar dilution (if appropriate); 87186 - yeast-MIC microdilution or agar dilution (if appropriate);

AMP 82664

Ampicillin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

AMBF 606595

Amylase, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, Jackson Pratt [JP] drain) -Pericardial fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 82150

AMISO
604930

Amylase, Isoenzymes, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82150 x 2

AMLPC
60078

Amylase, Pancreatic Cyst Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plain vial Specimen Volume: 1 mL Additional Information: A minimum of 0.5 mL is required for testing; specimens less than 0.5 mL may be rejected.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Pancreatic Cyst Fluid	Frozen (preferred)	30 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 82150

AMS
8352

Amylase, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	30 days
	Ambient	7 days

CPT Code Information: 82150

AAH
70349

Amyloid A (Hepatic) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FAMBT
75904

Amyloid Beta-Protein

Specimen Requirements: Collection Container/Tube: Lavender (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. 3 mL of EDTA plasma should be collected and separated as soon as possible. 2. Freeze EDTA plasma immediately after separation. 3. Ship frozen

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	30 days

CPT Code Information: 83519

AMYPI
70549

Amyloid P (SAP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

APPI
70357

Amyloid Precursor Protein (APP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AMPIP
620247

Amyloid Protein Identification, Paraffin, Mass Spectrometry

Specimen Requirements: Specimen Type: Formalin-fixed or B5-fixed paraffin-embedded tissue block Collection Instructions: 1. Do not send fixed tissue slides for testing. Testing can only be done on paraffin-embedded tissue blocks. 2. If Congo red stain has already been performed, send Congo red stained slide along with the tissue block.

Transport Temperature:

Specimen Type	Temperature	Time
AMYLOID	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88313; 82542 (if appropriate); 88380 (if appropriate);

TTRX
83674

Amyloidosis, Transthyretin-Associated Familial, Reflex, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	4 days
	Ambient	4 days

CPT Code Information: 82542; 81404 (if appropriate);

ANAID
45010

Anaerobe Ident (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87076

ISAN
45255

Anaerobe Identification by Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87153

BATTA
80931

Anaerobe Suscep Battery (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87186

SANA
45337

Anaerobe Suscep per Agent (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87181

ATPCO
614402

Anal ThinPrep Cytology with Human Papillomavirus (HPV) Co-Test, Varies

Specimen Requirements: Submit one of the following specimens: Preferred Specimen Type: Anus or rectum Supplies: ThinPrep Media with Spatula and Brush Kit (T434) Collection Container/Tube:

Brush Submission Container/Tube: ThinPrep Specimen Volume: A minimum of 20 mL or entire collection
 Collection Instructions: 1. Visualize the anal opening by retracting the buttocks. 2. Insert brush past internal anal sphincter until it abuts the distal rectal wall (4-5cm). 3. Rotate the brush 360 degrees and maintain lateral pressure on brush against the walls of the anus. The brush should bow slightly due to the pressure. 4. While rotating, slowly withdraw the brush. 5. Rotate at least 10 times while withdrawing the brush. This should take 20 to 30 seconds. 6. Immediately place brush in the ThinPrep solution and swish at least 20 to 30 seconds. 7. Dispose of the brush. 8. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 9. Bag ThinPrep specimens individually as they tend to leak during transport. 10. Place labels on the vial and on the biohazard bag. Acceptable Specimen Type: Anus or rectum Supplies: PreservCyt Vial (T536) Collection Container/Tube: Dacron/polyester swab Submission Container/Tube: PreservCyt solution vial Specimen Volume: A minimum of 20 mL or entire collection
 Collection Instructions: 1. Visualize the anal opening by retracting the buttocks. 2. Insert Dacron or polyester swab past internal anal sphincter until it abuts the distal rectal wall (4-5cm). 3. Rotate the swab 360 degrees and maintain lateral pressure on swab against the walls of the anus. The swab should bow slightly due to the pressure. 4. While rotating, slowly withdraw the swab. 5. Rotate at least 10 times while withdrawing the swab. This should take 20 to 30 seconds. 6. Immediately place swab in the ThinPrep solution. Swish at least 20 to 30 seconds in the ThinPrep solution. 7. Dispose of the swab. 8. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 9. Bag ThinPrep specimens individually as they tend to leak during transport. 10. Place labels on the vial and on the biohazard bag.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient	21 days	THIN PREP

CPT Code Information: 88112; 87624;

ANAP
81157

Anaplasma phagocytophilum (Human Granulocytic Ehrlichiosis) Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86666

ALKOT
620405

Anaplastic Lymphoma Kinase (ALK [OTI1A4]) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ALKD5
620966

Anaplastic Lymphoma Kinase (ALK[D5F3]) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ALKLC
615713

Anaplastic Lymphoma Kinase for Lung Cancer, Immunohistochemistry

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-Primary; 88341-If additional IHC;

ANPAT
70318

Anatomic Pathology Consultation, Wet Tissue

Specimen Requirements: Submit 1 of the following specimens: Specimen Type: Lung biopsy
Supplies: -Pathology Packaging Kit (T554) -Formalin, 10% Buffered Neutral for Tissue (T118)
-Michel's Transport Media for Immunofluorescent Testing on Tissue (T321) Specimen Volume: Biopsy specimens as delineated below Collection Instructions: For testing to be performed, both of the following must be submitted: a. For light microscopy: Preferred: A portion of lung tissue in 10% neutral buffered formalin. Specimens submitted in formalin needs to be fully submerged with the optimal approximate specimen volume of 10:1 or higher. Acceptable: A representative hematoxylin and eosin (H and E)-stained slide b. For immunofluorescence, a portion of the unfixed lung tissue in Michel's transport media Specimen Type: Cardiac biopsy Supplies: -Pathology Packaging Kit (T554) -Formalin, 10% Buffered Neutral for Tissue (T118) -Gluta (Trumps) (T130) Specimen Volume: Biopsy specimens as delineated below Collection Instructions: 1. Collect 4 to 6 biopsy specimens and submit all in 10% neutral buffered formalin. Specimens submitted in formalin needs to be fully submerged with the optimal approximate specimen volume of 10:1 or higher. If formalin biopsy specimens are not available, light microscopy slides would also be acceptable. 2. If electron microscopy (EM) is also requested, submit at least 1 biopsy into 2.5% to 3% buffered glutaraldehyde preservative (Trumps) along with the formalin biopsy specimens. Additional Information: If the question is drug toxicity, storage disease, or if the patient is younger than 25 years, send at least 1 biopsy specimen in 2.5% to 3% buffered glutaraldehyde (Trumps) in case EM is needed for diagnosis. Specimen Type: Cardiac explant Supplies: Pathology Packaging Kit (T554) Specimen Volume: Entire explant specimen Collection Instructions: 1. Fix entire explant specimen in formalin for a minimum of 24 hours. 2. Following fixation, lightly wrap specimen in formalin-soaked paper towel, place in a biohazard bag with a small amount of formalin, seal, place in another biohazard bag, and seal. Specimen Type: Enucleated eye Supplies: -Pathology Packaging Kit (T554) -Formalin - 10% Histo Prep, 45 mL (T117) Specimen Volume: Entire eye specimen Collection Instructions: 1. Immediately after removal, place specimen in approximately 300 mL of 10% neutral buffered formalin and fix for 48 hours. 2. Enucleated eye should not be opened or punctured. 3. After the 48-hour fixation, the specimen should be transferred from the larger, 300 mL container to a smaller container with fixative (Formalin - 10% Histo Prep, 45 mL) for shipping. Specimen Type: Iris, conjunctiva, cornea, and other small biopsies from eye Supplies: -Pathology Packaging Kit (T554) -Formalin - 10% Histo Prep, 45 mL (T117) Specimen Volume: Entire biopsy specimen Collection Instructions: 1. Place iris, conjunctiva, cornea, and other small biopsies on a paper mount (a piece of filter paper or other porous paper). This helps to keep the specimen from curling when it is fixed. 2. Immediately, gently place paper-mounted specimen into 10% formalin (Formalin - 10% Histo Prep, 45 mL). 3. In cases where margins are important, placing sutures at the margins of resection with accompanying explanatory draft will help orientation of the specimen in the lab. Specimen Type: Vitreous fluid/Aqueous humor Supplies: -Pathology Packaging Kit (T554) -Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic screw-top vial Specimen Volume: Entire specimen Collection Instructions: 1. Place the liquid (vitreous or aqueous) concentrate (preferred) or

washing (diluted, acceptable) into a small tube with a screw-top cap. 2. Refrigerate the specimen immediately (do not freeze). Specimen Stability Information: Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 88300 (if appropriate); 88302 (if appropriate); 88304 (if appropriate); 88305 (if appropriate); 88307 (if appropriate); 88309 (if appropriate);

ANCH
82345

Anchovy, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

AREC
70358

Androgen Receptor Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FAGES 75656

Androstenediol Glucuronide (Endocrine Sciences)

Specimen Requirements: Collection container/tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL (Note: Minimum volume does not allow for repeat analysis)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	6 days
	Ambient	6 days
	Frozen	

CPT Code Information: 82154

ANST 9709

Androstenedione, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 82157

MASF
35859

Angiosarcoma, MYC (8q24) Amplification, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by fluorescence in situ hybridization testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

FACEC
57824

Angiotensin Converting Enzyme, CSF

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	180 days
	Refrigerated	7 days

CPT Code Information: 82164

ACE
603622

Angiotensin Converting Enzyme, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	24 hours

CPT Code Information: 82164

FANG1 75911

Angiotensin I, Plasma

Specimen Requirements: Patient preparation: Patient should be on a normal sodium diet, 110 mEq of sodium. Patient should be in a recumbent posture for at least 30 minutes prior to collection of specimen. Diuretics, mineralocorticoids, glucocorticoids, estrogens, oral contraceptives, and ACTH medications and sodium, potassium, and posture all affect Angiotensin levels. Specimen Type: Plasma
Collection Container/Tube: EDTA Submission Container/Tube: Plastic vial Specimen Volume: 3 mL
Collection Instructions: 1. Draw blood in a lavender-top (EDTA) tube(s) 2. Centrifuge and aliquot 3 mL of plasma into a plastic vial. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	30 days

CPT Code Information: 83520

ANISP 82857

Anisakis, Parasite, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**ANSE**
82487**Anise, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FANSE**
57520**Annatto Seed (Bixa orellana) IgE**

Specimen Requirements: Container/Tube: Red or SST Preferred: Red top tube Acceptable: Serum gel tube Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

ANNEX
70355

Annexin-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FABAA
75662

Anti-bestrophin Autoantibodies

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: 1. Completed OHSU Ocular request form 2. Clinical history 3. Referring physician information (name & phone number) NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	7 days

CPT Code Information: 84182

AC1Q
621511

Anti-C1q Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial

Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83520

FACN1
75620

Anti-cN-1A (NT5c1A) IBM

Specimen Requirements: Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516

COL7
616879

Anti-Collagen type VII, IgG Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 83516

ADNAS
80204

Anti-DNase B Titer, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 86215

FAEAB
91854

Anti-Enterocyte Antibodies

Specimen Requirements: A completed Anti-Enterocyte Antibody (AEA) Clinical Form is required. Testing will not proceed without required form. Specimen Type: Serum Container/Tube: Red top Specimen volume: 1 mL Collection Instructions: Collect blood in a red-top no additive tube and submit 1 mL of serum shipped frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	

CPT Code Information: 88346; 88350 x 2; ;

AGNTS
43434

Anti-Glial/Neuronal Nuclear Antibody-Type 1 (AGNA-1) Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

AGNTC
43443

Anti-Glial/Neuronal Nuclear Antibody-Type 1 (AGNA-1) Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

FANTI
57892

Anti-IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 1.0 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.0 mL of serum ambient in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Ambient (preferred)	7 days
	Frozen	28 days
	Refrigerated	7 days

CPT Code Information: 83516

FAMDA
75622

Anti-MDA-5 Ab (CADM-140)

Specimen Requirements: Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83520

FFMI2
75591

Anti-Mi-2 Ab

Specimen Requirements: Collection Container/Tube: 6 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Separate serum from cells within 1 hour of collection and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516

FCLNE
91321

Anti-Phosphatidylcholine Ab

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	14 days

CPT Code Information: 83520/x3

FPHET
91322

Anti-Phosphatidylethanolamine Panel

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. After collection, allow blood to clot for 30 minutes. Spin down and send 3 mL of serum

frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	14 days

CPT Code Information: 83520 x 3; ;

FAPMA
75623

Anti-PM/Sci-100 Ab

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 86235

FARWB
57647

Anti-retinal autoantibodies follow up, WB

Specimen Requirements: Note: This test should only be ordered as follow up to previous Anti-retinal autoantibodies performed at Oregon Health Sciences University (OHSU) Ocular Immunology Laboratory. Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	7 days

CPT Code Information: 84182**FAS1A**
75634**Anti-SAE1 Ab, IgG**

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516**FFRFT**
75624**Anti-Synthetase Profile**

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL (volume does NOT allow for repeat testing)**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516 x 4; 86235;

FATHO
75619**Anti-Th/To Ab**

Specimen Requirements: Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: 5 mL SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516

FAT1G
75632**Anti-TIF-1gamma Antibody**

Specimen Requirements: Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 86235

FAU3R
75631**Anti-U3 RNP Antibodies (Fibrillarin)**

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 86235

ABIDR
113389

Antibody Identification, Blood and Serum

Specimen Requirements: Both blood and serum are required. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Specimen Type: Plasma/Blood Collection Container/Tube: 6-mL Pink-top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Plasma 3 mL Red blood cells (RBCs) Collection Instructions: 1. Centrifuge and aliquot plasma into a plastic vial. 2. Label specimen as EDTA plasma or EDTA RBCs as appropriate. 3. Send both tubes. Specimen Type: Serum/Blood Collection Container/Tube: 10-mL Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Serum 5 mL RBCs Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial. 2. Label specimen as serum or clotted RBCs as appropriate. 3. Send both tubes.

Specimen Minimum Volume: Blood: 6 mL in EDTA Pediatric: 2 mL Serum

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 86870; 86860-(if appropriate); 86886-(if appropriate); 86880 x 3 (if appropriate); 86905-(if appropriate); 86978-(if appropriate);

ABYSR
113387

Antibody Screen with Reflexed Antibody Identification, Blood

Specimen Requirements: Container/Tube: Pink top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	4 days
	Ambient	4 days

CPT Code Information: 86850

ABTIR
113390

Antibody Titer, Blood and Serum

Specimen Requirements: Blood cells, plasma, and serum are required. Supplies: Sarstedt Aliquot Tube, 5mL (T914) Specimen Type: Plasma/Blood Collection Container/Tube: 6-mL Pink top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Plasma 3 mL Red blood cells (RBCs) Collection Instructions: 1. Centrifuge and aliquot plasma into plastic vial. 2. Label specimens as EDTA plasma or EDTA RBCs as appropriate. 3. Send both tubes. Specimen Type: Serum/Blood Collection Container/Tube: 10-mL Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Serum 5 mL RBCs Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial. 2. Label specimens as serum or clotted RBCs as appropriate. 3. Send both tubes.

Specimen Minimum Volume: Blood: 6 mL EDTA Pediatric: 2 mL Serum

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 86886; 86870 (if appropriate-per panel tested); 86860 (if appropriate); 86880 x 3 (if appropriate); 86905- (if appropriate); 86978 (if appropriate); 81403 (if appropriate)-Internal only ;

ENAE
89035

Antibody to Extractable Nuclear Antigen Evaluation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235 x 6

FADDS Antidepressant Drug Screen, Qualitative

57772

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL of plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial, Urine Collect 3 mL random urine and send refrigerated in a preservative free plastic urine container.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80333; 80337; 80369;

FASQN Antidepressant Drug Screen, Ur, Quantitative

57740

Specimen Requirements: Collect 3 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 80333; 80337; 80369; ;

MMLYP
81602

Antimicrobial Susceptibility Panel, Yeast, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Sabouraud's dextrose agar slant Specimen Volume: Infecting yeast isolate Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87186

MMLRG
81601

Antimicrobial Susceptibility, Acid-Fast Bacilli, Rapidly Growing, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant or other appropriate media Specimen Volume: Pure isolate Collection Instructions: Organism must be in pure culture, actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87186

MMLSG
34805

Antimicrobial Susceptibility, Acid-Fast Bacilli, Slowly Growing, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large

(T146) Container/Tube: Middlebrook 7H10 agar slant or other appropriate media Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87186

ZMMLS
8073

Antimicrobial Susceptibility, Aerobic Bacteria, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 87077-Ident by MALDI-TOF mass spec (if appropriate); 87185-Beta lactamase (if appropriate); 87186-Antimicrobial Susceptibility, Aerobic Bacteria, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87150-H pylori + Clarithro Resistance PCR (if appropriate); 87150-mecA PCR (if appropriate);

MMLSA
56031

Antimicrobial Susceptibility, Anaerobic Bacteria, Minimal Inhibitory Concentration, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Acceptable Sources: Isolates from blood cultures, bone and joint infections, or brain abscesses, and organisms isolated in pure culture from other sources Supplies: Anaerobic Transport Tube (T588) Infectious Container, Large (T146) Container/Tube: Preferred: Anaerobic transport tube Acceptable: Thioglycollate broth or any other suitable anaerobic transport system Collection Instructions : 1. Organism must be in pure culture and actively growing. Do not submit mixed cultures. 2. Place specimen in a large infectious container and

label as an etiologic agent/infectious substance if appropriate

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87186-Antimicrobial Susceptibility, Anaerobic Bacteria, MIC; 87076-Organism Ref for ID, Anaerobic Bact (if appropriate); 87076-Anaerobe Ident (if appropriate); 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe ident by sequencing (if appropriate); 87150-Identification by PCR (if appropriate); 87185-Beta Lactamase (if appropriate); 87181-Anaerobe Susceptibility per Agent (if appropriate); 87150-mecA PCR (if appropriate);

TB1LN
35994

Antimicrobial Susceptibility, *Mycobacterium tuberculosis* Complex, First Line, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87188 x 3-Antimicrobial Susceptibility, *Mycobacterium tuberculosis* Complex, Broth Method

MMLNS
82019

Antimicrobial Susceptibility, *Nocardia* species and other Aerobic Actinomycetes, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Preferred: Middlebrook 7H10 agar slant without antimicrobials Acceptable: Sabouraud's dextrose agar slant or similar media without antimicrobials (eg, 7H11 agar slant, LJ, MGIT [7H9] broth media) Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87186**AMH1**
608824**Antimullerian Hormone, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	7 days

CPT Code Information: 82166**AN2TS**
43432**Antineuronal Nuclear Antibody Type 2 (ANNA-2) Titer, Serum**

Specimen Requirements: Only orderable as a reflex. For more information see: -PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: 0.6 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

AN2TC
43441

Antineuronal Nuclear Antibody Type 2 (ANNA-2) Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

AN3TS
43433

Antineuronal Nuclear Antibody Type 3 (ANNA-3) Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

AN3TC
43442

Antineuronal Nuclear Antibody Type 3 (ANNA-3) Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

AN1TS
43431

Antineuronal Nuclear Antibody-Type 1 (ANNA-1) Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -DYS2 / Dysautonomia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -GID2 / Gastrointestinal Dysmotility, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum -PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256**AN1TC**
43440**Antineuronal Nuclear Antibody-Type 1 (ANNA-1) Titer, Spinal Fluid**

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -PCDEC / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Spinal Fluid Container/Tube: Sterile vial
Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256**VASC**
83012**Antineutrophil Cytoplasmic Antibodies Vasculitis Panel, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516 x 2; 86036 x 2 (if appropriate);

ANA2 9026

Antinuclear Antibodies (ANA), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86038

NAIFA 65161

Antinuclear Antibodies, HEp-2 Substrate, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	28 days

CPT Code Information: 86039

ASO
80205

Antistrep-O Titer, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collections Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 86060

ATTF
9030

Antithrombin Activity, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85300

AATTF
614506

Antithrombin Activity, with Reflex to Antithrombin Antigen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information:

ATTI
9031

Antithrombin Antigen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85301

GNANT
619005

Antithrombin Deficiency, SERPINC1 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

AATTA
621379

Antithrombin Summary Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see AATTF / Antithrombin Activity, with Reflex to Antithrombin Antigen, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

APIXA
65848

Apixaban, Anti-Xa, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	42 days

CPT Code Information: 80299

FAPIX
75395

Apixaban, Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Plasma Collection Container/Tube: Lavender top or pink top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood in an EDTA (lavender top or pink top) tube(s). Plasma gel tube is not acceptable. 2. Centrifuge and send 2 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	29 days
	Ambient	29 days
	Frozen	

CPT Code Information: 80299

APOL1 Genotype, Varies

Specimen Requirements: Patient Preparation: A previous hematopoietic stem cell transplant from an allogeneic donor will interfere with testing. For information about testing patients who have received a hematopoietic stem cell transplant, call 800-533-1710. Submit only 1 of the following specimens:

Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be

evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Collection Instructions: 1. Invert several times to mix blood. 2. Send cord blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to

determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an

additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability

Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report.

Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: Blood: 0.4 mL Saliva/DNA: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

APOAB 607593

Apolipoprotein A1 and B, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot 1 mL of serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	8 days
	Frozen	60 days
	Ambient	24 hours

CPT Code Information: 82172 x 2

APOA1 607591

Apolipoprotein A1, Serum

Specimen Requirements: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL
Collection Instructions: 1. Centrifuge and aliquot within 2 hours of collection. 2. Red-top tubes should
be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	8 days
	Frozen	60 days
	Ambient	24 hours

CPT Code Information: 82172

APOLB 614544

Apolipoprotein B, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	8 days
	Frozen	60 days
	Ambient	24 hours

CPT Code Information: 82172

APOEG 35358

Apolipoprotein E Genotyping, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81401-APOE (apolipoprotein E) (eg, hyperlipoproteinemia type III, cardiovascular disease, Alzheimer disease), common variants (eg, *2, *3, *4)

FAPLG
57629

Apple IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

APPL
82712

Apple, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

APR
82835

Apricot, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**ARBOP**
83267**Arbovirus Antibody Panel, IgG and IgM, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86651 x 2-California virus (La Crosse) encephalitis antibody, IgG and IgM; 86652 x 2-Eastern equine encephalitis antibody, IgG and IgM; 86653 x 2-St. Louis encephalitis antibody, IgG and IgM; 86654 x 2-Western equine encephalitis antibody, IgG and IgM;

ABOPC
83897**Arbovirus Antibody Panel, IgG and IgM, Spinal Fluid**

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 0.7 mL

Specimen Minimum Volume: 0.7 mL**Transport Temperature:**

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86651 x 2; 86652 x 2; 86653 x 2; 86654 x 2;

ARGIN
70359

Arginase-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FARI
57112

Aripiprazole (Abilify)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	25 days
	Ambient	72 hours

CPT Code Information: 80299

ARVGG
617127

Arrhythmogenic Cardiomyopathy Gene Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for

instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81439

ASOU
608890

Arsenic Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -ASUOE / Arsenic Occupational Exposure with Reflex, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175

ASUOE
608895

Arsenic Occupational Exposure, with Reflex, Random, Urine

Specimen Requirements: Patient Preparation: 1. For the 48-hour period prior to start of collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. 3. For industrial exposure monitoring, recommended sampling time is at the end of the work week. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic vial or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175; 82570;

SPASU
609383

Arsenic Speciation, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. For the 48-hour period prior to start of collection, as well as during the collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate urine specimen within 4 hours of completion of 24-hour collection 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: For multiple collections see Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175

SPAS
607691

Arsenic Speciation, Random, Urine

Specimen Requirements: Patient Preparation: 1. For the 48-hour period prior to start of collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be

collected for 96 hours. Supplies: -Urine Tubes, 10 mL (T068) -Sarstedt Aliquot Tube 5 mL (T914)
 Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic vial or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL
 Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175

ASU24
48537

Arsenic with Reflex, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. For 48-hour period prior to start of collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert. Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert. Specimen Volume: 6 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175

ASB
8645

Arsenic, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original collection tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82175

ASHA
8651

Arsenic, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Head, beard, mustache, chest, pubic Specimen Volume: 0.2 g Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time
Hair	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 82175

ASNA
89848

Arsenic, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Fingernails or toenails Specimen Volume: 0.2 g Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing. 2. Clippings should be taken from all 10 fingernails or toenails.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time
Nail	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 82175

ASCU
608900

Arsenic/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -ASUCR / Arsenic/Creatinine Ratio, with Reflex, Random, Urine -HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175

ASUCR
608905

Arsenic/Creatinine, Ratio, with Reflex, Random, Urine

Specimen Requirements: Patient Preparation: 1. For the 48-hour period prior to start of collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See

Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82175 ; 82570;

FART
57913

Artichoke (*Cynara scolymus*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

ARSU
8777

Arylsulfatase A, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL tube Specimen Volume: 6 mL Collection Instructions: 1. Collect a 24-hour urine specimen. 2. No preservative. 3. Refrigerate specimen during collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated	14 days

CPT Code Information: 84311

ARSAW Arylsulfatase A, Leukocytes 8779

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

ARSBB Arylsulfatase B, Blood Spot 616834

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657; 83864 (if appropriate);

ARSBW Arylsulfatase B, Leukocytes

616835

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

ASCRI Ascaris, IgE, Serum

82764

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

VITC
42362

Ascorbic Acid (Vitamin C), Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 82180

ASPAR
82478

Asparagus, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

AST
8360

Aspartate Aminotransferase (AST) (GOT), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Specimen Volume: 0.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84450

FASPE
57947

Aspen (*Populus tremuloides*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

ASPAG
84356

Aspergillus (*Galactomannan*) Antigen, Serum

Specimen Requirements: Container/Tube: Serum gel (red-top tubes are not acceptable) Specimen Volume: 1.5 mL Collection Instructions: 1. Avoid exposure of specimen to atmosphere to prevent sample contamination from environment. 2. Centrifuge and send specimen in original tube. Do not aliquot or open tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	SERUM GEL TUBE
	Frozen	14 days	SERUM GEL TUBE

CPT Code Information: 87305

FASAB
75571

Aspergillus Antibodies, Quantitative, DID

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 86606 x 3

ASPBA
61009

Aspergillus Antigen, Bronchoalveolar Lavage

Specimen Requirements: Container/Tube: Sterile, leak-proof container Note: Specimen trap collection containers (with suction catheters attached) will be rejected due to high-risk of leakage and contamination upon opening. Avoid use of these for bronchoalveolar lavage specimens. Specimen Volume: 2 mL Additional Information: If specimen transfer into an acceptable sterile container is necessary, perform specimen transfer in a biosafety cabinet. Place container in separate sealed plastic bag.

Specimen Type	Temperature	Time
Lavage	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87305

FAFE
57910

Aspergillus flavus IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

ASP
82911

Aspergillus fumigatus, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SASP
9678

Aspergillus fumigatus, IgG Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86606

FASPG
75681

Aspergillus IgG Precipitins Panel

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 86331 x 6

ASPG
86324

Aspergillus niger, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ADMA
607697

Asymmetric Dimethylarginine, Plasma

Specimen Requirements: Patient Preparation: Fasting-overnight (12 hours) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot 1 mL of plasma into plastic vial. 2. Send specimen

frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 82542

ATRX
70360

ATRX Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AHUGP
618016

Atypical Hemolytic Uremic Syndrome (aHUS)/Thrombotic Microangiopathy (TMA) /Complement 3 Glomerulopathy (C3G) Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport

Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404 81479 81479 (if appropriate for government payers)

AHUSD
64881

Atypical Hemolytic Uremic Syndrome Complement Panel, Serum and Plasma

Specimen Requirements:

Specimen Minimum Volume: Serum: 1.5 mL; plasma: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days
Serum	Frozen	14 days

CPT Code Information: 86160 x 6; 86161; 86162;

AHLP
619372

AudioloGene Hearing Loss Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who

have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 Flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81430; 81431; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

AUPU
82855

Aureobasidium pullulans, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

APIN
82803

Australian Pine, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ALDG2
619516

Autoimmune Liver Disease Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube:
Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86381; 86039; 86015; 86015-Titer (if appropriate);

ALPSG
619746

Autoimmune Lymphoproliferative Syndrome (ALPS) Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient

(preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FARP
75446

Autoimmune Retinopathy Panel by Immunoblot (ARP)

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	7 days

CPT Code Information: 84182 x 8

AUTOG
620092

Autoinflammatory Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FAVCG
57690

Avocado IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

AVOC
82812

Avocado, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

AIAES
606974

Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen
collection is recommended prior to initiation of immunosuppressant medication or intravenous
immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial
Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 12; 84182; 84182 AGNBS (if appropriate); 86256 AGNTS (if
appropriate); 86255 AINCS (if appropriate); 84182 AMIBS (if appropriate); 84182 AN1BS (if
appropriate); 86256 AN1TS (if appropriate); 84182 AN2BS (if appropriate); 86256 AN3TS (if
appropriate); 86255 APBCS (if appropriate); 86256 APBTS (if appropriate); 86256 APHTS (if
appropriate); 86256 CRMTS (if appropriate); 86255 GFACS (if appropriate); 86256 GFATS (if

appropriate); 86256 IG5TS (if appropriate); 86255 NFHCS (if appropriate); 86255 NFLCS (if appropriate); 86256 NIFTS (if appropriate); 84182 PC1BS (if appropriate); 86256 PC1TS (if appropriate); 86256 PC2TS (if appropriate);

FAZAT 91934

Azathioprine (Imuran) as 6-Mercaptopurine

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

CTNBT 616499

B-Catenin Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2) Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479;

COGBF
113530

B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Children's Oncology Group Enrollment Testing, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88275, 88291-FISH Probe, Analysis, Interpretation; 1 probe set; 88271 x 2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

BALAF
609537

B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), FISH, Adult, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Whole blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x4,88275 x2, 88291 - FISH Probe, Analysis, Interpretation; 2 probe sets; 88271 x2, 88275 - FISH Probe, Analysis; each additional probe set (if appropriate); 88271 - FISH Probe (if appropriate);

BALPF
609547

B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Pediatric, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Whole blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 23, 88275 x 11, 88291 x 1-FISH Probe, Analysis, Interpretation; 11 probe sets; 88271 x 2, 88275 x 1-FISH Probe, Analysis; each additional probe set (if appropriate);

BALMF
614215

B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Whole blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x2, 88275 x1, 88291 x1- FISH Probe, Analysis, Interpretation; 1 probe sets; 88271 x2, 88275 x1 - FISH Probe, Analysis; each additional probe set (if appropriate); 88271 x1 -FISH Probe; coverage for sets containing 3 probes (if appropriate);

BCELL 620106

B-Cell and Antibody Deficiency Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CD40
89009

B-Cell CD40 Expression by Flow Cytometry, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 88184

BALLM
608251

B-Cell Lymphoblastic Leukemia Monitoring, Minimal Residual Disease Detection, Flow Cytometry, Varies

Specimen Requirements:

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	72 hours

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker 88185 x 9-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) 88188-Flow Cytometry Interpretation, 9 to 15 Markers

BLBLF
609451

B-Cell Lymphoblastic Leukemia/Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 20 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 20 consecutive unstained, positively charged, unbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 15 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

BLYM
65878

B-Cell Lymphoma, FISH, Tissue

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377 (if 1 probe set); 88377 x 2 (if 2 probe sets); 88377 x 3 (if 3 probe sets); 88377 x 4 (if 4 probe sets); 88377 x 5 (if 5 probe sets); 88377 x 6 (if 6 probe sets);

JLYMF
614564

B-Cell Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will not be accepted; provide fixation method used. Additional Information: Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin-stained slide and 1 unstained slide for each probe set plus an additional unstained slide. Collection Instructions: 1. Include 1 hematoxylin and eosin-stained slide for the entire test order. 2. For each probe set ordered, submit 1 consecutive, unstained, 4 to 5 micron-thick sections placed on positively charged slides, plus 1 additional unstained slide.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin-stained slide and 1 unstained slide for each probe set

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377 (if 1 probe set); 88377 x 2 (if 2 probe sets); 88377 x 3 (if 3 probe sets); 88377 x 4 (if 4 probe sets);

BLPMF
614227

B-Cell Lymphoma, Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot.

Specimen Minimum Volume: Bone marrow: 1 mL; Whole blood: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88275, 88291-FISH Probe, Analysis, Interpretation; 1 probe set;

88271 x 2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

IABCS
88800

B-Cell Phenotyping Profile for Immunodeficiency and Immune Competence Assessment, Blood

Specimen Requirements: Two separate EDTA whole blood specimens are required: 1 refrigerate and 1 ambient transport temperature. For serial monitoring, it is recommended that specimens are collected at the same time of day. Specimen Type: Whole blood for TBBS / Quantitative Lymphocyte Subsets: T, B, and Natural Killer (NK) Cells, Blood Container/Tube: 4 mL Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as TBBS. 3. Ship ambient. Specimen Stability Information: Ambient <52 hours Specimen Type: Whole blood for IABC / B-Cell Phenotyping Screen for Immunodeficiency and Immune Competence Assessment, Blood Container/Tube: Lavender top (EDTA) Specimen Volume: < or =14 years: 4 mL >14 years: 10 mL Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen IABC. 3. Ship refrigerate. Specimen Stability Information: Refrigerated <48 hours

Specimen Minimum Volume: TBBS: 1 mL; IABC: > 14 years: 5 mL; < or = 14 years: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Varies	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355-B cells, total count; 86357-Natural killer (NK) cells, total count; 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio; 86356 x7 - Mononuclear cell antigen, quantitative;

BNP
83873

B-Type Natriuretic Peptide, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	365 days

CPT Code Information: 83880

BABG
81128**Babesia microti IgG Antibodies, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86753

BABPB
618303**Babesia species, Molecular Detection, PCR, Blood**

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information:

FBACS
75397**Baclofen, Serum**

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	120 days
	Ambient	14 days

CPT Code Information: 80369

MSCSF
620941

Bacteria, Virus, Fungus, and Parasite Metagenomic Sequencing, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 2 mL Collection Instructions: 1. Masks should be worn by those collecting and processing specimens for this assay. 2. Handle all vials under sterile technique when open to the air. 3. A separate collection vial of CSF is preferred. 4. Submit specimen from collection vial 2, 3, or 4, as specimens from vial 1 are not acceptable. 5. Indicate on the label which vial is being submitted. 6. Do not centrifuge or heat inactivate. 7. Shunt fluid and ventricular fluid specimens are not acceptable.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	21 days
	Refrigerated	7 days

CPT Code Information: 0480U

ANAE
60519

Bacterial Culture, Anaerobic with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Supplies: Anaerobic Transport Tube (T588) Acceptable Sources: Deep tissues, sterile body fluids, abscesses, percutaneous transtracheal aspirates, suprapubic aspirations, or wounds Collection Instructions: Specimen should be obtained by using a needle and syringe from a source not normally colonized by anaerobes.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	72 hours

CPT Code Information: 87075-Bacterial Culture, Anaerobic; 87076-Anaerobe Ident (if appropriate); 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate); 87150-Identification by PCR (if appropriate); 87176-Tissue Processing (if appropriate); 87185-Beta Lactamase (if appropriate); 87186-Antimicrobial Susceptibility, Anaerobic Bacteria, MIC (if appropriate); 87181-Anaerobe Susceptibility per agent (if appropriate); 87150-mecA PCR (if appropriate);

ANAE 84292

Bacterial Culture, Anaerobic, Varies

Specimen Requirements: Supplies: Anaerobe Transport Tube (T588) Specimen Types: Deep tissues, sterile body fluids, abscesses, percutaneous transtracheal aspirates, suprapubic aspirations, or wounds Collection Instructions: Specimen should be obtained by using a needle and syringe from a source not normally colonized by anaerobes.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	72 hours

CPT Code Information: 87075-Bacterial Culture, Anaerobic; 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate); 87176-Tissue Processing (if appropriate); 87150-Identification by PCR (if appropriate);

CFRCS 60563

Bacterial Culture, Cystic Fibrosis with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Sputum, expectorated or induced Patient Preparation: Have the patient brush their teeth or gargle with water immediately before specimen collection. This reduces the number of contaminating oropharyngeal bacteria. Container/Tube: Sterile container Specimen Volume: Entire collection Acceptable: Specimen Type: Bronchial aspirate or washing, sinus aspirate, bronchoalveolar lavage, endotracheal, or tracheal Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Throat swab Supplies: Culturette (BBL Culture Swab) (T092) BD E-Swab (T853) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium), or ESwab Specimen Volume: Entire collection

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	48 hours

CPT Code Information: 87070-Bacterial, Culture, cystic fibrosis, respiratory; 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87150-Identification by PCR (if appropriate); 87185-Beta lactamase (if appropriate); 87186-Antimicrobial Susceptibility, Aerobic Bacteria, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87150-mec A PCR (if appropriate);

CFRC
89653

Bacterial Culture, Cystic Fibrosis, Respiratory

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Sputum, expectorated or induced Patient Preparation: Have the patient brush their teeth or gargle with water immediately prior to specimen collection. This reduces the number of contaminating oropharyngeal bacteria. Container/Tube: Sterile container Specimen Volume: Entire collection Acceptable: Specimen Type: Bronchial aspirate or washing, sinus aspirate, bronchoalveolar lavage, endotracheal, or tracheal Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Throat swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium), or ESwab

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	48 hours

CPT Code Information: 87070-Bacteria, culture, cystic fibrosis, respiratory; 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe Ident by sequencing (if appropriate); 87150-Identification by PCR (if appropriate);

BTWGS
65162

Bacterial Typing, Whole Genome Sequencing, Varies

Specimen Requirements: Aerobic Bacteria Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant Specimen Volume: Isolates on separate agar slants in pure culture Collection Instructions: 1. Isolate the bacteria (must be *Acinetobacter baumannii*, *Campylobacter jejuni/coli*, *Enterobacter cloacae*, *Enterococcus faecalis*, *Enterococcus faecium*, *Escherichia coli*, *Klebsiella pneumoniae*, *Legionella pneumophila*, *Pseudomonas aeruginosa*, *Serratia marcescens*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Staphylococcus lugdunensis*, *Streptococcus agalactiae*, or *Streptococcus pyogenes*). 2. Bacterial isolate must be in pure culture, actively growing. Do not submit mixed cultures. 3. Each isolate must be submitted under a separate order. Anaerobic Bacteria Supplies: -Anaerobe Transport Tube (T588) -Infectious Container, Large (T146) Container/Tube: Preferred: Anaerobic transport tube Acceptable: Thioglycollate broth or any other suitable anaerobic transport system Specimen Volume: Isolates in separate transport tubes in pure culture Collection Instructions: 1. Isolate the bacteria (must be *Clostridioides difficile* or *Cutibacterium [Propionibacterium] acnes*). 2. Do not submit growth directly from a CHROMagar plate; subculture to anaerobic media to obtain pure isolate and confirm identification prior to submission. 3. Bacterial isolate must be in pure culture, actively growing. Do not submit mixed cultures. 4. Each isolate must be submitted under a separate order.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 0010U-Bacterial Typing, Whole Genome Seq; 87900-Bioinformatics Reanalysis (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87077-Additional identification procedure (if appropriate); 87076-Id MALDI-TOF mass spec anaerobe (if appropriate); 87076-Anaerobe Ident (if appropriate); 87153-Anaerobe ident by sequencing (if appropriate);

BVRNA
621435

Bacterial Vaginosis, Nucleic Acid Amplification, Vaginal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Vaginal	Refrigerated (preferred)	30 days	APTIMA VIAL
	Frozen	60 days	APTIMA VIAL
	Ambient	30 days	APTIMA VIAL

CPT Code Information: 81513

BAHG
82711

Bahia Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BYST
82759

Baker's Yeast, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BCYP
82722

Bald Cypress, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BAMB
82879

Bamboo Shoot, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBANG
57635

Banana IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL
Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BANA
82746

Banana, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BAP1
71481

BAP1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BAP1Z
614581

BAP1-Tumor Predisposition Syndrome, BAP1 Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an
allogenic donor will interfere with testing. For information about testing patients who have received a

bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

BARBX
62713

Barbiturates Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit (T282) containing the specimen containers, seals, and documentation required Specimen Volume: 10 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 10 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80345; G0480 (if appropriate);

BARBU
80372

Barbiturates Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: G0480; 80345 (if appropriate for select payers);

FBCFS
75839

Barbiturates Confirmation, Serum

Specimen Requirements: Only orderable as a reflex test.

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 80345; G0480 (if appropriate);

FCDUB
75786

Barbiturates, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

FBARS 57742

Barium, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a EDTA metal-free royal blue-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL metal-free EDTA plasma refrigerated in a plastic vial. Serum Draw blood in a metal-free royal blue-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL metal-free serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 83018

BGRS 82785

Barley Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBARG
57578

Barley IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BRLY
82687

Barley, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBART
91439

Bartonella Antibody Panel, IFA CSF

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL of spinal fluid (CSF). Ship refrigerate

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86611 x 4

BART
81575

Bartonella Antibody Panel, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86611 x 4

BARTB
89983

Bartonella, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Bartonella species DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 87801

BARRP
84440

Bartonella, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Bartonella species DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Heart valve, liver, lymph node, spleen, or skin tissue papule/lesion/nodule Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue. 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days/ Frozen <7 days Preferred Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Heart valve, liver, lymph node, spleen, or skin tissue papule/lesion/nodule Supplies: Tissue Block Container (T553) Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Heart valve, liver, lymph node, spleen, or skin tissue papule/lesion/nodule Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Fluid Sources: Cerebrospinal or ocular (eg, vitreous humor fluid) Container/Tube: Sterile vial Specimen Volume: 0.5 mL Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days Collection Instructions: For CSF, submit specimen from collection vial 2. Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days

Specimen Minimum Volume: Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections Fluid: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87801

RBART
618100**Bartter Syndrome Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404; 81406; 81407; 81479; 81479 (if appropriate for government payers);

BMAMA
113630**Basic Metabolic Panel, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	24 hours

CPT Code Information: 84132; 84295; 82435; 82374; 84520; 82565; 82310; 82947;

FBSLG
57660**Basil IgG**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BASL
82489

Basil, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBBLE
57546

Bass Black (Sea Bass) (Centropristis striata) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen
Volume: 0.5 mL Collection Instructions: Draw blood in a plain red top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FBSQU Bath Salts Panel (Qualitative), Urine

75774

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 2 mL Collection Instructions: Collect 2 mL random urine without preservative. Send specimen refrigerated in a plastic, preservative-free urine container.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 80371

BAYL Bay Leaf, IgE, Serum

82601

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBWME 57583 Bayberry/Wax Myrtle (Myrica spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain re-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

BCL2 70362 BCL-2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BCL6
70363

BCL-6 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BCOR
605260

BCOR Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BCRFX
65248

BCR/ABL1 Qualitative Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210 Quantitative Assay, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL; Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206; 81207; 81208; 81479 (if appropriate for government payers);

BA190
83336

BCR/ABL1, p190, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Assay, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81207

B190R
48391

BCR/ABL1, p190, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see BCRFX / BCR/ABL1 Qualitative Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210 Quantitative Assay, Varies. Submit only 1 of the following specimens: Specimen Type: Whole blood Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow

top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81207

BCRAM
113538

BCR/ABL1, p210, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Chronic Myeloid Leukemia (CML), Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Refrigerated (preferred)	72 hours
	Ambient	72 hours

CPT Code Information: 81206-BCR/ABL1 (t[9;22]) (eg, chronic myelogenous leukemia) translocation analysis; major breakpoint, qualitative or quantitative

BCRAB
89007

BCR/ABL1, p210, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Chronic Myeloid Leukemia (CML), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206

B210R
48390

BCR/ABL1, p210, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see BCRFX /BCR/ABL1 Qualitative Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210 Quantitative Assay, Varies. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206

BADX
89006

BCR/ABL1, Qualitative, Diagnostic Assay, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Peripheral blood: 8 mL; Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206; 81207; 81208; 81479 (if appropriate for government payers);

BAKDM
89609

BCR/ABL1, Tyrosine Kinase Inhibitor Resistance, Kinase Domain Mutation Screen, Sanger Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Acceptable: Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL; Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81170-ABL1 (ABL proto-oncogene 1, non-receptor tyrosine kinase)(eg, acquired imatinib tyrosine kinase inhibitor resistance), gene analysis, variants in the kinase domain

P190M
618879

BCR::ABL1, p190, mRNA Detection, Reverse Transcription PCR, Quantitative, Monitoring Assay, Bone Marrow

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL
Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Refrigerated (preferred)	72 hours
	Ambient	72 hours

CPT Code Information: 81207

FBEBE
57521

Bean Black (Phaseolus spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL
Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FBGSG
57522

Bean Green/String IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL
Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FBKG
57662

Bean Kidney IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FBLME
57523

Bean Lima (Phaseolus limensis) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FNBE
57937

Bean Navy/White (Phaseolus vulgaris) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FBNWG
57655

Bean Navy/White IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BWRS
35376

Beckwith-Wiedemann Syndrome/Russell-Silver Syndrome, Molecular Analysis, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information:

BECH
82669

Beech, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBEFG
57626

Beef IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume:
0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001**BEEF**
82697**Beef, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FBTRG**
57689**Beet Root IgG**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume:
 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
 Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BEETS 82618

Beets (Beetroot), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPHEN 91136

Benzene as Phenol, Occupational Exposure, Urine

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 82570/Creatinine; 84600/Volatiles;

FBEN
90294

Benzene, Occupational Exposure, Blood

Specimen Requirements: Draw blood in a green-top (sodium heparin) tube(s) and send 20 mL in two tubes of sodium heparin whole blood refrigerated. Blood should be drawn at end of shift. Tubes should be filled to prevent loss of volatile compound into headspace.

Specimen Minimum Volume: 2.5 mL (in two tubes)

Transport Temperature:

Specimen Type	Temperature	Time
WB Sodium Heparin	Refrigerated (preferred)	14 days
	Frozen	365 days

CPT Code Information: 84600

FBCQ
75822

Benzodiazepine Confirmation, Urine

Specimen Requirements: Only orderable as a reflex. For further information see FSHPU/Sedative Hypnotic Panel, Urine

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate); ;

BNZX
608279

Benzodiazepines Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit containing the specimen containers, seals, and documentation required Specimen Volume: 5 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 5 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80347; G0480 (if appropriate);

BNZU
608255

Benzodiazepines Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: G0480 ; 80347 (if appropriate for select payers); 80339 (if appropriate for select payers); 80368 (if appropriate for select payers);

FCDU2
75777

Benzodiazepines, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

FBENZ
90092

Benzotropine (Cogentin), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

BBEET
82838

Berlin Beetle, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BERG
82892

Bermuda Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBERY
91092

Beryllium, Blood

Specimen Requirements: Draw blood in a metal free, royal blue-top with EDTA tube(s). Send 2 mL of EDTA whole blood refrigerated.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA - Metal Free (ERB)	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 83018

BETV2
609436

BET v2 (Profilin), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 86008

WBSEQ Beta Globin Gene Sequencing, Varies

62128

Specimen Requirements:

Specimen Minimum Volume: Blood: 1 mL; Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81364-HBB (hemoglobin, beta) full sequence

FBLGG Beta Lactoglobulin IgG

57667

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

AB2GP
86180**Beta-2 Glycoprotein 1 Antibodies, IgA, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86146

B2GMG
62926**Beta-2 Glycoprotein 1 Antibodies, IgG and IgM, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86146 x 2

GB2GP
86182**Beta-2 Glycoprotein 1 Antibodies, IgG, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86146

MB2GP
86181

Beta-2 Glycoprotein 1 Antibodies, IgM, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86146

B2MU
602026

Beta-2 Microglobulin, Random, Urine

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7) which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, urine tube Specimen Volume: 1.0 mL Collection Instructions: 1. Patient should empty bladder. 2. Have patient drink at least 0.5 liters of water. 3. Within 1 hour, collect a random urine specimen. 4. Add 1 M sodium hydroxide (NaOH) as preservative to the collection. This preservative is intended to achieve an approximate pH of between 6 and 8.

Specimen Minimum Volume: 0.5mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	14 days
	Refrigerated	48 hours

CPT Code Information: 82232

BETA2
80351

Beta-2 Transferrin: Detection of Spinal Fluid in Other Body Fluid

Specimen Requirements: Specimen Type: Body fluid Sources: Nasal, otic, wound, etc Container/Tube: Preferred: Sterile container, syringe, test tube, or microtube Acceptable: Plain cotton swab or gauze Specimen Volume: 0.5 mL Collection Instructions: 1. If submitting a syringe, remove needle. Add cap to end of syringe. 2. If direct collection is not feasible, specimen may be collected using a plain cotton swab or gauze. 3. If gauze is used to collect specimen, circle area on the gauze where specimen was collected. 4. Place cotton swab or gauze in as small a container as possible (eg, plain test tube or collection container). 5. Do not collect specimen with a culture swab. 6. Do not add any liquid to the swab or gauze. Additional Information: 1. Specimens collected from above the shoulders risk salivary contamination, which can degrade the beta-2 transferrin protein. These specimens should be frozen immediately following collection and kept frozen until testing is performed. 2. Although results may be obtainable on smaller specimens (perhaps as little as 0.05 mL, depending on the protein concentrations and percentage of spinal fluid in the specimen), reliable results are best obtained with an adequate specimen volume. 3. Specimens collected with additives such as microbiology media (eg, Stuart or Amies liquid medium) or TransFix/EDTA (used for analyses in flow cytometry) yield uninterpretable results and will be rejected.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen	14 days

CPT Code Information: 86335

B2MC
60546

Beta-2-Microglobulin (Beta-2-M), Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Send spinal fluid from collection vial 1.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82232

B2M
9234

Beta-2-Microglobulin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82232

BAMY
70634

Beta-Amyloid Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AMYR
615903

Beta-Amyloid Ratio (1-42/1-40), Spinal Fluid

Specimen Requirements: Container/Tube: Preferred: Sarstedt 1.5 mL tube (Ref. 72.703.600), Collect at least 750 mcL of cerebrospinal spinal fluid (CSF) or (> or =50% full). Acceptable: -CSF AD Biomarker Tube (T833; Sarstedt CSF False Bottom Tube 63.614.625 [2.5 mL]) -Sarstedt 72.694.600 (2 mL) -Sarstedt 10 mL tube Ref. 62.610.018 (Collect at least 5 mL of CSF [> or =50% full]) All tubes should be filled to between 50% to 100% of the total empty container volume. Specimen Volume: 0.75

to 1.5 mL or at least 50% container volume
Collection Instructions: 1. This test is intended for use in adult patients, aged 55 years and older. Do not collect CSF for this test if the patient is younger than 55 years of age. 2. Perform lumbar puncture and discard the first 1 to 2 mL of CSF. Note: CSF collection should be performed by the gravity drip method. 3. Discard any visibly blood contaminated CSF. 4. Collect CSF directly into one of the listed collection tubes until the tube is at least 50% full. Specimens received with less than the required fill volume may be rejected. 5. If transporting frozen, freeze sample upright prior to placing in transport container. 6. If transporting refrigerate, tubes should be transported upright. Note: Polystyrene collection tubes are not acceptable. Exposure of CSF to polystyrene tubes may result in falsely low beta-amyloid concentrations. For more information see Cautions. 7. Collection instructions can also be found on Spinal Fluid Specimen Collection Instructions for B-Amyloid (1-42/1-40) (T979).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	90 days
	Refrigerated	14 days
	Ambient	48 hours

CPT Code Information: 0358U

BCATN
70361

Beta-Catenin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CTX
83175

Beta-CrossLaps, Serum

Specimen Requirements: Patient Preparation: Patient should fast for 12 hours before specimen

collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top
Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection
Instructions: 1. Collect specimen prior to 10 a.m. 2. Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	72 hours

CPT Code Information: 82523

BGA
8486

Beta-Galactosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable:
Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in
original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

WBGDR
620975

Beta-Globin Gene Cluster Deletion/Duplication, Blood

Specimen Requirements: Only orderable as a reflex. For more information see: -HAEV1 /
Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood
-MEV1 / Methemoglobinemia Evaluation, Blood -REVE2 / Erythrocytosis Evaluation, Blood -THEV1 /
Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	

CPT Code Information: 81363-HBB (hemoglobin, beta, beta-globin) (eg, beta thalassemia), duplication/deletion analysis

WBGDD Beta-Globin Gene Cluster, Deletion/Duplication, Varies 620979

Specimen Requirements: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in the original tube. Do not aliquot. Specimen Stability Information: Refrigerated (preferred)/Ambient

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81363-HBB (hemoglobin, beta, beta-globin) (e.g. beta thalassemia), duplication/deletion analysis

WBSQR Beta-Globin Gene Sequencing, Blood 47959

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	14 days

CPT Code Information: 81364-HBB (hemoglobin, beta) full sequence

GBAW Beta-Glucosidase, Leukocytes 606273

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in whole blood original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82963

GUSBB
618288

Beta-Glucuronidase, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing EDTA and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours.

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657

GUSBW
618289

Beta-Glucuronidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

BHCG
61718

Beta-Human Chorionic Gonadotropin, Quantitative, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 84702

BHSF
8877

Beta-Human Chorionic Gonadotropin, Quantitative, Spinal Fluid

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 84702

BHYD
9251

Beta-Hydroxybutyrate, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 82010

BLAC
82896

Beta-Lactoglobulin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

HCO3
876

Bicarbonate, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of collection. 2. Red-top tube must be centrifuged, and the

serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	24 hours

CPT Code Information: 82374

FBIUR
75383

Bicarbonate, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Send 1 mL from a random urine collection. Send specimen refrigerated in a preservative free plastic urine container.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	48 hours

CPT Code Information: 82374

BAPS
62538

Bile Acid Profile, Serum

Specimen Requirements: Patient Preparation: Patient must fast for 12 to 14 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	90 days
	Ambient	90 days
	Frozen	90 days

CPT Code Information: 82542

BAIPD
41445

Bile Acids for Peroxisomal Disorders, Serum

Specimen Requirements: Patient Preparation: Patient must fast for 12 to 14 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	90 days
	Ambient	90 days
	Frozen	90 days

CPT Code Information: 82542

BAMRP
619919

Bile Acids Malabsorption Panel, Serum and Feces

Specimen Requirements:

Specimen Minimum Volume: Feces: See Specimen Required; Homogenized feces: 1 mL; Serum: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen	30 days
Serum	Frozen (preferred)	90 days
	Refrigerated	72 hours
	Ambient	24 hours

CPT Code Information: 82542 x2

BA48F
607368

Bile Acids, Bowel Dysfunction, 48 Hour, Feces

Specimen Requirements:

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen	30 days

CPT Code Information: 82542

BAFS
62234

Bile Acids, Fractionated and Total, Serum

Specimen Requirements: Patient Preparation: Patient must fast for 12 to 14 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	90 days
	Ambient	90 days
	Frozen	90 days

CPT Code Information: 82542

BILEA
84689

Bile Acids, Total, Serum

Specimen Requirements: Patient Preparation: Patient must be fasting for 12 hours. Infants and pregnant patients do not need to fast. Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and serum aliquoted into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 82239

FBAC
75012

Bile Acids, Urine

Specimen Requirements: Collection Container: Plastic urine container Specimen Volume: 5-25 mL Collection Instructions: Collect 5-25 mL random urine without preservative. Ship frozen in a plastic container. NOTE: Submit with specimen: 1. Clinical history/Preliminary diagnosis -Because URSO can mask detection of bile acid synthetic defects it is preferable for patients to be off Urso or Actigall for 5 days before sample collection. -If possible, send Urine & Serum (ZW166 - Bile Acids Serum, referral lab code 9001004). Urine is analyzed for all patients - if Urine shows evidence of a metabolic abnormality, Serum will be tested. Urine and serum must be ordered separately as they are 2 separate tests with separate charges.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	
	Ambient	48 hours
	Refrigerated	48 hours

CPT Code Information: 83789

BILAO
71917

Biliary Tract Malignancy, FISH, Varies

Specimen Requirements: Supplies: PreservCyt Vial (T536) Specimen Type: Bile duct brushing, bile duct aspirate, hepatobiliary brushing, or hepatobiliary aspirate (fine-needle aspiration is not acceptable) Container/Tube: Separate ThinPrep vial, containing 20 mL PreservCyt or CytoLyt solution for each specimen Specimen Volume: Entire collection Collection Instructions: 1. If performing local cytology in addition to fluorescence in situ hybridization testing, aliquot half of the specimen into another ThinPrep vial before processing the specimen. 2. Submission of residual specimen (after processing other testing) may compromise the sensitivity of the test. 3. Label each specimen with

specific source (eg, right hepatic duct or common bile duct).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88377

FBILM
70587

Biliary Tract Malignancy-Cytology, FISH, Varies

Specimen Requirements: Supplies: PreservCyt Vial (T536) CytoLyt Solution (T564) Specimen Type: Bile duct brushing, bile duct aspirate, hepatobiliary brushing, or hepatobiliary aspirate Container/Tube: Separate ThinPrep vial containing 20 mL PreservCyt or CytoLyt solution for each specimen Specimen Volume: Entire collection Collection Instructions: Label with site specimen was collected from (eg, right hepatic duct or common bile duct).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88112; 88377 (if appropriate);

BILID
81787

Bilirubin Direct, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	24 hours	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	6 hours	LIGHT PROTECTED

CPT Code Information: 82248

BFBL
606895

Bilirubin, Body Fluid

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, Jackson Pratt [JP] drain) -Pericardial fluid Acceptable Source: Other body fluid, write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Opaque, amber vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into an amber vial to protect from light. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	70 days	LIGHT PROTECTED
	Refrigerated	14 days	LIGHT PROTECTED

CPT Code Information: 82247

BILI3
8452

Bilirubin, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	24 hours	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	6 hours	LIGHT PROTECTED

CPT Code Information: 82247-Bilirubin, total; 82248-Bilirubin, direct;

BILIT
81785

Bilirubin, Total, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 82247

BIOTN
606867

Biotin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 84591

BTDZ
35375

Biotinidase Deficiency, BTD Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81404-BTD (biotinidase) (eg, biotinidase deficiency), full gene sequence

BIOTS
88205

Biotinidase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge immediately and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	21 days
	Refrigerated	5 days

CPT Code Information: 82261

FBFPI
57925

Bird Fancier's Precipitin Panel I

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 86331 x 10

BHDZ
614584

Birt-Hogg-Dube Syndrome, FLCN, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

BIWB
64274

Bismuth, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Collection Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) Specimen Volume: 0.8 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

BIVAL
614120

Bivalirudin, Ecarin, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	42 days

CPT Code Information: 80299

PBKQN **BK Virus DNA Detection and Quantification, Plasma**
614567

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot into a plastic vial per manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87799

UBKQN **BK Virus DNA Detection and Quantification, Random, Urine**
614568

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	84 days	COBAS PCR URINE
	Ambient	84 days	COBAS PCR URINE

CPT Code Information: 87799

BLPEP
82814

Black/White Pepper, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BLACK
82361

Blackberry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SBL
8237

Blastomyces Antibody Immunodiffusion, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86612

CBL
81541

Blastomyces Antibody Immunodiffusion, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Submit specimen from collection vial number 2 (preferred), 3, or 4.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86612

BLAST
35793

Blastomyces Antibody, Enzyme Immunoassay, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86612; 86612 (if applicable);

Bleeding Diathesis Profile, Limited, Plasma**Specimen Requirements:****Specimen Minimum Volume:** 4 Plastic vials, each containing 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85610-PTSC; 85730-APTSC; 85670-TTSC; 85384-CLFIB; 85379-DIMER; 85390-26-ALBLI; 85240-F8A; 85250-F_9; 85291-FXIII; 85246-VWAG; 85397-VWACT; 85130-Chromogenic factor VIII (if appropriate); 85130-Chromogenic factor IX (if appropriate); 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85245-Ristocetin cofactor (if appropriate); 85247-von Willebrand factor multimer (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85300-Antithrombin activity (if appropriate); 85301-Antithrombin antigen (if appropriate); 85335-Bethesda units (if appropriate); 85335-Factor II inhibitor screen (if appropriate); 85335-Factor V inhibitor screen (if appropriate); 85335-Factor VII Inhibitor screen (if appropriate); 85335-Factor VIII inhibitor screen (if appropriate); 85335-Factor IX inhibitor screen (if appropriate); 85335-Factor X inhibitor screen (if appropriate); 85335-Factor XI inhibitor screen (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85410-Alpha-2 plasmin inhibitor (if appropriate); 85415-PAI-1 Ag (if appropriate); 85420-Plasminogen Activity (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Hex LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirm (if appropriate); 85635-Reptilase time (if appropriate); 85732-APTT mix 1:1 (if appropriate);

Bleeding Disorders, Comprehensive Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to

culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

GNBLF
619243

Bleeding Disorders, Focused Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: See

Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81238; 81407; 81408; 81479; 81479 (if appropriate for government payers); 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

BTROP
82374

Blomia tropicalis, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BUN
81793

Blood Urea Nitrogen (BUN), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days

CPT Code Information: 84520

BWOR
82840

Blood Worm, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MUSS
82548

Blue Mussel, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBLUG
57658

Blueberry IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BLUE
82359

Blueberry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BOB1
70365

BOB-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per

test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BAP
82985

Bone Alkaline Phosphatase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 84080

BHISI
70314

Bone Histomorphometry, Consultant Interpretation, Slides Only

Specimen Requirements: Specimen Type: Bone Source: Anterior iliac crest Slides: 2 Submission Container/Tube: Plastic slide holder Specimen Volume: A minimum of 1 Goldner Trichrome-stained slide and 1 hematoxylin and eosin-stained slide are required. One tetracycline slide should be submitted as applicable. Collection Information: For complete instructions see Bone Histomorphometry Specimen Preparation (T579).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 88321

BHISC
70312

Bone Histomorphometry, Gross Microscopic Exam

Specimen Requirements: Supplies: Metal Free Specimen Vial (T173) Specimen Type: Bone Preferred: Anterior iliac crest Container/Tube: Metal-free specimen vial Specimen Volume: Entire specimen Collection Instructions: 1. Fix specimen in 70% ethanol. 2. Quantitation of bone turnover requires 2 time-spaced tetracycline labels. 3. The use of metal-free containers is required to avoid aluminum or iron contamination. 4. For complete instructions see Bone Histomorphometry Specimen Preparation (T579). Additional Information: Consultation with a Mayo Clinic Laboratories pathologist or endocrinologist/nephrologist is recommended for first-time users of this service. Written instructions are available upon request.

Specimen Minimum Volume: 5 mm bone

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88346; 88307; 88313;

BMAPC
113350

Bone Marrow Aspirate (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 85097 GC

BMBPC
113351**Bone Marrow Biopsy (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88305

BMCP
113352**Bone Marrow Clot (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88305

BPRPV
618299**Bordetella pertussis and Bordetella parapertussis, Molecular Detection, PCR, Varies**

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Bordetella pertussis or Bordetella parapertussis DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Nasopharyngeal swab Supplies: Culture Swab - Liquid Stuarts/Single Swab (NP Swab) (T515) Container/Tube: Rayon swab with an aluminum shaft placed in transport medium such as a green-top nasopharyngeal swab (rayon mini-tip) with Stuart's media (no charcoal), or Stuart's media with charcoal, or Amies media with or without charcoal (Transwab Nasopharyngeal with Charcoal System). Additional Information: 1. Swab transport containers without charcoal must contain a pledget saturated with either Stuart's or Amies liquid media. Clear semi-solid/solid media is gel and will be rejected. 2. Other swab or media types may be inhibitory to PCR testing and will be rejected. Acceptable: Specimen Type: Nasopharyngeal (not throat) aspirate/wash or nasal aspirate/wash Container/Tube: Sterile container with a screw top cap (no transport media) Specimen Volume: Entire collection

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 87798 x 2; 87798 (if appropriate for government payers);

BORDG
64780

Bordetella pertussis Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86615

BOAC
9723

Boron, Serum/Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	Acid Washed Plastic (MML Supply T619)
	Ambient	30 days	Acid Washed Plastic (MML Supply T619)
	Frozen	30 days	Acid Washed Plastic (MML Supply T619)

CPT Code Information: 83018

BMIYC
64969

Borrelia miyamotoi Detection PCR, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Submit aliquot from collection vial 2.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87478

BMIPB
618298

Borrelia miyamotoi Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 87478

BOT
82715

Botrytis cinerea, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BOV
82135

Bovine Serum Albumin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

BXMPL
82876

Box Elder/Maple, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BRACH
70366

Brachyury Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BBRAF
35893

BRAF Analysis (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies		

CPT Code Information: 81210-BRAF (v-raf murine sarcoma viral oncogene homolog B1) (eg, colon cancer), gene analysis, V600E variant

BRFKT
616786

BRAF and KIT Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1

Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81406; 81479; 81479 (if appropriate for government payers);

MBRAF
616925

BRAF V600 Somatic Mutation Analysis, Bone Marrow

Specimen Requirements: Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81210

TBRBF
616940

BRAF V600 Somatic Mutation Analysis, Tumor, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Blocks prepared with alternative fixation methods will not be accepted; provide fixation method used Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 or more

unstained slides. Collection Instructions: 1. A minimum of 10 percent tumor is required. 2. Submit 1 hematoxylin and eosin-stained slide and 4 to 10 unstained, nonbaked slides with 7 to 10-micron thick sections of the tumor tissue with an aggregate of 25 mm squared. 10 microns is preferred. 3. 5-micron sections will be accepted if a 50mm squared aggregate is cut

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin-stained slide and 1 unstained slide for each probe set

Transport Temperature:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81210

BRAFV
70367

BRAF V600E Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BRAFD
608305

BRAF V600E/V600K Somatic Mutation Analysis, Tumor

Specimen Requirements: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue slide Slides: 1 Hematoxylin and eosin stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81210; 88381-Microdissection, manual;

MSUSC
618716

Branched-Chain Amino Acids, Self-Collect, Blood Spot

Specimen Requirements: Supplies: Blood Spot Collection-Self Collect (T858) Container/Tube: Blood Spot Self Collection Card Specimen Volume: 2 Blood spots Collection Instructions: 1. Order test each time the patient is to collect a dried blood specimen at home and mail the specimen directly to Mayo Clinic Laboratories. 2. Order should be placed a minimum of 3 days prior to desired date of collection. 3. Enter patient's address information for each order created, including street address (post-office [PO] boxes are not acceptable delivery locations), city, state abbreviation, ZIP (postal) code, country, and home phone number. 4. For each order, the Blood Spot Collection-Self Collect kit will be mailed directly to the patient for self-collection (delivery to a PO box will not occur). 5. For more information on how to collect blood spots, see the following: -How to Collect Dried Blood Spot Samples via fingerstick. -Blood Spot Collection Instructions-Fingerstick -Blood Spot Collection Instructions-Fingerstick-Spanish

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	59 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Refrigerated	59 days	FILTER PAPER

CPT Code Information: 0381U

FBNC1
75583

Brazil Nut Component rBer e 1

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86008

BRAZX
618852

Brazil Nut Component, IgE, Serum

Specimen Requirements: Only orderable as a reflex. For more information see BRAZR / Brazil Nut, IgE, with Reflex to Brazil Nut Component, IgE, Serum Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

BRAZR
618851

Brazil Nut, IgE with Reflex to Brazil Nut Component, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BRAZ
82899

Brazil Nut, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BRCAT
616495

BRCA1/2 Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm² -Minimum amount of tumor area: tissue 36 mm² -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm² and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm². Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381 - Microdissection, manual; 81163;

HBOCZ
614570

BRCA1/BRCA2 Genes, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81162

C2729
606583

Breast Carcinoma-Associated Antigen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Specimens that have not been aliquoted will be canceled. 2. Send refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	4 days

CPT Code Information: 86300**BRG1**
71537**BRG1 (SMARCA4) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**BRIVA**
620767**Brivaracetam, Plasma**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Lavender top (K2 EDTA) Acceptable: Lavender top (K3 EDTA), green top (sodium or lithium heparin), light-blue top (sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. For sustained-release formulations only, draw blood a minimum of 12 hours after last dose. 3. Within 2 hours of collection, centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

BRBPS
65058

Broad Range Bacterial PCR and Sequencing, Varies

Specimen Requirements: Fresh tissue is preferred over formalin-fixed, paraffin-embedded tissue. Submit only 1 of the following specimens: Preferred Specimen Type: Specimen Type: Fresh tissue or biopsy Sources: Normally sterile tissue such as bone, lymph node, joint, heart valve, brain, viscera, organ, lung, prostate Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3)-approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue. 3. Freeze specimen. Specimen Stability Information: Frozen (preferred) <21 days/Refrigerated <21 days Alternate Specimen Types: Preferred: Paraffin-embedded tissue block Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue block Sources: Normally sterile or deep tissues such as bone, lymph node, joint, heart valve, brain, viscera, organ, lung, prostate Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Paraffin-embedded tissue block Specimen Type: Section (scrolls) of FFPE tissue block Sources: Normally sterile or deep tissues such as bone, lymph node, joint, heart valve, brain, viscera, organ, lung, prostate Container/Tube: Sterile container for each individual cut section (scroll) Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Fluid Sources: Normally sterile body fluids such as vitreous humor, pleural, abdominal, peritoneal, ascites, pericardial, pelvic, prostatic Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect fresh fluid specimen. 2. Freeze specimen. Specimen Stability Information: Frozen (preferred) <21 days/Refrigerated <21 days Specimen Type: Spinal fluid Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect fresh spinal fluid (CSF) specimen using sterile technique. 2. Submit specimen from collection vial 2 or higher, specimens in vial 1 are not acceptable. 3. Indicate on the label which vial is being submitted. 4. CSF collected via shunt and ventricular fluid are also acceptable. Label tube with applicable collection information if submitting one of these specimens. Specimen Stability Information: Frozen (preferred) <21 days/Refrigerated <21 days Specimen Type: Synovial fluid Container/Tube: Preferred: Red top or sterile container Acceptable: Lavender top (EDTA), pink top (EDTA), royal blue top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Frozen (preferred) <21 days/Refrigerated <21 days

Specimen Minimum Volume: Fluid: 0.5 mL; Fresh tissue or biopsy: 5 mm(3); Paraffin-embedded tissue block: two 10-micron sections

Transport Temperature:

FBRCG
57642

Broccoli IgG

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87801-Broad Range Bacterial PCR and Sequencing; 87798-Bacterial Ident by Sequencing (if appropriate); 87798-Specimen Identification by PCR (if appropriate); 87798-Ident by Next Generation Sequencing (if appropriate); 87483-Meningitis Encephalitis Panel, PCR (if appropriate);

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

BROC
82817

Broccoli, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BROM
82919**Brome Grass, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBROM
75695**Bromine - Total, Blood**

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Blood Collection Container/Tube: Royal Blue top tube (Trace metal-free; EDTA) Specimen Volume: 2 mL Collection Instructions: Draw blood in a royal blue top (trace metal-free; EDTA) tube(s). Send 2 mL refrigerated. NOTE: Avoid exposure to gadolinium or iodine based contrast media for 96 hours prior to sample collection. Do not use disinfectants containing iodine, such as Betadine, during venipuncture.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA - Metal Free (ERB)	Refrigerated (preferred)	30 days	METAL FREE
	Frozen	365 days	METAL FREE
	Ambient	30 days	METAL FREE

CPT Code Information: 82542

BRCMG
607346**Brucella Antibody Screen, IgM and IgG, ELISA, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and

aliquot serum into a sterile, plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86622 x 2-Brucella antibody, IgG and IgM; 86622-Brucella total antibody, agglutination (if appropriate);

BRUTA
8112

Brucella Total Antibody Confirmation, Agglutination, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86622

SCN5A
617449

Brugada Syndrome, SCN5A Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred:

Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Tissue biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5 to 3 cm³ or larger Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect a Dried Blood Spot Sample. Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Send Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from blood spots, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 2. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions. 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 µL at a concentration of 75 ng/µL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed

as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81407

BSPR
82480

Brussels Sprouts, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BTKSG
619760

Bruton Tyrosine Kinase, BTK Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and

streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB /Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB /Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

BTK
89011

Bruton Tyrosine Kinase, Protein Expression, Flow Cytometry, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 88184

BUCW
82727

Buckwheat, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BDRP
82791

Budgerigar Droppings, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BFTH
82779

Budgerigar Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BPAB
606816

Bullous Pemphigoid, BP180 and BP230, IgG Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission container/tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 83516 x 2

FMARC
75307

Bupivacaine (Marcaine)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable.
Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	180 days
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code Information: 80299

BUPMX
65215

Buprenorphine and Norbuprenorphine, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit containing specimen containers, seals, and required documentation. Specimen Volume: 5 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80348; G0480 (if appropriate);

BUPM
66200

Buprenorphine and Norbuprenorphine, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: G0480; 80348 (if appropriate for select payers);

BUPR
63222

Buprenorphine Screen with Reflex, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic vial. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 5 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

BUPS
63119

Buprenorphine Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic vial. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 5 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

FBUMT
75387

Bupropion and Metabolite, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared

between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red-top Submission Container/Tube: Plastic vial Specimen volume: 1 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. 2. Centrifuge and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	30 days

CPT Code Information: 80338

FBUS
91115

Buspirone (Buspar)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

BUAUC
83188

Busulfan, Intravenous Dose, Area Under the Curve, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Heparin	Frozen (preferred)	28 days
	Refrigerated	72 hours

CPT Code Information: 80299 x 4

BUTAS Butalbital, Serum

8427

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80299

FCPEU C-Peptide, 24-Hour Urine

75894

Specimen Requirements: Patient Preparation: It is recommended to ask all patients who may be indicated for this test about biotin supplementation. Patients should be cautioned to stop biotin consumption at least 72 hours prior to the collection of a sample. Collection Container/Tube: Clean, plastic 24-hour urine collection container. Submission Container/Tube: Plastic urine container. Specimen Volume: 10 mL Collection Instructions: 1. Instruct the patient to void at 8 AM and discard the specimen. 2. Collect all urine including the final specimen voided at the end of the 24-hour collection period (ie, 8 AM the next morning) in a 24-hour urine collection container. pH should be 4 to 7. 3. Refrigerate specimen during the 24-hour collection. 4. Aliquot and send 10 mL urine in plastic urine container frozen. 5. 24-Hour collection volume is required.

Specimen Minimum Volume: 1 mL (Note: this volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time
Urine 24hr	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 84681

CPR
8804

C-Peptide, Serum

Specimen Requirements: Patient Preparation: 1. Patient should fast for 8 hours. 2. For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 84681

CRPRO
70409

C-Reactive Protein (CRP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CRP
9731

C-Reactive Protein (CRP), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tube should be centrifuged within 2 hours of collection. 2. Red-top tube should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	365 days
	Ambient	14 days

CPT Code Information: 86140

HSCR
606909

C-Reactive Protein, High Sensitivity, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86141

C1ES
8198

C1 Esterase Inhibitor Antigen, Serum

Specimen Requirements: Patient Preparations: Fasting preferred but not required. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1.

Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Refrigerated	28 days
	Ambient	72 hours

CPT Code Information: 83883

C1INF
616906

C1 Esterase Inhibitor, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	28 days

CPT Code Information: 83520

C1QFX
83374

C1q Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

C2FXN
32137

C2 Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	21 days

CPT Code Information: 86161

C2
81835

C2 Complement, Functional, with Reflex, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	21 days

CPT Code Information: 86161; 86160 x 2 (if appropriate);

C3FX
81090

C3 Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

FC3AR
75729

C3a Level By RIA

Specimen Requirements: Container/Tube: Lavender top tube Preferred: Lavender top tube Acceptable: Lavender top tube Specimen Volume: 2 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tube(s), plasma gel tube(s) is not acceptable. Mix well, centrifuge at ambient temperature within one half hour of draw and freeze immediately. Send 1 mL of EDTA plasma frozen in plastic vial. Complete and submit with specimen: National Jewish Complement request form

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	365 days

CPT Code Information: 86160

C4U
88829

C4 Acylcarnitine, Quantitative, Random, Urine

Specimen Requirements: Patient Preparation: If clinically feasible, discontinue L-carnitine supplementation at least 72 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10 mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Freeze specimen immediately.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	7 days
	Refrigerated	24 hours

CPT Code Information: 82017

C4FX
83391

C4 Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

FC4AL
75726

C4 Level by RIA

Specimen Requirements: Container/Tube: Lavender top tube Preferred: Lavender top tube Acceptable: Lavender top tube Specimen Volume: 2 mL Collection Instructions: Draw blood in a lavender top (EDTA) tubes(s), plasma gel tube(s) is not acceptable. Mix well, centrifuge at room temperature within one half hour of draw (preferable immediately after venipuncture) and freeze immediately on dry ice or at -70 C. Send 1 mL of EDTA plasma frozen in plastic vial. Complete and submit with specimen: 1. National Jewish Complement request form

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	365 days

CPT Code Information: 86160

C5AG
9266

C5 Complement, Antigen, Serum

Specimen Requirements: Patient Preparation: Fasting for 12 hours is preferred but not required. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	60 days
	Refrigerated	28 days
	Ambient	7 days

CPT Code Information: 86160

C5FX
83392

C5 Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

C5DCU
88831

C5-DC Acylcarnitine, Quantitative, Random, Urine

Specimen Requirements: Patient Preparation: If clinically feasible, discontinue L-carnitine supplementation at least 72 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Freeze specimen immediately.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	7 days
	Refrigerated	24 hours

CPT Code Information: 82017

C5OHU
88830**C5-OH Acylcarnitine, Quantitative, Random, Urine**

Specimen Requirements: Patient Preparation: If clinically feasible, discontinue L-carnitine supplementation at least 72 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Freeze specimen immediately.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	7 days
	Refrigerated	24 hours

CPT Code Information: 82017

C6FX
83393**C6 Complement, Functional, Serum**

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

C7FX
81064**C7 Complement, Functional, Serum**

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

C8FX
81065

C8 Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

C9FX
81066

C9 Complement, Functional, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86161

C9ORF
35377

C9orf72 Hexanucleotide Repeat, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81479; ;

FCABB
57672

Cabbage IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CABB
86327

Cabbage, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

COCOA Cacao/Cocoa, IgE, Serum 60112

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CDOMB Cadmium for Occupational Monitoring, Blood 89539

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original collection tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82300

CDOU
608892

Cadmium Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CDUOE / Cadmium Occupational Exposure, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82300

CDUOE
608896

Cadmium Occupational Exposure, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82300 ; 82570 ;

CDU
8678

Cadmium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. For the 48-hour period prior to start of collection, as well as during the collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium or iodine containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82300

CDB
8682

Cadmium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for

complete instructions. 2. Send whole blood specimen in original collection tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82300

CDUCR
608906

Cadmium/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82300; 82570;

CDCU
608902

Cadmium/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information, see: -CDUCR / Cadmium/Creatinine Ratio, Random, Urine -HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82300**CAFF**
8754**Caffeine, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code Information: 80155**CALCI**
70368**Calcitonin (CALCI) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CATLN
61527

Calcitonin, Fine-Needle Aspiration Biopsy Needle Wash, Lymph Node

Specimen Requirements: Patient Preparation: For 12 hours before this procedure do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. Needle wash specimens for analysis should be collected in conjunction with cytology specimens. 2. Have saline available prior to start of procedure. Saline is the only acceptable solution for needle washings. 3. After each fine-needle aspiration biopsy (FNAB) has been collected and the material in the needle has been expelled onto a slide for cytologic analysis, attach the used FNAB needle to an empty syringe. 4. Withdraw between 0.10 mL and 0.25 mL of saline up through the needle until the saline starts to fill the hub of the needle or end of the syringe. 5. Expel this fluid back through the needle into a separate tube. This is the needle washing used for analysis. 6. Repeat steps 2 through 4 for each needle pass of the same biopsied site and empty into the same tube, accumulating a total of 0.5 mL to 1.5 mL of fluid to send to the laboratory. (If more than 1 site is biopsied, see Additional Information) 7. Inspect specimen for visible blood or tissue contamination: a. If bloody, centrifuge specimen and transfer supernatant to a new plastic aliquot tube (5-mL standard tube) to send to laboratory. The supernatant, not the cellular material, is used for analysis. b. If specimen is clear, centrifugation is not necessary. 8. Freeze within 2 to 4 hours of collection. Additional Information: 1. If more than 1 site is biopsied, each washing material should be submitted in a separate tube and under a different order number. 2. A minimum of 0.5 mL is required for testing; however, the total collection volume should not exceed 1.5 mL. Sample volumes outside these parameters may be rejected. 3. Do not send saline control. This test has been validated to rule-out saline matrix effect.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fine Needle Wash	Frozen (preferred)	7 days
	Refrigerated	4 hours

CPT Code Information: 82308

CATN
9160

Calcitonin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. After collection, immediately place specimen on ice. 2. Refrigerate specimen during centrifugation and immediately transfer serum to a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	24 hours
	Ambient	8 hours

CPT Code Information: 82308

CALU
610595

Calcium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Patient cannot have a laxative during the 24-hour collection period. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 82340

CAI
8378

Calcium, Ionized, Serum

Specimen Requirements: Container/Tube: Serum gel or serum gel microtainer Specimen Volume: Full tube Collection Instructions: 1. Allow blood to clot for 30 minutes. 2. Serum gel tube/microtainer must be centrifuged within 1 hour of collection. Centrifuge with stopper in place for 7 minutes at 3000 rpm to ensure that the gel barrier separates the serum and cells. 3. Keep specimen anaerobic; do not aliquot. 4. Test cannot be combined with other testing. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1.75 mL in a 3.5 mL (50% full) in serum gel tube or 1 full serum gel microtainer

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated	7 days	SERUM GEL TUBE

CPT Code Information: 82330

CALC5
610591

Calcium, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see CACR3 / Calcium/Creatinine Ratio, Random, Urine Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 82310

CA
601514

Calcium, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. If drawing for more than total calcium, send first tube drawn. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	240 days
	Refrigerated	21 days

CPT Code Information: 82310**CCTR**
610592**Calcium/Creatinine Ratio, Random, Urine**

Specimen Requirements: Only orderable as part of a profile. For more information see CACR3 / Calcium/Creatinine Ratio, Random, Urine
Supplies: Sarstedt 5 mL Aliquot Tube (T914)
Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert
Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert
Specimen Volume: 4 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CACR3
610594**Calcium/Creatinine Ratio, Random, Urine**

Specimen Requirements: **Supplies:** Sarstedt Aliquot Tube 5 mL (T914)
Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert
Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert
Specimen Volume: 4 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 82310; 82570;

CALD
70369

Caldesmon Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CAVPC
83900

California Virus (La Crosse) Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86651 x 2

CAVP
83153

California Virus (La Crosse) IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86651 x 2**CAMTA**
603417**Calmodulin-Binding Transcription Activator 1 (CAMTA1), Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**CALPN**
70370**Calponin Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CALPR
63016

Calprotectin, Feces

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz Random (T288)
Submission Container/Tube: Stool container Specimen Volume: 5 g Collection Instructions: 1. Collect a fresh random fecal specimen, no preservative. 2. If specimen is sent refrigerate, send immediately after collection. 3. If specimen cannot be sent immediately, freeze specimen, and send frozen. Additional Information: 1. Separate specimens must be submitted when multiple tests are ordered, with the exception of ELASF / Pancreatic Elastase, Feces. If only a single specimen is collected, it must be split prior to transport. 2. Testing cannot be added on to a previously collected specimen.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	7 days
	Refrigerated	72 hours

CPT Code Information: 83993

CALFM
618654

CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN), Bone Marrow

Specimen Requirements: Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B)
Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81219

CALX
36997

CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN), Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see MPNR / Myeloproliferative Neoplasm, JAK2 V617F with Reflex to CALR and MPL, Varies.

Specimen

Minimum Volume: Blood and Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9

CALR
62912

CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Label specimen as blood. 3. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerate Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Label specimen as bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA from blood or bone marrow 2. Include indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Whole blood/bone marrow: 1 mL; Extracted DNA: 50 mcl at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9

CALJM
606806

CALR Variant Analysis, Myeloproliferative Neoplasm, Reflex, Bone Marrow

Specimen Requirements: Only orderable as a reflex. For more information see MPNJM / Myeloproliferative Neoplasm, JAK2 V617F with Reflex to CALR and MPL, Bone Marrow. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Note: Extracted DNA from bone marrow is not acceptable.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9

CALRC
71486

Calreticulin ex9mut Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CALNN
70371

Calretinin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CAMPC
606218

Campylobacter Culture, Feces

Specimen Requirements: Patient Preparation: Patient should not use barium or bismuth for 7 to 10 days before collection of specimen. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Campylobacter Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

CFTH
82778

Canary Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CAGR
82829

Canary Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CA25
9289

Cancer Antigen 125 (CA 125), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	5 days
	Frozen	168 days

CPT Code Information: 86304

CA153
81607

Cancer Antigen 15-3 (CA 15-3), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 86300

FCARP
75447

Cancer-Associated Retinopathy Panel (CARP) by Immunoblot and IHC

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: 1. Completed OHSU Ocular request form 2. Clinical history 3. Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	7 days

CPT Code Information: 84182 x 8

CDAB
82690

Candida albicans (Monilia), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCANG
75605

Candida albicans IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Container/Tube: Red Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum Frozen in a sterile, screw top tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	28 days
	Ambient	7 days

CPT Code Information: 86001

CAURS
607883

Candida auris Surveillance, Molecular Detection, PCR, Varies

Specimen Requirements: Supplies: BD Eswab (T853) Source: Axilla and groin composite Container/Tube: ESwab in liquid Amies medium Specimen Volume: Swab Collection Instructions: 1. Swab transport containers without charcoal must contain a pledget saturated with either Stuart's or Amies liquid media. 2. Swab used for this test cannot be shared with fungal culture. When fungal culture is ordered with this test, send separate swabs for each.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87481**CVRNA**
620888**Candida Vaginitis, Nucleic Acid Amplification RNA, Vaginal****Specimen Requirements:****Specimen Minimum Volume:** See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Vaginal	Refrigerated (preferred)	30 days	APTIMA VIAL
	Frozen	60 days	APTIMA VIAL
	Ambient	30 days	APTIMA VIAL

CPT Code Information: 87481**FCBDS**
75527**Cannabidiol, Serum**

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a red-top tube(s). Serum gel tube is not acceptable. 2. Centrifuge and send 1 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	30 days
	Ambient	14 days
	Frozen	

CPT Code Information: 80299

FMARI
75172

Cannabinoid Analysis, Whole Blood

Specimen Requirements: Draw blood in a purple-top (EDTA), green-top (sodium-heparin) or grey-top (NaF/oxalate) tube(s). Send 7 mL of whole blood refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307; 80349- if applicable; G0480 (if applicable);

FCDU7
75782

Cannabinoids, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

CWAY
82493

Caraway, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CARBR
610048

Carbamazepine Hypersensitivity Pharmacogenomics, Varies

Specimen Requirements: Patient Preparation: A previous hematopoietic stem cell transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a hematopoietic stem cell transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA are met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send cord blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA are met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81381 x 2**CARTF**
37037**Carbamazepine Profile, Serum**

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Draw blood 12 hours (trough value) after last dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 80156-Carbamazepine, total; 80157-Carbamazepine, free; 80161-Carbamazepine-10,11-Epoxyde;

CARFT
37039**Carbamazepine, Free and Total, Serum**

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 80156; 80157;

CARF
37038

Carbamazepine, Free, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 80157

CARTA
37035

Carbamazepine, Total, Serum

Specimen Requirements: Collection Container/Tube: Red top Specimen Volume: 0.5 mL Submission Container/Tube: Plastic vial Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 80156

CARBG
37036

Carbamazepine-10,11-Epoxy, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood 12 hours (trough value)

after last dose. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information:

CRPCR
620176

Carbapenem Resistance Genes, Molecular Detection, PCR, Rectal Swab

Specimen Requirements: Specimen Type: Rectal/perirectal swab Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab Specimen Volume: Entire collection

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Ambient	5 days

CPT Code Information: 87798

CARBI
620159

Carbapenem Resistance Genes, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Klebsiella pneumoniae* carbapenemase (KPC), New Delhi metallo-beta-lactamase (NDM), Verona integron-encoded metallo-beta-lactamase (VIM), oxacillin-hydrolyzing beta-lactamase (OXA-48), and imipenemase-type metallo-beta-lactamase (IMP) DNA is not likely. Supplies: Infectious Container, Large (T146) Container/Tube: Slant Specimen Volume: Isolate Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87150

CARNB
35953

Carbapenemase Detection-Carba NP Test (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87185

CARNP
62606

Carbapenemase Detection-Carba NP Test, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Slant Specimen Volume: Isolate Collection Instructions: Submit Enterobacteriales or Pseudomonas aeruginosa isolate in pure culture (ie, not mixed with other organisms), actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

199PC
89508

Carbohydrate Antigen 19-9 (CA 19-9), Pancreatic Cyst Fluid

Specimen Requirements: Patient Preparation: For 12 hours before this procedure do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair,

skin, and nail supplements and multivitamins. Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Pancreatic Cyst Fluid	Frozen (preferred)	90 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 86301

199PT
61530

Carbohydrate Antigen 19-9 (CA 19-9), Peritoneal Fluid

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Sources: Peritoneal, abdominal, ascites, paracentesis fluid (peritoneal washings are not acceptable) Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Peritoneal	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86301

PF199
60230

Carbohydrate Antigen 19-9 (CA 19-9), Pleural Fluid

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL (Samples <0.5 mL may be rejected)

Transport Temperature:

Specimen Type	Temperature	Time
Pleural Fluid	Frozen (preferred)	90 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 86301**CA19**
9288**Carbohydrate Antigen 19-9 (CA 19-9), Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Within 2 hours of collection, serum gel tubes should be centrifuged. 2. Within 2 hours of collection, red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	8 hours

CPT Code Information: 86301**CDG**
89891**Carbohydrate Deficient Transferrin for Congenital Disorders of Glycosylation, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.05 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	45 days
	Refrigerated	28 days
	Ambient	7 days

CPT Code Information: 82373

CDTA
82425

Carbohydrate Deficient Transferrin, Adult, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.05 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	45 days
	Refrigerated	28 days
	Ambient	7 days

CPT Code Information: 82373

CHOU
9255

Carbohydrate, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL
urine tube Specimen Volume: 5 mL Collection Instructions: Collect an early-morning (preferred) random
urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	21 days
	Refrigerated	21 days

CPT Code Information: 84377-Carbohydrate; 82760-Galactose (if appropriate);

FCMEB
75880

Carbon Monoxide Exposure, Blood

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Blood Collection Container/Tube: Lavender top EDTA Specimen Volume: 4 mL Collection Instructions: Draw blood in a lavender top EDTA tube(s). Send 4 mL refrigerated.

Specimen Minimum Volume: 1.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	28 days
	Ambient	28 days

CPT Code Information: 82375

CAIX
606251

Carbonic Anhydrase IX (CA-IX) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEAPC
89509

Carcinoembryonic Antigen (CEA), Pancreatic Cyst Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Pancreatic Cyst Fluid	Frozen (preferred)	90 days
	Refrigerated	72 hours
	Ambient	24 hours

CPT Code Information: 82378

CEAPT
61528

Carcinoembryonic Antigen (CEA), Peritoneal Fluid

Specimen Requirements: Sources: Peritoneal, abdominal, ascites, paracentesis fluid (peritoneal washings are not acceptable) Container/Tube: Plain, plastic, screw top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Peritoneal	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 82378

PFCEA
83742

Carcinoembryonic Antigen (CEA), Pleural Fluid

Specimen Requirements: Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Pleural Fluid	Frozen (preferred)	90 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 82378

CEA
8521

Carcinoembryonic Antigen (CEA), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82378

CEASF
90695

Carcinoembryonic Antigen (CEA), Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Submission Container/Tube: 13 x 75-mm tube Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 82378

MCEA
70506

Carcinoembryonic Antigen, Monoclonal Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,

paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PCEAI
70535

Carcinoembryonic Antigen, Polyclonal Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

CRMP1
616727

Cardiovascular Risk Marker Panel, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred but not required unless directed by the ordering provider. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 80061-Lipid panel (includes: HDL [CPT Code 83718], total cholesterol [CPT Code 82465], and triglycerides [CPT Code 84478]); 83695-Lipoprotein (a); 86141-C-reactive protein; high sensitivity (hsCRP); 82172-Apolipoprotein B;

FCRDE
57524

Carmine Dye/Red Dye Cochineal (*Dactylopius coccus*) IgE (Red # 4)

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

CARN
8802

Carnitine, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA), green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	60 days
	Refrigerated	21 days
	Ambient	7 days

CPT Code Information: 82379

CARNU Carnitine, Random, Urine

81123

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1.5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	365 days
	Refrigerated	72 hours

CPT Code Information: 82379

CARNS Carnitine, Serum

60449

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	60 days
	Refrigerated	21 days
	Ambient	7 days

CPT Code Information: 82379

CAROB
82368

Carob, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCARO
75178

Carotene, Beta

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (Amber) (T915) Specimen Type: Serum Container/Tube: Red Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Spin Down and send 1 mL of serum ambient in an amber vial to protect from light. Note: 1. Protect from light within 1 hour of collection. 2. Patient must be fasting overnight (12 hours). Blood should be collected before breakfast in the morning and prior to any medication. 3. Abstain from alcohol for 24 hours prior to collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	14 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Refrigerated	14 days	LIGHT PROTECTED

CPT Code Information: 82380

CSFP
608336

Carrier Screen, Focused Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81220; 81329; 81479 ; 81257; 81363 ; 81222; 81479 (if appropriate for government payers);

FCRTG
57630

Carrot IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CROT
82742

Carrot, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCASG
57555

Casein IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw
blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of
serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CASE
82895

Casein, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008**FCCA3**
75556**Cashew Component rAna o 3**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86008**CASHX**
618846**Cashew Component, IgE, Serum**

Specimen Requirements: Only orderable as a reflex. For more information see CASHR / Cashew, IgE, with Reflex to Cashew Component, IgE, Serum Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

FCASH
57687

Cashew IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CASHR
618845

Cashew, IgE with Reflex to Cashew Component, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CASH
82881

Cashew, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCFS
75883

Caspofungin Susceptibility Testing

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen
Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Testing Lab request
form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in
a large infectious container (T146) and label as etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999-Unlisted Microbiology Procedure (Refer to patient report to apply
the appropriate CPT code in place of this unlisted CPT code based on specimen organism.); 87188 -
mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar
dilution (if appropriate);

CASRG
618058

CASR Full Gene Sequencing with Deletion/Duplication, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an
allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who
have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top
(ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several

times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405

CAT
82665

Cat Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CATPF
616093

Cat Epithelium, IgE, with Reflex to Cat Epithelium Components, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

COMTQ Catechol-O-Methyltransferase (COMT) Genotype, Varies 610049

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 µL at a concentration of 75 ng/µL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed, and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 0032U

Catecholamine Fractionation, Free, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. If medically feasible, discontinue drugs that release or hinder metabolism of epinephrine, norepinephrine, or dopamine for at least 1 week prior to specimen collection (see Cautions for details). If this is not possible for medical reasons, contact the laboratory to discuss whether a shorter drug-withdrawal period may be acceptable. 2. Unless the reason for testing is drug monitoring, the patient should stop any epinephrine, norepinephrine, or dopamine injections or infusions for at least 12 hours prior to specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children younger than 5 years old. This preservative is intended to achieve a pH of between approximately 2 and 4. 2. Collect urine for 24 hours. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 82384

Catecholamine Fractionation, Free, Plasma

Specimen Requirements: Patient Preparation: 1. Discontinue drugs that release epinephrine, norepinephrine, or dopamine, or hinder their metabolism, for at least one week before obtaining the specimen (see Cautions for details). If this is not possible for medical reasons, contact the laboratory and discuss whether a shorter drug withdrawal period may be possible in a particular case. 2. Unless the purpose of the measurement is drug monitoring, discontinue any epinephrine, norepinephrine, or dopamine injections or infusions for at least 12 hours before specimen collection. 3. The patient must refrain from eating, using tobacco, and drinking caffeinated beverages for at least 4 hours before the specimen is collected. Supplies: Catecholamine Tubes-EDTA (T066) (tubes contain sodium metabisulfite, may come as 10-mL or 6-mL tubes, and have a 6-month expiration time) Collection Container/Tube: Preferred: 10-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Acceptable: 6-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Note: If the collection instructions are not followed, falsely elevated test results are highly likely. 1. Drawing from an indwelling intravenous (IV) line/catheter/butterfly is required. 2. Calm the patient by giving complete instructions and reassurance regarding the procedure. 3. Insert an indwelling IV catheter. Flush with 3 mL of sodium chloride (NaCl) using positive pressure. 4. Have the patient rest for 30 minutes in the supine position in a quiet room. 5. At the end of the 30 minutes, withdraw and discard a minimum of 3 mL of blood to remove the saline out of the catheter. 6. If provocative sampling (eg, standing specimen) is required, perform provocative maneuver immediately after obtaining supine specimen. Obtain standing specimen immediately. 7. For each specimen, draw 10 mL of blood into the chilled 10 mL catecholamine tube containing EDTA-sodium metabisulfite solution. A 6 mL pink top EDTA-metabisulfite tube is an acceptable substitute. 8. Specimens must remain at refrigerated

temperature during processing and transport. 9. Separate plasma in a refrigerated centrifuge within 30 minutes of collection. 10. Freeze specimen immediately.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA Meta	Frozen	28 days

CPT Code Information: 82384

CTP10
33861

Catecholamine Fractionation, Standing, Plasma, Free

Specimen Requirements: Only orderable as part of a profile. For more information see CATPA / Catecholamine, Endocrine Study, Plasma. Patient Preparation: 1. Discontinue drugs that release epinephrine, norepinephrine, or dopamine, or hinder their metabolism, for at least 1 week before obtaining the specimen (see Cautions for details). If this is not possible for medical reasons, contact the laboratory and discuss whether a shorter drug-withdrawal period may be possible in a particular case. 2. Unless the purpose of the measurement is drug monitoring, discontinue any epinephrine, norepinephrine, or dopamine injections/infusions for at least 12 hours before specimen draw. 3. The patient must refrain from eating, using tobacco, and drinking caffeinated beverages for at least 4 hours before the specimen is collected. Supplies: Catecholamine tubes containing EDTA-sodium metabisulfite solution (T066) (tubes have a 6-month. expiration time) Collection Container/Tube: Preferred: 10-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Acceptable: 6-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Submission Container/Tube: Plastic vial Specimen Volume: 3 mL per collection Collection Instructions: 1. Drawing from a catheter is required. 2. Calm the patient by giving complete instructions and reassurance regarding the procedure. 3. Insert an indwelling intravenous catheter. Flush with 3 mL of saline, using positive pressure. 4. Have the patient rest for 30 minutes in the supine position in a quiet room. 5. At the end of the 30 minutes, withdraw and discard a minimum of 3 mL of blood to remove the saline out of the catheter. 6. If provocative sampling (eg, standing specimen) is required, perform provocative maneuver immediately after obtaining supine specimen. Obtain standing specimen immediately. 7. For each specimen, draw blood into the chilled EDTA-sodium metabisulfite 10-mL tube. 8. Specimen must remain at refrigerated temperature during processing and transport. 9. Separate plasma in a refrigerated centrifuge within 30 minutes of draw. 10. Freeze specimen immediately.

Specimen Type	Temperature	Time
Plasma EDTA Meta	Frozen	28 days

CPT Code Information: 82384

CTP0
33860

Catecholamine Fractionation, Supine, Plasma, Free

Specimen Requirements: Only orderable as part of profile. For more information see CATPA /

Catecholamine, Endocrine Study, Plasma. Patient Preparation: 1. Discontinue drugs that release epinephrine, norepinephrine, or dopamine, or hinder their metabolism, for at least 1 week before obtaining the specimen (see Cautions for details). If this is not possible for medical reasons, contact the laboratory and discuss whether a shorter drug-withdrawal period may be possible in a particular case. 2. Unless the purpose of the measurement is drug monitoring, discontinue any epinephrine, norepinephrine, or dopamine injections/infusions for at least 12 hours before specimen draw. 3. The patient must refrain from eating, using tobacco, and drinking caffeinated beverages for at least 4 hours before the specimen is collected. Supplies: Catecholamine tubes containing EDTA-sodium metabisulfite solution (T066) (tubes have a 6-month. expiration time) Collection Container/Tube: Preferred: 10-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Acceptable: 6-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Submission Container/Tube: Plastic vial Specimen Volume: 3 mL per collection Collection Instructions: 1. Drawing from a catheter is required. 2. Calm the patient by giving complete instructions and reassurance regarding the procedure. 3. Insert an indwelling intravenous catheter. Flush with 3 mL of saline, using positive pressure. 4. Have the patient rest for 30 minutes in the supine position in a quiet room. 5. At the end of the 30 minutes, withdraw and discard a minimum of 3 mL of blood to remove the saline out of the catheter. 6. If provocative sampling (eg, standing specimen) is required, perform provocative maneuver immediately after obtaining supine specimen. Obtain standing specimen immediately. 7. For each specimen, draw blood into the chilled EDTA-sodium metabisulfite 10-mL tube. 8. Specimen must remain at refrigerated temperature during processing and transport. 9. Separate plasma in a refrigerated centrifuge within 30 minutes of draw. 10. Freeze specimen immediately.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA Meta	Frozen	28 days

CPT Code Information: 82384

CATPA
33859

Catecholamine, Endocrine Study, Plasma

Specimen Requirements: Patient Preparation: 1. Discontinue drugs that release epinephrine, norepinephrine, or dopamine, or hinder their metabolism, for at least 1 week before obtaining the specimen (see Cautions for details). If this is not possible for medical reasons, contact the laboratory and discuss whether a shorter drug-withdrawal period may be possible in a particular case. 2. Unless the purpose of the measurement is drug monitoring, discontinue any epinephrine, norepinephrine, or dopamine injections/infusions for at least 12 hours before specimen draw. 3. The patient must refrain from eating, using tobacco, and drinking caffeinated beverages for at least 4 hours before the specimen is collected. Supplies: Catecholamine tubes containing EDTA-sodium metabisulfite solution (T066) (tubes have a 6-month. expiration time) Collection Container/Tube: Preferred: 10-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Acceptable: 6-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution Submission Container/Tube: Plastic vial Specimen Volume: 3 mL per collection Collection Instructions: 1. Drawing from a catheter is required. 2. Calm the patient by giving complete instructions and reassurance regarding the procedure. 3. Insert an indwelling intravenous catheter. Flush with 3 mL of saline, using positive pressure. 4. Have the patient rest for 30 minutes in the supine position in a quiet room. 5. At the end of the 30 minutes, withdraw and discard a minimum of 3 mL of blood to remove the saline out of the catheter. 6. If provocative sampling

(eg, standing specimen) is required, perform provocative maneuver immediately after obtaining supine specimen. Obtain standing specimen immediately. 7. For each specimen, draw blood into the chilled EDTA-sodium metabisulfite 10-mL tube. 8. Specimen must remain at refrigerated temperature during processing and transport. 9. Separate plasma in a refrigerated centrifuge within 30 minutes of draw. 10. Freeze specimen immediately.

Specimen Minimum Volume: 2 mL per collection

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA Meta	Frozen	28 days

CPT Code Information: 82384 x 2

CPVTG
617211

Catecholaminergic Polymorphic Ventricular Tachycardia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81408; 81479; 81479 (if appropriate for government payers);

FCATE
57554

Catfish (Siluriformes spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003**FCLPF**
75676**Cathartic Laxatives Profile, Stool**

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Stool Container/Tube: Acid-washed or trace metal-free plastic container, MCL supply T656 Specimen Volume: 10 g Collection Instructions: Collect 10 g of stool with no preservative. Send specimen in an acid-washed or trace metal-free plastic container, MCL supply T656. Send specimen refrigerated.

Specimen Minimum Volume: 10 mL stool liquid or 10 g stool solid**Transport Temperature:**

Specimen Type	Temperature	Time
Fecal	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 83735; 84100;**CTSK**
607887**Cathepsin K Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCAFG Cauliflower IgG

57680

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
 Specimen Volume: 0.5 mL Submission Container/tube: Plastic vial Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CALFL Cauliflower, IgE, Serum

82617

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

IN16Q
610266

CBFB::MYH11 Inversion(16), Quantitative Detection and Minimal Disease Risk Monitoring, qRT-PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL; Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	5 days
	Ambient	72 hours

CPT Code Information: 81401-CBFB-MYH11

CD10
70373

CD10 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD103
70372

CD103 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only

Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD11C
70412

CD11c Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD123
70413

CD123 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD13 70374

CD13 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD138 70414

CD138 (Syndecan) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD14I 70375

CD14 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD15 70376

CD15 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD163 70415

CD163 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

C19BM 603205

CD19 Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD19I
70377

CD19 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD1A
70378

CD1a Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD2B
603203

CD2 Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD2
70384

CD2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEE20
65660

CD20 Cell Expression Evaluation, Varies

Specimen Requirements:

Specimen Minimum Volume: Blood: 3 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 3-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker; 88187-Flow Cytometry Interpretation, 2 to 8 Markers;

CD20I
70379

CD20 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD20B
89584

CD20 on B Cells, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: 1. Secondary aliquot tubes will be rejected. 2. Testing will be canceled if the specimen is not received ambient. 3. For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	4 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355; 86356;

CD200 619517

CD200 (OX2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD21 70380

CD21 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD22I 70381

CD22 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD23
70382

CD23 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD25
70383

CD25 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD273 601986

CD273 (PD-L2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD279 70417

CD279 (PD-1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD3I
70391**CD3 Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD30
70385**CD30 Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD303
607891**CD303 (BDCA-2) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD31
70386

CD31 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD33
70387

CD33 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD34I
70388

CD34 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD35
70389

CD35 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD38
70390

CD38 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TCD4 84348

CD4 Count for Immune Monitoring, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio;

CD4NY 28334

CD4 Count for Monitoring, New York, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio;

CD4I
70393**CD4 Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD4RT
89504**CD4 T-Cell Recent Thymic Emigrants, Blood**

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356

CD43
70392**CD43 Immunostain, Technical Component Only****Transport Temperature:**

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD45I
70348

CD45 Leukocyte Common Antigen (LCA) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEE49
65658

CD49d Cell Expression Evaluation, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole Blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or Green top (sodium heparin) Specimen Volume: 10 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot 2. Label specimen as blood. Specimen Stability Information: Ambient < or = 4 days/Refrigerated < or =4 days Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or Green top (sodium heparin) Specimen Volume: 1-5 mL Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen as bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient/Refrigerated < or =4 days

Specimen Minimum Volume: Blood: 3 mL Bone Marrow Aspirate: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 3-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker; 88187-Flow Cytometry Interpretation, 2 to 8 Markers;

CD5
70396

CD5 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEE52
65659

CD52 Cell Expression Evaluation, Varies

Specimen Requirements:

Specimen Minimum Volume: Blood: 3 mL Bone Marrow Aspirate: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 3-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker; 88187-Flow Cytometry Interpretation, 2 to 8 Markers;

CD56
70394

CD56 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD57 70395

CD57 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD61 70397

CD61 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CDKPB 603209

CD68 (KP1) Immunostain, Bone Marrow, Technical Component

Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CDKP1 70486

CD68 (KP1) Immunostain, Tissue, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PGM1 70536

CD68 (PG-M1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD7 70399

CD7 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD71 70398

CD71 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

CD79 70418

CD79a Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD8I
70400

CD8 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GLICP
89369

CD8 T-Cell Immune Competence Panel, Global, Whole Blood

Specimen Requirements: Two separate whole blood specimens, EDTA and (possibly 2 tubes) sodium heparin, are required. For serial monitoring, it is recommended that specimens are collected at the same time of day. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Specimen Type: EDTA whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as TBBS / Quantitative Lymphocyte Subsets: T, B, and Natural Killer (NK) Cells, Blood Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day. Specimen Type: Sodium heparin whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 15 mL Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as GLIC / CD8 T-Cell Immune Competence, Global, Blood

Specimen Minimum Volume: Sodium heparin whole blood: 10 mL EDTA whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP
Whole Blood EDTA	Ambient	52 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355-B cells, total count ; 86357-Natural killer (NK) cells, total count ; 86359-T cells, total count ; 86360-Absolute CD4/CD8 count with ratio ; 86356 x 2;

GLIC
89317

CD8 T-Cell Immune Competence, Global, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Green top (sodium heparin) Specimen Volume: 15 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86356 x 2

CD99
70508

CD99 (MIC-2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CDKN1C Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 2 to 3 weeks is required to culture chorionic villi before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

CDX2
70401

CDX2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FRCE
57952

Cedar Red (*Juniperus virginiana*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

CEDR
82482

Cedar, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCELG
57638

Celery IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CELY
82766

Celery, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CELI
88906

Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD Solution A or B) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 81376 x 2-HLA Class II typing, low resolution (eg, antigen equivalents); one locus (eg, HLA-DRB1/3/4/5, -DQB1, -DQA1, -DPB1, or -DPA1), each; ;

CDCOM
89201

Celiac Disease Comprehensive Cascade, Serum and Whole Blood

Specimen Requirements: Both whole blood and serum are required. Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: No additional anticoagulants are acceptable. Specimen Volume: 6 mL Collection Instructions: Send whole blood in original tube. Do not aliquot. Specimen Type: Serum Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: Whole blood: 3 mL; Serum: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	21 days
Whole Blood ACD-B	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 81376 x 2; 82784; 86258 (if appropriate); 86364 (if appropriate); 86231 (if appropriate);

CDGF
89200**Celiac Disease Gluten-Free Cascade, Serum and Whole Blood**

Specimen Requirements: Both whole blood and serum are required. Specimen Type: Whole Blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: No additional anticoagulants are acceptable. Specimen Volume: 6 mL Collection Instructions: Send whole blood in original tube. Do not aliquot. Specimen Type: Serum Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: Blood: 3 mL Serum: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days
Whole Blood ACD-B	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 81376 x 2; 82784 (if appropriate); 86258 (if appropriate); 86364 (if appropriate); 86231 (if appropriate);

CDSP
89199**Celiac Disease Serology Cascade, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	21 days

CPT Code Information: 82784; 86258 (if appropriate); 86364 (if appropriate); 86231 (if appropriate);

NCSPC
113338**Cell Concentration (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88108

BFCC
608873

Cell Count and Differential, Body Fluid

Specimen Requirements: For Local Accounts Only Sources: Synovial, pleural, peritoneal, pericardial fluid Container/Tube: Preferred: Body fluid container Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Ambient (preferred)	24 hours
	Refrigerated	24 hours

CPT Code Information: 89051-Cell count with differential

BRAFB
65100

Cell-Free DNA BRAF V600, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Container/Tube: Streck Cell-Free DNA blood collection kit Specimen Volume: Two 10-mL Streck Cell-Free DNA blood collection tubes Additional Information: Only blood collected in Streck Cell-Free DNA tubes will be accepted for analysis. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10 mL Streck cell-free DNA blood collection tube

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81210

T790M
113410

Cell-Free DNA EGFR T790M Mutation Analysis, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Specimen Volume: Two, 10-mL Streck cell-free DNA (cfDNA) blood collection tubes Additional Information: 1. Only blood collected in Streck cfDNA tubes will be accepted for analysis. 2. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10 mL Streck tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	Streck Black/Tan top
	Refrigerated	7 days	Streck Black/Tan top

CPT Code Information: 81235

KRASD
68003

Cell-Free DNA KRAS 12, 13, 61,146, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Container/Tube: Streck Cell-Free DNA blood collection kit Specimen Volume: Two 10-mL Streck Cell-Free DNA blood collection tubes Additional Information: Only blood collected in Streck Cell-Free DNA BCT tubes will be accepted for analysis. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10 mL Streck tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	Streck Black/Tan top
	Refrigerated	7 days	Streck Black/Tan top

CPT Code Information: 81275; 81276; ;

PIK3B
614802

Cell-Free DNA PIK3CA Test, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Specimen Volume: Two, 10-mL Streck cell-free DNA (cfDNA) blood collection tubes Additional Information: 1. Only blood collected in Streck cfDNA tubes will be accepted for analysis. 2. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10 mL Streck cell-free DNA tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	Streck Black/Tan top
	Refrigerated	7 days	Streck Black/Tan top

CPT Code Information: 81309

CNSA
70644

Central Nervous System Consultation, Autopsy, Varies

Specimen Requirements:

Specimen Minimum Volume: Entire collection

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 88037 (if appropriate); 88036 (if appropriate);

CMA
9278

Centromere Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

CEAC
82387

Cephalosporium acremonium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CTSU
606147

Ceramide Trihexosides and Sulfatides, Random, Urine

Specimen Requirements: Patient Preparation: Baby wipes or wipes containing soaps and lotions should not be used prior to urine collection because these may interfere with results. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 2 mL
Collection Instructions: Collect a first-morning, random urine specimen. Specimen Stability Information: Refrigerated (preferred) 45 days/Ambient 45 days/Frozen 19 months

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	45 days
	Ambient	45 days
	Frozen	

CPT Code Information: 83789

SFINC 2762

Cerebrospinal Fluid (CSF) IgG Index, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see SFIG / Cerebrospinal Fluid IgG Index Profile, Serum and Spinal Fluid. Specimen Type: Spinal fluid
Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82042; 82784;

SFIG 610783

Cerebrospinal Fluid IgG Index Profile, Serum and Spinal Fluid

Specimen Requirements: Both serum and spinal fluid are required. -Spinal fluid must be obtained within 7 days of serum collection. -Two individual serum samples are required. Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: 2 Plastic vials
Specimen Volume: 2 mL in 2 plastic vials, each vial containing 1 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into 2 plastic vials. Specimen Type: Spinal fluid
Container/Tube: Sterile vial Preferred: Collection vial number 2 Specimen Volume: 1 mL Collection
Instructions: Label specimen as SFINC.

Specimen Minimum Volume: Serum: 1 mL in 2 plastic vials, each vial containing 0.5 mL; Spinal fluid: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 82040; 82042; 82784 x 2;

CTXWB
113444

Cerebrotendinous Xanthomatosis, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Specimen Volume: 1 mL Collection Instructions: Send whole blood in original vial. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	72 hours
	Ambient	48 hours

CPT Code Information: 82542

CTXBS
65630

Cerebrotendinous Xanthomatosis, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection Card (Filter Paper) Acceptable: Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper, Postmortem Screening Card or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

CTXP
65631

Cerebrotendinous Xanthomatosis, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	65 days

CPT Code Information: 82542

FCZAC
75563

Certolizumab and Anti-Certolizumab Antibody, DoseASSURE CTZ

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum frozen in a plastic vial. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested. NOTE: High serum biotin concentrations in patients taking biotin supplements may cause an interference in this assay. Patients may be advised to stop biotin consumption at least 72 hours prior to sample collection.

Specimen Minimum Volume: 0.60 mL (Note: This volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 80299; 82397;

CERS
614504

Ceruloplasmin, Serum

Specimen Requirements: Patient Preparation: Patient should be fasting: 4 hours preferred, nonfasting acceptable Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 82390

G162
605195

CGO Custom Gene Panel (LPGD) (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CHGL
82384

Chaetomium globosum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FAMCE Cheese American IgE 57914

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FCCGG Cheese Cheddar IgG 57573

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FSCE
57936

Cheese Swiss IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

CCHZ
82752

Cheese, Cheddar, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MCHZ
82751

Cheese, Mold, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CHER
82798

Cherry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CTRE
82607

Chestnut Tree, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CNUT
82870

Chestnut, Sweet, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CHXP
82494

Chick Pea, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CDROP
82142

Chicken Droppings, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CHCK
82713

Chicken Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCHXG
57625

Chicken IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into

a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CSPR
82351

Chicken Serum Proteins, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CHIC
82703

Chicken, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CHIKG 63868

Chikungunya IgG, Antibody, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86790

CHIKV 64173

Chikungunya IgM and IgG, Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86790 x2

CHIKM
63867

Chikungunya IgM, Antibody, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86790

CHIKI
37102

Chikungunya Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CHIKS
603833

Chikungunya Virus, PCR, Molecular Detection, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot the serum into a sterile container. 2. Serum specimens not aliquoted from the serum gel collection tube into a sterile container will be rejected.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

CHIKC
603832

Chikungunya Virus, PCR, Molecular Detection, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Preferred: Vial number 2 Acceptable: Any vial number Submission Container/Tube: Sterile screw cap vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge or heat inactivate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

CHIMU
62983

Chimerism Transplant No Cell Sort, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Only 1 tube is required. 2. Invert several times to mix blood. 3. Label specimen as blood. 4. Send whole blood specimen in original tube. Do not aliquot. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Label specimen as bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 3 mL Bone marrow: See Specimen Required Lesser volumes may be acceptable, depending on white cell count. Call 800-533-1710 or 507-266-5700 with questions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81267-Chimerism (engraftment) analysis, post hematopoietic stem cell transplantation specimen, includes comparison to previously performed baseline analyses, without cell selection

CHIMS 62984

Chimerism Transplant Sorted Cells, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Only 1 tube is required. 2. Invert several times to mix blood. 3. Label specimen as blood. 4. Send whole blood specimen in original tube. Do not aliquot. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Label specimen as bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 3 mL Bone marrow: See Specimen Required Lesser volumes may be acceptable, depending on white cell count. Call 800-533-1710 or 507-266-5700 with questions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	4 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	4 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81268-Chimerism (engraftment) analysis, post hematopoietic stem cell transplantation specimen, includes comparison to previously performed baseline analyses; with cell selection (eg, CD3, CD33), each cell type (if appropriate)

CHIDB 83182

Chimerism-Donor, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Label specimen as blood. 3. Send whole blood specimen in original tube. Do not aliquot. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2

mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Label specimen as bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen
 Collection Instructions: 1. Label specimen as extracted DNA from blood or bone marrow 2. Indicate volume and concentration of the DNA Specimen Type: Buccal swab Supplies: Buccal Swab Kit (T543) Container/Tube: Buccal smear collection kit Specimen Volume: 2 Cyto-Pak brushes-1 per cheek
 Collection Instructions: 1. Patient should rinse out mouth vigorously with mouthwash for approximately 15 seconds. 2. Remove Cyto-Pak brush from container only touching "stick" end. Save container. 3. Using medium pressure, rotate brush several times on inside of cheek. 4. Return brush to container and cap. 5. Repeat steps 2 through 4 on other cheek using second brush. 6. It is important that patient's buccal cells are not contaminated with cells from any other source. Do not touch bristles. Do not brush too vigorously. If blood appears, discard brush and restart collection process. 7. Label each container with patient's name and order number or hospital/clinic number. Additional Information: It is important that the cells do not dry out during shipping. Ensure that container is tightly sealed.

Specimen Minimum Volume: Whole blood: 3 mL Bone marrow/Buccal swab: See Specimen Required Extracted DNA from blood or bone marrow: 50 microliters at 20 ng/microliter Lesser volumes may be acceptable, depending on white cell count. Call 800-533-1710 or 507-266-5700 with questions.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81265-Comparative analysis using short tandem repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells)

CHRGB 83186 Chimerism-Recipient Germline (Pretransplant), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Label specimen as blood. 3. Send whole blood specimen in original tube. Do not aliquot. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Label specimen as bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen
 Collection Instructions: 1. Label specimen as extracted DNA from blood or bone marrow 2. Indicate volume and concentration of the DNA Specimen Type: Buccal swab Supplies: Buccal Swab Kit (T543) Container/Tube: Buccal smear collection kit Specimen Volume: 2 Cyto-Pak brushes-1 per cheek
 Collection Instructions: 1. Patient should rinse out mouth vigorously with mouthwash for approximately 15 seconds. 2. Remove Cyto-Pak brush from container only touching "stick" end. Save container. 3. Using medium pressure, rotate brush several times on inside of cheek. 4. Return brush to container and cap. 5. Repeat steps 2 through 4 on other cheek using second brush. 6. It is important that patient's buccal cells are not contaminated with cells from any other source. Do not touch bristles. Do not brush too

vigorously. If blood appears, discard brush and restart collection process. 7. Label each container with patient's name and order number or hospital/clinic number. Additional Information: It is important that the cells do not dry out during shipping. Ensure that container is tightly sealed.

Specimen Minimum Volume: Whole blood: 3 mL Bone marrow/buccal swab: See Specimen Required Extracted DNA from blood or bone marrow: 50 microliters at 20 ng/microliter Lesser volumes may be acceptable, depending on white cell count. Call 800-533-1710 or 507-266-5700 with questions.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells)

CHLG
619389

Chlamydia IgG, Immunofluorescence, Serum

Specimen Requirements: Specimen Required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86631 x 2

CHLAP
619387

Chlamydia IgM and IgG Panel, Immunofluorescence, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86632 x 2; 86631 x 2;

CHLM
619388

Chlamydia IgM, Immunofluorescence, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86632 x 2

MCTGC
43721

Chlamydia trachomatis and Neisseria gonorrhoeae, Miscellaneous Sites, Nucleic Acid Amplification, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491 - Chlamydia trachomatis; 87591 - Neisseria gonorrhoeae; 87801 -
If appropriate for government payers;

CGRNA
61553

Chlamydia trachomatis and Neisseria gonorrhoeae, Nucleic Acid Amplification, Varies

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491 - Chlamydia trachomatis; 87591 - Neisseria gonorrhoeae; 87801 -
If appropriate for government payers;

SCCGR
621934

Chlamydia trachomatis and Neisseria gonorrhoeae, Self-Collect, Amplified RNA, Rectal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491-Chlamydia trachomatis; 87591-Neisseria gonorrhoeae; 87801-If
appropriate for government payers;

SCCGT
621931

Chlamydia trachomatis and Neisseria gonorrhoeae, Self-Collect, Amplified RNA, Throat

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491-Chlamydia trachomatis; 87591-Neisseria gonorrhoeae; 87801-If appropriate for government payers;

SCCGV
621937

Chlamydia trachomatis and Neisseria gonorrhoeae, Self-Collect, Amplified RNA, Vaginal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491; 87591; 87801-If appropriate for government payers;

MCRNA
61554

Chlamydia trachomatis, Miscellaneous Sites, Nucleic Acid Amplification, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491

CTRNA
61551

Chlamydia trachomatis, Nucleic Acid Amplification, Varies

Specimen Requirements:

Specimen Minimum Volume: Urine: 2 mL; Endocervical/Cervix in PreservCyt or Swab specimens: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491

SCCTV
621938

Chlamydia trachomatis, Self-Collect, Amplified RNA, Vaginal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491

SCCTR
621935

Chlamydia trachomatis, Self-Collect, Nucleic Acid Amplification, Rectal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491

SCCTT
621932

Chlamydia trachomatis, Self-Collect, Nucleic Acid Amplification, Throat

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87491

CDP
8610

Chlordiazepoxide and Metabolite, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 80299**CLU**
614058**Chloride, 24 Hour, Urine**

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82436**CL_F**
606755**Chloride, Feces**

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g**Transport Temperature:**

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 82438

RCHLU Chloride, Random, Urine

610607

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82436

CL Chloride, Serum

8460

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 82435

FCHPZ
57719

Chlorpromazine (Thorazine)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

FCHCG
57644

Chocolate/Cacao IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and send 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FCCK1
75914

Cholecystokinin (CCK)

Specimen Requirements: Patient Preparation: 1. Patient should fast for 10 to 12 hours prior to

collection of specimens. 2. Antacid medications and medications that affect intestinal motility should be discontinued, if possible, for at least 48 hours prior to collection of specimens. Supplies: GI Preservative Tube (T125) Collection Container/Tube: Special tube containing GI preservative (T125) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Collect 10 mL blood in special GI preservative tube. 2. Centrifuge immediately and aliquot 3 mL plasma into a plastic vial. 3. Ship frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
GI Plasma	Frozen	180 days

CPT Code Information: 83519

CHLGP
608018

Cholestasis Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30

minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab
Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information:
Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is
possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: Blood: 1 mL; Blood spots: 2 spots; Skin biopsy, cultured
fibroblasts, or saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate);
88240-Cryopreservation (if appropriate);

CHLBF
606915

Cholesterol, Body Fluid

Specimen Requirements: Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites,
paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial
fluid Acceptable Source: Write in source name with source location (if appropriate) Collection
Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL
Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2.
Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 84311-Spectrophotometry, analyte not specified (cholesterol)

HDCH
8429

Cholesterol, High-Density Lipoprotein (HDL), Serum

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 83718

CLDL1
617023

Cholesterol, Low-Density Lipoprotein (LDL), Calculated, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see LPSC1 / Lipid Panel, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CHOL
8320

Cholesterol, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82465

CHLE
606888

Cholesteryl Esters, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	60 days
	Ambient	24 hours

CPT Code Information: 84311

FCNAB
57737

Chromatin (Nucleosomal) Antibody

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 86235

CRCOF
606424

Chromium and Cobalt, Synovial Fluid

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: Metal Free EDTA 3mL Tube (T989) Container/Tube: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Specimen Volume: 1 mL Collection Instructions: See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: Cobalt and chromium are

present in the black rubber plunger seals found in most disposable syringes. As a result, synovial fluid should not be collected in these devices as contamination may occur.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Synovial Fluid	Refrigerated (preferred)	90 days
	Ambient	90 days
	Frozen	90 days

CPT Code Information: 83018; 82495;

CRUO
65719

Chromium Occupational Exposure, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82495 ; 82570;

CRU
8593

Chromium, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 0.5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: 1. 24-Hour volume is required. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen

Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82495

CRWB
65601

Chromium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: Metal Free EDTA 3 mL Tube (T989) Container/Tube: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (T989) (BD catalog no. 367777) (T989) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82495

CRS
8638

Chromium, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 0.5 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully

pour specimen into a Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 82495

CRSY
606353

Chromium, Synovial Fluid

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: Chromium is present in the black rubber plunger seals found in most disposable syringes. As a result, synovial fluid should not be collected in these devices as contamination may occur.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Synovial Fluid	Refrigerated (preferred)	90 days
	Ambient	90 days
	Frozen	90 days

CPT Code Information: 82495

CRCRU
607758

Chromium/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic vial or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82495; 82570;

CH9
65029

Chromogenic Factor IX Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85130

CHF8
610419

Chromogenic Factor VIII Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85130

CH8BI
606844

Chromogenic Factor VIII Inhibitor Bethesda Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

CHF8P
610420

Chromogenic Factor VIII Inhibitor Bethesda Profile, Plasma

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: CHF8-85130; CH8B-85335; CH8BI-85390-26;

CH8B
606843

Chromogenic Factor VIII Inhibitor Bethesda Titer, Plasma

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

CGAK
34641

Chromogranin A, Serum

Specimen Requirements: Patient Preparation: For at least 2 weeks before specimen collection, patient should stop taking proton pump inhibitor medications. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial. Do not submit in original tube.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Ambient	48 hours
	Refrigerated	48 hours

CPT Code Information: 86316

CHRO
70402

Chromogranin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

Chromosomal Microarray (CMA) Familial Testing, FISH

Specimen Requirements: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Additional Information: Provide the name of the child (originally tested family member) on the request form. If testing was performed outside of Mayo Clinic Laboratories, consultation with the laboratory is required prior to ordering this test.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

Chromosomal Microarray, Autopsy, Products of Conception, or Stillbirth

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Products of conception or stillbirth Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) of placenta (including 50-mg chorionic villi) and 1 cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Attempt to identify and send only fetal tissue for analysis. 2. If a fetus cannot be specifically identified, collect 50-mg villus material or tissue that appears to be of fetal origin. 3. If multiple specimen types are sent, send each specimen in a separate container. Multiple specimens received (eg, placenta and fetal thigh) will be ordered under 1 test. All specimens will be processed separately. Additional Information: 1. Do not send entire fetus. 2. Do not send the container from a dilation and curettage (D and C) procedure. 3. Do not send other containers with large volumes of tissue. 4. While fresher specimens prepared as described above are preferred, we can attempt analysis on specimens that have been in less-than-ideal conditions. Specimen Type: Autopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 to 30 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. Results will be reported and telephoned or faxed if requested. Specimen Type: Chorionic villus Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 50 mg Collection Instructions: 1. Collect chorionic villus specimen (CVS) by transabdominal or transcervical method. 2. Transfer CVS to a Petri dish containing transport medium (such as CVS Media [RPMI] and Small Dish). 3. Using a

stereomicroscope and sterile forceps, assess the quality and quantity of villi and remove any blood clots and maternal decidua. Acceptable Specimen Type: Cultured cells Container/Tube: T25 flasks with culture media Specimen Volume: 2 T25 flasks Specimen Type: Tissue Supplies: Hank's Solution (T132) Container/Tube: In sterile Hank's solution

Specimen Minimum Volume: Chorionic villus: 10 mg; Muscle-fascia: 1 cm(3); Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81229

CMAMT
62667

Chromosomal Microarray, Autopsy/Products of Conception/Stillbirth, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded block containing fetal or placental (including chorionic villi) tissue. Specimen Type: Slides Specimen Volume: 6 Consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded tissue block; 5 Consecutive, unstained slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81229

CMACB
35247

Chromosomal Microarray, Congenital, Blood

Specimen Requirements: This test requires 2 blood specimens: 1 sodium heparin and 1 EDTA. Submit only 1 of the following specimen types: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) and lavender top (EDTA) Specimen Volume: 3-mL EDTA tube and 4-mL sodium heparin tube Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimens in original tubes. Do not aliquot. Specimen Type: Cord blood Container/Tube: Green top

(sodium heparin) and lavender top (EDTA) Specimen Volume: 3-mL EDTA tube and 4-mL sodium heparin tube Note: The lab will attempt testing on a minimum of 1-mL whole blood, EDTA preferred. Collection Instructions: 1. Invert several times to mix blood. 2. Send cord blood specimens in original tubes. Do not aliquot. 3. Label specimen as cord blood.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81229

CMAH
35899

Chromosomal Microarray, Hematologic Disorders, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. Specimen Type: Whole blood Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Specimen Volume: 7-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81277

CMAH
35898

Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 to 30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport

medium (such as CVS Media [RPMI] and Small Dish). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 to 30 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. Results will be reported and telephoned or faxed if requested.

Specimen Minimum Volume: Amniotic fluid: 12 mL; Chorionic villi: 12 mg; If ordering in conjunction with other testing: With PADF: 14 mL or 14 mg; with CHRAF: 24 mL; with CHRCV: 24 mg; with PADF and CHRAF/CHRCV: 26 mL or 26 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 81229

CMAPT
35901

Chromosomal Microarray, Tumor, Formalin-Fixed Paraffin-Embedded

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 10 Consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81277

CMAT
35900

Chromosomal Microarray, Tumor, Fresh or Frozen

Specimen Requirements: Submit only 1 of the following specimens: Supplies: Hank's Solution

(T132) Specimen Type: Tumor biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5-3 cm(3) or larger Specimen Type: Lymph node Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline. Specimen Volume: 1 cm(3) Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline. Specimen Volume: 4-mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: Tumor biopsy: 3 cm(3); Lymph node: 1 cm(3); Skin biopsy: 4 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81277

CHRAF
35243

Chromosome Analysis, Amniotic Fluid

Specimen Requirements: Specimen Type: Amniotic fluid Submission Container/Tube: Centrifuge tube Specimen Volume: 20 to 25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. 3. If ordering with PADF / Prenatal Aneuploidy Detection, FISH, submit a minimum of 14 mL. 4. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 24 mL. 5. If ordering with both PADF and CMAP, then submit a minimum of 26 mL. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. If the specimen does not grow in culture, the client will be notified within 7 days of receipt. 3. Bloody specimens are undesirable. Specimen Type: Fetal body fluid Container/Tube: Sterile tube Specimen Volume: Entire specimen Additional Information: 1. If the specimen does not grow in culture, the client will be notified within 7 days of receipt. 2. Clearly indicate on tube and paperwork that specimen is fetal body fluid.

Specimen Minimum Volume: The following are the minimum volumes when only this test is ordered: Amniotic fluid: 12 mL Fetal body fluid: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88235, 88291-Tissue culture for amniotic fluid or chorionic villus cells, Interpretation and report; 88269 w/modifier 52-Chromosome analysis, in situ for amniotic fluid cells, <6 colonies, 1 karyotype with banding (if appropriate); 88269-Chromosome analysis, in situ for amniotic fluid cells, 6 or greater colonies, 1 karyotype with banding (if appropriate); 88267, 88285-Chromosome analysis, amniotic fluid or chorionic villus, greater than 15 cells, 1 karyotype with banding (if appropriate); 88267 w/modifier 52-Chromosome analysis, amniotic fluid or chorionic villus, <15 cells, 1 karyotype with banding (if appropriate);

CHRCV
35251

Chromosome Analysis, Chorionic Villus Sampling

Specimen Requirements: Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect chorionic villus specimen (CVS) by the transabdominal or transcervical method. 2. Transfer the CVS to a Petri dish containing transport medium (Such as CVS Media [RPMI] and Small Dish [T095]). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. 4. If ordering with PADF / Prenatal Aneuploidy Detection, FISH, submit a minimum of 14 mg. 5. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 24 mg. 6. If ordering with both PADF and CMAP, then submit a minimum of 26 mg.

Specimen Minimum Volume: The following is the minimum volume when only this test is ordered: 12 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88235, 88291-Tissue culture for amniotic fluid or chorionic villus cells, Interpretation and report; 88267 w/modifier 52-Chromosome analysis, amniotic fluid or chorionic villus, <15 cells, 1 karyotype with banding (if appropriate); 88267-Chromosome analysis, amniotic fluid or chorionic villus, 15 cells, 1 karyotype with banding (if appropriate); 88267, 88285-Chromosome analysis, amniotic fluid or chorionic villus, <15 cells, 1 karyotype with banding (if appropriate);

CHRCB
35248

Chromosome Analysis, Congenital Disorders, Blood

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. 3. Label specimen as whole blood. Specimen Type: Cord blood Container/Tube: Green top (sodium heparin) Specimen Volume: As much as possible Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. 3. Label specimen as cord blood.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88230, 88291- Tissue culture for Lymphocytes, Interpretation and report; 88262 w/modifier 52-Chromosome analysis less than 15 cells (if appropriate); 88262-Chromosome analysis with 15 to 20 cells (if appropriate); 88262, 88285-Chromosome analysis with greater than 20 cells (if appropriate); 88280-Chromosome analysis, greater than 2 karyotypes (if appropriate); 88283-Additional specialized banding technique (if appropriate);

CHRHB
35308

Chromosome Analysis, Hematologic Disorders, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264,88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate) ;

CHRBM
35245

Chromosome Analysis, Hematologic Disorders, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

COGBL
113532

Chromosome Analysis, Hematologic Disorders, Children's Oncology Group Enrollment Testing, Blood

Specimen Requirements: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

COGBM
113531

Chromosome Analysis, Hematologic Disorders, Children's Oncology Group Enrollment Testing, Bone Marrow

Specimen Requirements: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

CHFXH
64922

Chromosome Analysis, Hematologic Disorders, Fixed Cells

Specimen Requirements: Specimen Volume: 2 mL Additional Information: Advise Express Mail or equivalent if not on courier service.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88291- Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

CHRTI
35250

Chromosome Analysis, Skin Biopsy

Specimen Requirements: Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile RPMI transport media, Ringer's solution, or normal saline-RPMI transport media (T095-Petri dish is not needed for this test). Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: 4 mm punch biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88233, 88291- Tissue culture for skin/biopsy, Interpretation and report; 88262 w/modifier 52-Chromosome analysis less than 15 cells(if appropriate); 88262-Chromosome analysis with 15 to 120 cells (if appropriate); 88262, 88285-Chromosome analysis with greater than 20 cells (if appropriate); 88280-Chromosome analysis, greater than 2 karyotypes (if appropriate); 88283-Additional specialized banding technique (if appropriate);

EOSDF
609587

Chronic Eosinophilia, Diagnostic FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

EOSMF
614254

Chronic Eosinophilia, Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x2, 88275 x1, 88291 x1-FISH Probe, Analysis, Interpretation; 1 probe sets; 88271 x2, 88275 x1-FISH Probe, Analysis; each additional probe set (if appropriate); 88271 x1-FISH Probe; coverage for sets containing 3 probes (if appropriate);

CHSBP
9023

Chronic Hepatitis B Monitoring Profile, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Transfer serum into a plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86707; 87340; 87350; 87341 (if appropriate);

CHBVS
615268

Chronic Hepatitis B Screen, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 87340; G0499-(if appropriate); 87350 (if appropriate); 87341 (if appropriate); 86707 (if appropriate);

CIDP
616443

Chronic Inflammatory Demyelinating Polyradiculoneuropathy/Nodopathy Evaluation, Serum

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 2

CIDPI
616444

Chronic Inflammatory Demyelinating Polyradiculoneuropathy/Nodopathy Interpretation, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CLLMD
608972

Chronic Lymphocytic Leukemia (CLL) Monitoring Minimal

Residual Disease Detection, Flow Cytometry, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Slides: If possible, include 5- to 10-unstained blood smears, must be labeled with two unique identifiers. Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Slides: If possible, include 5 to 10 unstained bone marrow aspirate smears, must be labeled with two unique identifiers. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 9-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88188-Flow Cytometry Interpretation, 9 to 15 markers;

CLLDF
610713

Chronic Lymphocytic Leukemia, Diagnostic FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot. Acceptable: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x12, 88275x6, 88291-FISH Probe, Analysis, Interpretation; 6 probe

sets; 88271x2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

CLLMF
610724

Chronic Lymphocytic Leukemia, Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot. Acceptable: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL; Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88275, 88291-FISH Probe, Analysis, Interpretation; 1 probe set; 88271x2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

CRHEP
113119

Chronic Viral Hepatitis (Unknown Type), Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 86704; 86706; 86803 ; 87340; 87341 (if appropriate); 87522 (if appropriate);

CHUB
82822

Chub Mackerel, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CSU
606921

Chyluria Screen, Random, Urine

Specimen Requirements: Patient Preparation: Before specimen collection, the patient should not ingest foods or beverages rich in vitamin C or take vitamin C supplements. Supplies: Urine Container, 60 mL (T313) Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 15 mL Collection Instructions: Collect a first-morning, random urine collection.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	10 days
	Refrigerated	10 days
	Ambient	4 hours

CPT Code Information: 82664-Electrophoretic technique, not elsewhere specified (Chylomicrons and lipoproteins); 84311-Spectrophotometry, analyte not specified (Cholesterol); 84478-Triglycerides;

FCHYS
57806

Chymotrypsin, Stool

Specimen Requirements: Specimen Type: Random stool Container/Tube: Sterile leak proof stool container Specimen Volume: 1 g Collection Instructions: Collect 1 gm random stool in sterile leak proof container, ship refrigerate. Note: Dietary restrictions: Patients receiving pancreatic enzymes should discontinue taking the enzymes at least 5 days before the collection of the stool sample.

Specimen Minimum Volume: 0.5 gram

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 84311

FCING
57676

Cinnamon IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CINN
82624

Cinnamon, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FCICP**
75925**Circulating Immune Complex Panel**

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood in plain, red-top tube(s) or serum gel tube(s). 2. Allow complete clotting of red blood cells (up to 1 hour) 3. Within 30 minutes of clotting completion, centrifuge and aliquot 2 mL into a plastic vial. 3. Freeze immediately. 4. Ship frozen.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86332 x 2**FCQBA**
57301**Circulating Immune Complex, C1q Binding**

Specimen Requirements: Collection Container/Tube: Red Top or SST Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Allow complete clotting of red blood cells (up to 1 hour), then separate serum from cells within 30 minutes and freeze immediately. Send 1 mL of serum frozen in a plastic vial. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86332

FCIC3
75772**Circulating Immune Complex, C3 fragments**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top/SST acceptable
Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s), is acceptable. Allow complete clotting of red blood cells (up to 1 hour), then separate from cells within 30 minutes and freeze immediately. Send 1 mL of serum frozen in a plastic vial. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	30 days

CPT Code Information: 86332

FCIC
91497**Circulating Immune Complexes (CIC)**

Specimen Requirements: Draw blood in a plain, red-top tube(s) or a serum gel tube(s). Spin down and send 3 mL of serum refrigerated.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	14 days

CPT Code Information: 86332

CITR2
606637**Citrate Concentration, Random, Urine**

Specimen Requirements: Only orderable as part of a profile. For more information see CITRA / Citrate Excretion, Random, Urine. Patient Preparation: Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible. The patient must avoid laxative use for 24 hours prior to collection. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 82507

CITR
606710

Citrate Excretion, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible. The patient must avoid laxative use for 24 hour collection period. Supplies: -Diazolidinyl Urea (Germall) 5.0 mL (T822) -Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic tube Specimen Volume: 4 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea (Germall) as preservative at start of collection or refrigerate specimen during and after collection. 2. Collect urine for 24 hours. 3. Mix well before taking 4-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information:

CITRA
606715

Citrate Excretion, Random, Urine

Specimen Requirements: Patient Preparation: Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible. The patient must avoid laxative use for 24 hours prior to collection. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 82507; 82570;

RAT10
606642

Citrate/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see CITRA / Citrate Excretion, Random, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 82507

CLAD
82912

Cladosporium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CLAM
82884

Clam, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CLD18
620665

Claudin 18 (CLDN18) (43-14A), Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554)
Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

CLAUD
70403

Claudin-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CLDN4
607334

Claudin-4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCLCN
75262

CLCN1 DNA Sequencing Test

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube(s) and send 8 mL of whole blood. Ship Ambient. Note: Collection date and informed consent are required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient (preferred)	10 days
	Refrigerated	10 days

CPT Code Information: 81406

CLIR
605136

CLIR Supplemental Report

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CLOBZ
65483**Clobazam and Metabolite, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collect blood immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Additional Information: Trough specimens are recommended as therapeutic ranges are based on specimens collected at trough (ie, immediately before the next dose).

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: G0480; 80339 (if appropriate for select payers);

CLOM
80902**Clomipramine, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299

CZPS
65044

Clonazepam and 7-Aminoclonazepam, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose (minimum 12 hours after last dose). 2. Within 2 hours of collection, the specimen must be centrifuged and the serum aliquoted into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80299

FCLMS
75524

Clonazepam and Metabolite, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic, preservative-free vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a red top tube(s). Serum gel tube is not acceptable. 2. Centrifuge and send 1 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 80299

FCLON
91107

Clonidine (Catapres)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

CDIFS
603416

Clostridioides difficile Culture with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Submit only 1 of the following specimens: Patient Preparation: Patient should not use antacids, barium, bismuth, antidiarrheal medication, zinc oxide paste, Vagisil cream or oily laxatives prior to specimen collection. Preferred: Specimen Type: Preserved feces Supplies: Culture and Sensitivity Stool Transport Vial (T058); Stool Collection Kit, Random (T635) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S [T058]) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect 1 gram or 5 mL fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Additional Information: Only diarrheal (ie., unformed) feces should be tested. Testing formed feces for C difficile is not clinically indicated. Specimen Stability Information: Ambient (preferred) 96 hours/Refrigerated 96 hours/Frozen 7 days Acceptable: Specimen Type: Unpreserved feces Supplies: Stool container, Small (Random), 4 oz (T288); Stool Collection Kit, Random (T635) Specimen Volume: Representative portion of stool Collection Instructions: Collect fresh stool and submit representative sample in stool container. Specimen Stability Information: Ambient (preferred) 72 hours/Frozen 7 days Additional Information: Only diarrheal

(i.e., unformed) stool should be tested. Testing formed stool for C difficile is not clinically indicated. Specimen Stability Information: Ambient (preferred) 72 hours/Frozen 7 days Specimen Type: Fresh tissue or biopsy Sources: Colon Supplies: Anaerobe Transport Tube (T588) Specimen Volume: Entire collection, 1-2 cm(3) Collection Instructions: Aseptically collect a 1-2 cm(3) piece of tissue whenever possible. In general, a larger piece of tissue is preferred. Submit in an anaerobic transport tube. Specimen Stability Information: Ambient 72 hours

Specimen Minimum Volume: Stool: 1 gram or 5 mL Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87081-C. difficile Culture; 87076-Anaerobe Ident (if appropriate); 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate); 87181-Anaerobe Susceptibility per agent (if appropriate); 87181 x 3-Antimicrobial Susceptibility, Anaerobic Bacteria, MIC (if appropriate);

CDIF
64354

Clostridioides difficile Culture, Varies

Specimen Requirements: Submit only 1 of the following specimens: Patient Preparation: Patient should not use antacids, barium, bismuth, antidiarrheal medication, zinc oxide paste, Vagisil cream or oily laxatives prior to specimen collection. Preferred: Specimen Type: Preserved feces Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect 1 gram or 5 mL fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Additional Information: Only diarrheal (ie, unformed) feces should be tested. Testing formed feces for Clostridioides difficile is generally not clinically indicated. Specimen Stability Information: Ambient (preferred) 96 hours/Refrigerated 96 hours/Frozen 7 days Acceptable: Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz (T288) -Stool Collection Kit, Random (T635) Container/Tube: Stool container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh feces and submit representative sample in stool container. Additional Information: Only diarrheal (ie, unformed) feces should be tested. Testing formed feces for Clostridioides difficile is generally not clinically indicated. Specimen Stability Information: Ambient (preferred) 72 hours/Frozen 7 days Specimen Type: Fresh tissue or biopsy Sources: Colon Supplies: Anaerobe Transport Tube (T588) Specimen Volume: Entire collection, 1 to 2 cm(3) Collection Instructions: Aseptically collect 1 to 2 cm(3) piece of tissue whenever possible. In general, a larger piece of tissue is preferred. Submit in an anaerobic transport tube. Specimen Stability Information: Ambient 72 hours

Specimen Minimum Volume: Stool: 1 g or 5 mL Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87081-C. difficile Culture; 87076-Anaerobe Ident (if appropriate); 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate);

CDPCR
618554

Clostridioides difficile Toxin, PCR, Feces

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Clostridioides difficile toxin DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Specimen Stability Information: Ambient (preferred) <5 days/Refrigerated <5 days Acceptable: Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz Random (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit representative sample in fecal container. Specimen Stability Information: Refrigerated (preferred) <5 days/Frozen <5 days

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies	5 days

CPT Code Information: 87493

CLOV
82490

Clove, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CLZ
42366

Clozapine, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80159

CLUS
70404

Clusterin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CMET
70405

cMET Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCMVQ
91734

CMV by PCR

Specimen Requirements: 1 mL amniotic fluid shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Amniotic Fld	Frozen	180 days

CPT Code Information: 87497

FCMVR
75857

CMV Resistance: Ganciclovir, Foscarnet, Cidofovir

Specimen Requirements: Specimen Type: Plasma Collection Container/Tube: EDTA Acceptable: ACD and PPT Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Draw blood in a EDTA tube(s), ACD or PPT tube(s) are acceptable. Centrifuge send 2 mL of plasma ambient in a plastic vial.

Specimen Minimum Volume: 0.5mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Ambient (preferred)	7 days
	Frozen	60 days
	Refrigerated	7 days

CPT Code Information: 87910x2

FDMZ
57859

CNBP DNA Test (DM2)

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA)
Specimen volume: 8 mL Collection instructions: 1. Draw blood in a lavender top (EDTA) tube(s). 2. Invert several times to mix. 3. Send ambient. Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	10 days
	Refrigerated	10 days

CPT Code Information: 81187; ;

CDS1
65565

CNS Demyelinating Disease Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended before initiation of immunosuppressant medication. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86053; 86363; 86053-Titer (if appropriate); 86363-Titer (if appropriate);

F₂
9121

Coagulation Factor II Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85210

F₉
9065

Coagulation Factor IX Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85250

FACTV
9054

Coagulation Factor V Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85220

F 7
9055

Coagulation Factor VII Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85230

F8A
9070

Coagulation Factor VIII Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85240

F8IS
7289

Coagulation Factor VIII Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: 8INHE / Factor VIII Inhibitor Evaluation, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma AVWPR / von Willebrand Disease Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

F 10
9066

Coagulation Factor X Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85260

FXCH
89042

Coagulation Factor X Chromogenic Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85260

F 11
9067

Coagulation Factor XI Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85270

F 12
9069

Coagulation Factor XII Activity Assay, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85280

CMMPP
606103

Cobalamin, Methionine, and Methylmalonic Acid Pathways, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately place specimen on ice. 2. Within 4 hours of collection, centrifuge and aliquot plasma into plastic vial. 3. If blood cannot be placed on wet ice immediately, centrifuge and aliquot plasma into plastic vial within 1 hour of collection. 4. A refrigerated centrifuge is not required if the above time restrictions are met.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Refrigerated (preferred)	28 days
	Frozen	309 days
	Ambient	28 days

CPT Code Information: 83090; 83918; 82136; 82542 (if appropriate for government payers);

CMMPS
606111

Cobalamin, Methionine, and Methylmalonic Acid Pathways, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 4 hours of collection, centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	309 days
	Ambient	28 days

CPT Code Information: 83090; 83918; 82136; 82542 (if appropriate for government payers);

COUO
607762

Cobalt Occupational Exposure, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic 10 mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. At the end of the work week, collect a random urine specimen at the end of the employee's work shift. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83018 ; 82570 ;

COU
80083

Cobalt, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 0.5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

COWB
60355

Cobalt, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free EDTA 3 mL Tube (T989) Container/Tube: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

COS
80084

Cobalt, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 0.5 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 83018

COSY
606352

Cobalt, Synovial Fluid

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (T989) (BD catalog no. 367777) Acceptable: Royal blue-top BD vacutainer with EDTA blood collection tube (6mL) (BD Catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: See Metals Analysis Specimen Collection and Transport for complete instructions.

Additional Information: Cobalt is present in the black rubber plunger seals found in most disposable syringes. As a result, synovial fluid should not be collected in these devices as contamination may occur.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Synovial Fluid	Refrigerated (preferred)	90 days
	Ambient	90 days
	Frozen	90 days

CPT Code Information: 83018

COBRU
607760

Cobalt/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83018 ; 82570;

FCOKE
75174

Cocaine Analysis - Whole Blood

Specimen Requirements: Draw blood in a purple-top (EDTA), green-top (sodium-heparin) or grey-top (NaF/oxalate) tube(s). Send 7 mL of whole blood refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307; 80353-if applicable;

COKMX
62720

Cocaine and Metabolite Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	21 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: 80353; G0480 (if appropriate);

COKEX
62719

Cocaine and Metabolite Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 10 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80353; G0480 (if appropriate);

COKEU
9286

Cocaine and Metabolite Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: G0480; 80353 (if appropriate for select payers);

COKEM
84140

Cocaine and Metabolites Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	21 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: G0480; 80353 (if appropriate for select payers);

FCDU6
75781

Cocaine and Metabolites, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

RSCOC
35928

Coccidioides Antibody Reflex, Complement Fixation and Immunodiffusion, Serum

Specimen Requirements: Only orderable as a reflex. For more information see COXIS / Coccidioides Antibody Screen with Reflex, Serum.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86635 x 3

COXIS
62079

Coccidioides Antibody Screen with Reflex, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 1.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86635; 86635 x3 (if appropriate);

SCOC
8295

Coccidioides Antibody, Complement Fixation and Immunodiffusion, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86635 x 3

CCOC
81542

Coccidioides Antibody, Complement Fixation and Immunodiffusion, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 2 mL Collection Instructions: Submit specimen from collection vial 2 (preferred), 3, or 4.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86635 x 3

CIMT
62204

Coccidioides immitis/posadasii, Molecular Detection, PCR, Paraffin, Tissue

Specimen Requirements: Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Body tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Body tissue Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87798

CIMRP
88804

Coccidioides immitis/posadasii, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Coccidioides species DNA is unlikely. Preferred Specimens: Body fluid, cerebrospinal fluid (CSF), ocular fluid, respiratory (eg, bronchoalveolar lavage [BAL], bronchial washing, sputum), fresh tissue, or bone Acceptable Specimens: If no fresh specimen is available, digested respiratory specimens treated with N-acetyl-L-cysteine-sodium hydroxide (NALC/NaOH) are acceptable (eg, BAL, bronchial washing, respiratory fluid, sputum, or tracheal secretion) Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Body, ocular, or CSF Container/Tube: Sterile container Specimen Volume: 1 mL Additional Information: Only fresh, non-NALC/NaOH-digested body fluid is acceptable. Specimen Type: Respiratory Sources: BAL, bronchial washing, or sputum Container/Tube: Sterile container Specimen Volume: 1 mL if only PCR ordered or 3 mL if PCR ordered with smear and culture Specimen Type: Tissue Sources: Fresh tissue or bone Container/Tube: Sterile container Specimen Volume: 5 to 10 mm Collection Instructions: Keep moist with sterile water or sterile saline Additional Information: Only fresh, non-NALC/NaOH-digested tissue is acceptable. Acceptable Specimen Type: NALC/NaOH-digested respiratory specimens Sources: BAL, bronchial washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen.

Specimen Minimum Volume: Body fluid or nondigested respiratory specimen: 0.5 mL; Fresh

tissue or bone: 5 mm; NALC-NaOH-digested specimen: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

FCKTF
57966

Cockatiel Feathers IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

CBUR
82802

Cocklebur, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCAIG
75561

Cockroach American (*Periplaneta americana*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

COCR
82693

Cockroach, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCO CN
57668

Coconut IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CCNT
82739

Coconut, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

COD
82889

Codfish, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

Q10
87853

Coenzyme Q10, Reduced and Total, Plasma

Specimen Requirements: Patient Preparation: Fasting (8 hours) Collection Container/Tube: Green top (lithium or sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after collection, place specimen on wet ice. Maintain on wet ice and process within 3 hours of collection. 2. Centrifuge, aliquot plasma into plastic vial, and freeze immediately.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Heparin	Frozen (preferred)	14 days
	Refrigerated	8 hours

CPT Code Information: 82542

TQ10
63148

Coenzyme Q10, Total, Plasma

Specimen Requirements: Patient Preparation: Fasting (8 hours) Collection Container/Tube: Green top (lithium or sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after collection, place specimen on wet ice. Maintain on wet ice and process within 3 hours of collection. 2. Centrifuge, aliquot plasma into plastic vial, and freeze immediately.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Heparin	Frozen (preferred)	14 days
	Refrigerated	10 days

CPT Code Information: 82542

FCOFE
57525

Coffee (Coffea spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

ML20C
605263

COG Metaphases, 1-19 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264

M25C
605264

COG Metaphases, 20-25 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264

MG25C
605265

COG Metaphases, >25 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264; 88285;

CATTR
614034

Cold Agglutinin Titer, Serum

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	72 hours

CPT Code Information: 86157

COLIV
70408

Collagen IV Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FFTYC
91496

Collagen Type II antibody

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in plain, red-top tube(s) or serum-gel tube(s). 2. Centrifuge and aliquot serum into a plastic vial. 3. Send refrigerated.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days

CPT Code Information: 83520

MSCG
615298

Collagenofibrotic Glomerulopathy Confirmation, Mass Spectrometry

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded kidney tissue block Collection Instructions: Do not send fixed tissue slides. Testing can only be done on paraffin-embedded tissue blocks.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 82542; 88380;

CRMTS
43436

Collapsin Response-Mediator Protein-5 (CRMP-5) Neuronal IgG Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -DYS2 / Dysautonomia, Autoimmune/Paraneoplastic Evaluation, Serum -GID2 / Gastrointestinal Dysmotility, Autoimmune/Paraneoplastic Evaluation, Serum -PVLE / Paraneoplastic Vision Loss Evaluation, Serum -AIAES / Axonal Neuropathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

CRMTC
43445

Collapsin Response-Mediator Protein-5 (CRMP-5) Neuronal IgG Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

CRMWS
83107

Collapsin Response-Mediator Protein-5-IgG, Western Blot, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 84182

CRMWC **Collapsin Response-Mediator Protein-5-IgG, Western Blot, Spinal Fluid**
21747

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 84182

CMITO **Combined Mitochondrial Full Genome and Nuclear Gene Panel, Varies**
617103

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with whole blood or dried blood spot testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710 Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted.

Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Whole blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81460; 81440; 81465;

CMIL
82833

Common Millet, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

REED
82902

Common Reed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CO4D 70407

Complement 4d Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

C1Q 8851

Complement C1q, Serum

Specimen Requirements: Patient Preparation: Fasting for 12 hours Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 86160

C341Q 621739

Complement C3 and C4 with Anti-C1q Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	21 days

CPT Code Information: 86160 x2; 83520;

C3 8174

Complement C3, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86160

C4 8171

Complement C4, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86160

COM
8167

Complement, Total, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	28 days

CPT Code Information: 86162

CBC
9109

Complete Blood Cell Count (CBC) with Differential, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	48 hours
	Ambient	24 hours

CPT Code Information: 85025; 85007 (if appropriate); 85060 (if appropriate);

CACMG
617141

Comprehensive Arrhythmia and Cardiomyopathy Gene Panel,

Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81439

CARGG
617169

Comprehensive Arrhythmia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81413

CCMGG
617183

Comprehensive Cardiomyopathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original

tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81439

CVHBG
617225

Comprehensive Cerebrovascular Gene Panel, Varies

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405 x5; 81406 x3; 81408; 81479; 81479 (if appropriate for government payers);

DWPAN
617545

Comprehensive Distal Weakness Gene Panel, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

FCDSU
75775

Comprehensive Drug Screen, Umbilical Cord Tissue

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Umbilical Cord Tissue Container/Tube: Plastic, preservative-free container Specimen Volume: 10 grams Collection Instructions: Collect at least 6 inches of umbilical cord (approximately the length of an adult hand). Drain and discard any blood. Rinse the exterior of the cord segment with normal saline or sterile water. Pat the cord dry and place in container for transport. Ship refrigerated in a preservative-free, plastic container. Unacceptable Specimens: Cords soaking in blood or other fluid. Formalin fixed. Tissue that is obviously decomposed. Samples received without cold pack.

Specimen Minimum Volume: 10 grams

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307

EPPAN
616550

Comprehensive Epilepsy With or Without Encephalopathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81419

CAORG
617155

Comprehensive Marfan, Loeys-Dietz, Ehlers-Danlos, and Aortopathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81410

CMAMA Comprehensive Metabolic Panel, Serum 113631

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged and protected from light within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	24 hours

CPT Code Information: KS-84132; NAS-84295; CL-82435; HCO3-82374; BUN-84520; CRTS1-82565; CA-82310; GLURA-82947; TP-84155; ALB-82040; AST-84450; ALP-84075; ALT-84460; BILIT-82247;

NGHMM Comprehensive Myeloid Next-Generation Sequencing Assay, 620041 Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD-B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Refrigerated (preferred)	72 hours
	Ambient	72 hours

CPT Code Information: 81455**NEPHP**
618086**Comprehensive Nephrology Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81401 x 2; 81404 x 12; 81405 x 8; 81406 x 22; 81407 x 13; 81408 x 5; 81479; 81479 (if appropriate for government payers);**MUPAN**
617662**Comprehensive Neuromuscular Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional

information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

PEPAN
617688

Comprehensive Peripheral Neuropathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed

as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81448

TBT
80667

Concentration, Mycobacteria (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87015

FFCAH
75305

Congenital Adrenal Hyperplasia (CAH) Pediatric Profile 6, Comprehensive Screen

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 3.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and separate within 45 minutes of collection and send 3.5 mL of serum frozen in plastic vial.

Specimen Minimum Volume: 2 mL NOTE: Minimum volume does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	90 days

CPT Code Information: 82633/DOC; 82634/ 11-Desoxycortisol; 82157/Androstenedione; 82533/Cortisol; 82626/DHEA; 84143/17-OH-Pregnenolone; 84144/Progesterone; 83498/17-OH-Progesterone; 84403/Testosterone;

CAH21
87815

Congenital Adrenal Hyperplasia (CAH) Profile for 21-Hydroxylase Deficiency, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Specimen Volume: 0.6 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Include time of collection. 3. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 82157; 82533; 83498;

CAH2T
42202

Congenital Adrenal Hyperplasia Newborn Screen, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Local newborn screening card, Whatman 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 82542

CCMVS
620659

Congenital Cytomegalovirus (cCMV), Molecular Detection, PCR, Saliva

Specimen Requirements: Supplies: BD UVT with mini tip flocced swab (T971) Collection Container/Tube: Flocced swab Submission Container/Tube: Sterile, screw-capped, tube containing viral transport media with flocced swab containing saliva. See Collection Instructions for acceptable media. Specimen Volume: 1 Swab in viral transport media Collection Instructions: 1. Collect a saliva specimen using a flocced swab per swab manufacturer instructions. 2. Place in a sterile, screw capped tube containing BD Universal Viral Transport Medium (UVT) (1 mL or 3 mL), Copan Universal Transport Medium (UTM) (1 mL or 3 mL), Remel M4-RT, Remel M4, or Remel M6.

Specimen Minimum Volume: Saliva swab submitted in minimum volume of 0.3 mL of viral transport media.

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Frozen	7 days

CPT Code Information: 87496

CCMVU
620658

Congenital Cytomegalovirus (cCMV), Molecular Detection, PCR, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic sterile container, 5 mL Specimen Volume: 0.2 mL Collection Instruction: 1. Collect a random urine from a urine bag, container, or catheter. 2. Transfer urine to sterile container. 3. No preservative

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	72 hours

CPT Code Information: 87496

CDGGP
608010

Congenital Disorders of Glycosylation Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: Blood: 1 mL; Blood spots: 2 spots; Skin biopsy, cultured fibroblasts, or saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CDGN
65485

Congenital Disorders of N-Glycosylation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.15 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	45 days
	Ambient	7 days

CPT Code Information: 83789

NCDA
619075

Congenital Dyserythropoietic Anemia Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

GNFIB
619159

Congenital Fibrinogen Disorders, FGA, FGB, and FGG Genes, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

Congenital Heart Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. If amniotic fluid or nonconfluent cultures are received, CULAF / Culture for Genetic Testing, Amniotic Fluid will be added at an additional charge. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. If nonconfluent cultures are received, CULFB / Fibroblast Culture for Biochemical or Molecular Testing will be added at an additional charge. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404; 81405 x 3; 81406 x 6; 81407 x 3; 81408; 81479; 81479 (if appropriate for government payers); 81265-Maternal cell contamination (if appropriate); 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88235-Amniotic Fluid culture (if appropriate); 88240-Cryopreservation (if appropriate);

Congenital Infantile Leukemia, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Additional Information: 1. The paraffin embedded specimen can be from any anatomic location (skin, soft tissue, lymph node, etc.). 2. Bone specimens that have been decalcified will be attempted for FISH, with a success rate of approximately 50%. Acceptable: Slides Collection Instructions: 20 Consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: 15 consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x2, 88291-DNA probe, each (first probe set), interpretation and report; 88271 x2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

CLADP
608019

Congenital Lactic Acidosis Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 81460; 81465; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 81479 (if appropriate for government payers);

CTDC
83631

Connective Tissue Diseases Cascade, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86038; 86200; 83516-Centromere (if appropriate); 83516-Ribosome (if appropriate); 86225-ds-DNA AB IgG, Serum (if appropriate); 86235 x 6-RNP, Sm, SS-B, SS-A, Jo 1, and Scl 70 (if appropriate);

SLSUR
622224

Consult Slide Surcharge (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CRHPC
113329

Consult, w/Comp Rvw of His (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88325

CSPPC
113327

Consult, w/Slide Prep (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88323

CUPPC
113328

Consult, w/USS Prof (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88323-26

CONCS
616442

Contactin-1 IgG Cell Binding Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: -CIDP / Chronic Inflammatory Demyelinating Polyradiculoneuropathy/Nodopathy Evaluation, Serum -DMNES / Peripheral Nervous System Demyelinating Neuropathy, Autoimmune Evaluation, Serum Patient Preparation: For optimal antibody detection, specimen collection is recommended to occur prior to starting immunosuppressant medication or intravenous immunoglobulin treatment (IVIg). Supplies:

Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

CSMEU
615907

Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine container Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Submitting less than 30 mL may compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test.

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 80307; G0482; 80347 (if appropriate for select payers); 80364 (if appropriate for select payers); 80326 (if appropriate for select payers);

CSMHU
615293

Controlled Substance Monitoring Hybrid Drug Profile, 20 Drug Classes, High-Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 10 mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic bottle. 3. No preservative Additional Information: 1. No specimen substitutions. 2. Submitting less than 5 mL may compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 80307; G0482; 80347 (if appropriate for select payers); 80364 (if appropriate for select payers); 80326 (if appropriate for select payers);

CSMOF
621483

Controlled Substance Monitoring Panel, 11 Drug Classes, Screen Only, Immunoassay, Oral Fluid

Specimen Requirements: Patient Preparation: 1. For 15 to 60 minutes before specimen collection, the patient should abstain from eating food. 2. If the patient has recently taken an oral medication or used an inhaled medication, wait 2 hours before collecting the specimen. 3. Patient must empty mouth of any gum, food, or tobacco prior to oral fluid collection. If patient's mouth is not empty immediately before collection, have them rinse their mouth with water (up to 4 oz) and wait 10 minutes before collection. The patient may discard or drink the water after rinsing. Supplies: Quantisal Oral Fluid Collection Device (T980) Note: Check expiration date on Quantisal packaging Container/Tube: Quantisal collection device Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Oral Fluid Specimen Collection Instructions for Controlled Substance Monitoring. 2. Peel open package and remove collector by the handle. Do not touch the collection pad with fingers before or after specimen collection. To expedite the collection process, move tongue side to side to accumulate saliva in mouth before starting. Keep the tip of the device pointed down. 3. Position collector under tongue and close mouth. Keep head down to allow gravity to help with saliva collection. Important: Do not chew on pad, talk, or remove collector from mouth until indicator turns BLUE, or until 10 minutes has passed, whichever occurs first. 4. Hold transport tube in an upright position and uncap by pushing up with thumbs. Do not stand tube on table. Do not spill or empty the liquid from tube. 5. Insert collector into the uncapped transport tube and replace cap. Do not place collector back in mouth after it has been placed in the transport tube. 6. Snap cap firmly for transport. Place center of specimen seal on top of tube and press down both sides. 7. Complete paperwork and send sample to laboratory. 8. Send in original tube. Do not aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Fluid	Ambient (preferred)	7 days
	Frozen	28 days
	Refrigerated	7 days

CPT Code Information: 80307

CSMPU
610271

Controlled Substance Monitoring Panel, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine container Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Submitting less than 30 mL may compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test.

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 80307; G0482; 80347 (if appropriate for select payers); 80364 (if appropriate for select payers); 80326 (if appropriate for select payers);

CSMTU
615292

Controlled Substance Monitoring Targeted Profile, 17 Drug Classes, Mass Spectrometry, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 10 mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic bottle. 3. No preservative Additional Information: 1. No specimen substitutions. 2. Submitting less than 5 mL may compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: G0482; 80347 (if appropriate for select payers); 80364 (if appropriate for select payers); 80326 (if appropriate for select payers);

CPAPD 70329

Conventional Smear-Diagnostic, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Papanicolaou smears should be collected near the middle of the menstrual cycle. No douching, lubricant use, or sexual intercourse for 24 hours prior to specimen collection. Container/Tube: Slide Specimen Volume: Circular scrape of cervical os Collection Instructions: 1. Specimen containers must be labeled with a minimum of 2 unique identifiers (patient's name, and medical record number or date of birth). Containers should also be labeled with specimen source, and date collected. 2. Glass slides may be labeled with a single unique identifier, but 2 identifiers are preferred. If multiple slides are submitted, each slide must have proper identification. Glass slides should be identified with the patient's name and a second patient identifier that is also on the accompanying paperwork (ie, medical record number or date of birth) 3. Fix slides immediately in 95% alcohol or treat with commercially available spray fixative.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	SLIDE	
	Refrigerated	SLIDE	

CPT Code Information: P3000; 88164; 88141-CVSPC (if appropriate);

CPAPS 70331

Conventional Smear-Screen, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Papanicolaou smears should be collected near the middle of the menstrual cycle. No douching, lubricant use, or sexual intercourse for 24 hours prior to specimen collection. Container/Tube: Slide Specimen Volume: Circular scrape of cervical os Collection Instructions: 1. Specimen containers must be labeled with a minimum of 2 unique identifiers (patient's name, and medical record number or date of birth). Containers should also be labeled with specimen source, and date collected. 2. Glass slides may be labeled with a single unique identifier, but 2 identifiers are preferred. If multiple slides are submitted, each slide must have proper identification. Glass slides should be identified with the patient's name and a second patient identifier that is also on the accompanying paperwork (ie, medical record number or date of birth) 3. Fix slides immediately in 95% alcohol or treat with commercially available spray fixative.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	SLIDE	
	Refrigerated	SLIDE	

CPT Code Information: P3000; 88164; 88141-CVSPC (if appropriate);

CPAVP
603599

Copeptin proAVP, Plasma

Specimen Requirements: Patient Preparation: For water-deprivation testing, for at least 8 hours, the patient should fast and thirst (no liquids, including water, are allowed). Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic screw-top vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot plasma into a plastic vial. Do not submit in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84588

CUU
8590

Copper, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with this test. If barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82525

CUT
8687

Copper, Liver Tissue

Specimen Requirements:

Specimen Minimum Volume: Needle biopsy: See Specimen Required; 2 mm x 2 mm (punch): 0.3 mg by dry weight

Transport Temperature:

Specimen Type	Temperature	Time
Liver Tissue	Refrigerated (preferred)	
	Ambient	
	Frozen	

CPT Code Information: 82525

FCOPP
75391

Copper, RBCs

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: RBCs Collection Container/Tube: Royal Blue top tube (Trace metal-free; EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in a royal blue top (trace metal free; EDTA) tube(s). Centrifuge and separate plasma within two hours of collection. Leave RBCs in the original collection container and replace stopper. Send 1 mL RBC's refrigerated. NOTE: Tubes containing Heparin based anticoagulants are not acceptable.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
RBCS	Refrigerated	14 days	METAL FREE

CPT Code Information: 82525

CUS1 616155

Copper, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metal tests. If gadolinium-, iodine, or barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: -Metal Free Specimen Vial (T173) -Metal Free B-D Tube (No Additive), 6 mL (T184) Collection Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 0.8 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 82525

CURCU 615257

Copper/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with this test. If barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82525; 82570;

CURC
615258

Copper/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see CURCU / Copper/Creatinine Ratio, Random, Urine. Patient Preparation: High concentrations of barium are known to interfere with most metal tests. If barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82525

CORI
82476

Coriander, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCORG
57526

Corn IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge down and aliquot 0.5 mL of serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FCOR4
57569

Corn IgG4

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CRNP
82718

Corn Pollen, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CORN
82705

Corn-Food, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CORTC
88221

Corticosterone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: 1. Morning (8 a.m.) specimen is preferred. 2.

Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82528

CORTO 65484

Cortisol, Free and Total, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.85 mL Collection Instructions: 1. Morning (8 a.m.) specimens are preferred. The 8 a.m. cortisol can be referred to as the a.m. cortisol and can be collected anywhere between 6 a.m. and 10:30 a.m. in the morning. 2. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82530; 82533;

CORTU 8546

Cortisol, Free, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10-mL (T068) Submission Container/Tube: Plastic urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 10 g of boric acid as preservative at start of collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 82530**CRANR**
609741**Cortisol, Free, Random, Urine**

Specimen Requirements: Supplies: Urine tube, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 82530; 82570;**CORTF**
65423**Cortisol, Free, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.25 mL Collection Instructions: 1. Morning (8 a.m.) specimens are preferred. The 8 a.m. cortisol can be referred to as the a.m. cortisol and can be collected any time between 6 a.m. and 10:30 a.m. in the morning. 2. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send a separate order for each specimen.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82530

CIVC
6347

Cortisol, Inferior Vena Cava, Serum

Specimen Requirements: Collection Container/Tube: Red top Specimen Volume: 1.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Include time of collection. 3. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send a separate order for each specimen.

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82533

CLAV
6346

Cortisol, Left Adrenal Vein, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top Specimen Volume: 1.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Include time of collection 3. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send a separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82533

CINP
9369

Cortisol, Mass Spectrometry, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Specimen Volume: 0.6 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Include time of collection. 3. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send a separate order for each specimen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82533

CRAV
6345

Cortisol, Right Adrenal Vein, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top Specimen Volume: 1.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Include time of collection. 3. Centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are collected, send a separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82533

SALCT 84225

Cortisol, Saliva

Specimen Requirements: If multiple specimens are collected, submit each Salivette under a separate order number. Patient Preparation: 1. Patient should not brush teeth, eat, drink, or take any oral medication for at least 60 minutes before specimen collection. 2. Have patient rinse mouth thoroughly with water for 1-5 seconds. Wait 10 minutes before collecting the specimen to avoid contamination of the saliva by interfering substance. Supplies: Cortisol, Saliva Collection Kit (T514) Container/Tube: Sarstedt Salivette Specimen Volume: 1.5 mL Collection Instructions: 1. Provide patient with a Saliva Collection Kit (Salivette) containing the Cortisol - Saliva Collection Instructions and ask them to follow the instructions as written. 2. Instruct patient to collect specimen between 11 p.m. and midnight and record collection time on the Cortisol - Saliva Collection Instructions sheet. 3. Instruct patient to return Cortisol - Saliva Collection Instructions with the appropriately labeled Salivette to the laboratory. Additional Information: Reference values are also available for an 8 a.m. (7 a.m.-9 a.m.) or a 4 p.m. (3 p.m.-5 p.m.) collection, however, the 11 p.m. to midnight collection is preferred.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Saliva	Refrigerated (preferred)	28 days
	Frozen	60 days
	Ambient	28 days

CPT Code Information: 82533

CORT 8545

Cortisol, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection. Additional Information: 1. Include time of collection. 2. If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 82533

COCOU
82948

Cortisol/Cortisone, Free, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10-mL (T068) Submission Container/Tube: Plastic, urine tube (T068) Specimen Volume: 5 mL Collection Instructions: 1. Add 10 g of boric acid as preservative at start of collection. 2. Collect urine for a full 24 hours (required) and record the total volume. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82530-Cortisol; free; 82542;

CCFR
609740

Cortisol/Cortisone, Free, Random, Urine

Specimen Requirements: Supplies: Urine tube, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 82542 ; 82530 - Cortisol; 82570 - Creatinine;

COTT
82859

Cotton Fiber, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CSED
82804

Cottonseed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CTWD
82748

Cottonwood, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

COW
82873

Cow Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CBBRP
62248

Coxiella burnetii (Q fever), Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Coxiella burnetii DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

CBSRP
62194

Coxiella burnetii (Q Fever), Molecular Detection, PCR, Serum

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Coxiella burnetii* DNA is unlikely. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a sterile vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 87798

CBRP
62193

Coxiella burnetii (Q fever), Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Coxiella burnetii* DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Lung, bone, liver, heart valve, aorta, or endocardium Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days/ Frozen <7 days Preferred Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Lung, bone, liver, heart valve, aorta, or endocardium Supplies: Tissue Block Container (T553) Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Lung, bone, liver, heart valve, aorta, or endocardium Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare 5 separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87798

FCRAB 57674

Crab IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CRAB 82745

Crab, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CRANB
86307

Cranberry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CRAY
82343

Crayfish, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CRDPP
606130

Creatine Disorders Panel, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA)
Acceptable: Green top (sodium heparin), yellow top (ACD) Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial. Send

plasma frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 82540; 82565; 82542;

CRDPU
88697

Creatine Disorders Panel, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10 mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. Immediately freeze urine specimen. 3. If possible, do not send other tests ordered on same vial of urine. In doing so, the other tests may have increased turnaround time due to the strict frozen criteria of this assay.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	29 days

CPT Code Information: 82540; 82570; 82542;

CRDPS
606131

Creatine Disorders Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Send serum frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 82540; 82565; 82542;

CK
8336

Creatine Kinase (CK), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 82550

CRCL
615813

Creatinine Clearance, Serum and 24-Hour Urine

Specimen Requirements: Both serum and urine are required. Serum must be collected no earlier than 72 hours before start of urine collection and no later than 72 hours after urine collection is completed. Specimen Type: Serum Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot serum into plastic vial. 2. Label specimen as serum. Specimen Type: Urine Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. Label specimen as urine. Additional Information: For multiple collections see Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens

Specimen Minimum Volume: Serum: 0.5 mL Urine: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	
	Frozen	
Urine	Refrigerated (preferred)	
	Ambient	
	Frozen	

CPT Code Information: 82575

CRTS1
48216

Creatinine with Estimated Glomerular Filtration Rate (eGFR), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	24 hours

CPT Code Information: 82565

CTU
610601

Creatinine, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: 1. This test does not require the use of a chemical preservative; if a chemical preservative is used, it must be added to the specimen within 4 hours of completion of 24-hour collection. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 82570

CRT24
610597

Creatinine, 24 Hour, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: -NMH24 / N-Methylhistamine, 24 Hour, Urine -RB24 / Retinol-Binding Protein, 24 Hour, Urine -A124 / Alpha-1-Microglobulin, 24 Hour, Urine

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information:

CRT2F
618161

Creatinine, 24 Hour, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: -TLTE4 / Leukotriene E4, 24 Hour, Urine -MCM24 / Mast Cell Mediators, 24 Hour, Urine

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	30 days
	Refrigerated	30 days
	Ambient	14 days

CRBF
606601

Creatinine, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Peritoneal dialysate (dialysis fluid) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 82570

RCTUR
610603

Creatinine, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 6 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 82570

CRETR
610598

Creatinine, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see

orderable test ID. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube
Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 82570

CRTFR
618560

Creatinine, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: -RLTE4 / Leukotriene E4, Random, Urine. -TIUCR / Titanium/Creatinine Ratio, Random, Urine Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	30 days
	Refrigerated	30 days
	Ambient	14 days

CPT Code Information: 82570

CRE2
614427

Creatinine, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: -ALBR / Albumin, Random, Urine -RALB / Albumin, Random, Urine. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 82570

CJDEI
620375

Creutzfeldt-Jakob Disease Evaluation Interpretation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	BlueTop SARSTEDT
	Refrigerated	14 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CJDE
620374

Creutzfeldt-Jakob Disease Evaluation, Spinal Fluid

Specimen Requirements: Supplies: CJD/RPD Evaluation Kit (T966) Container/Tube: Preferred: 2 Sarstedt CSF False Bottom Tubes 63.614.625 (2.5 mL) Acceptable: Sarstedt 72.703.600 (1.5 mL) or Sarstedt 72.694.600 (2 mL) Specimen Volume: 2 tubes, each containing 1.5 mL to 2.5 mL Collection Instructions: 1. Perform lumbar puncture and discard the first 1 to 2 mL of cerebrospinal fluid (CSF). 2. Collect two tubes of CSF directly into an acceptable collection tube until the tube is at least 50% full. 3. Send CSF specimen in original collection tube. Do not aliquot. 4. Collection instructions can also be found on Spinal Fluid Specimen Collection Instructions for Creutzfeldt-Jakob Disease and Rapidly Progressive Dementia Evaluations (T974).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	BlueTop SARSTEDT
	Refrigerated	14 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CPT Code Information: 84999; 84393; 84394;

CRGSP
83659

Cryoglobulin and Cryofibrinogen Panel, Serum and Plasma

Specimen Requirements:

Specimen Minimum Volume: Plasma: 0.5 mL Serum: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	
	Frozen	
Serum Red	Refrigerated (preferred)	
	Frozen	

CPT Code Information: 82585; 82595; 86334-Immunofixation (if appropriate);

CRY_S
80988

Cryoglobulin, Serum

Specimen Requirements:

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	
	Frozen	

CPT Code Information: 82595

SLFA
62075

Cryptococcus Antigen Screen with Titer, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899

CLFA
62074

Cryptococcus Antigen Screen with Titer, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Submit specimen from collection vial 2 (preferred), 3, or 4.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899-Cryptococcus screen; 87899-Cryptococcus titer (if appropriate);

PLFA
42396

Cryptococcus Antigen Screen, Lateral Flow Assay, Pleural Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25

Transport Temperature:

Specimen Type	Temperature	Time
Pleural Fluid	Refrigerated (preferred)	21 days
	Frozen	30 days

CPT Code Information: 87899-Cryptococcus Ag Screen, LFA, PF; 87899-Cryptococcus Ag Titer, LFA, PF (if appropriate);

ULFA
604095

Cryptococcus Antigen Screen, Lateral Flow Assay, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899; 87899 (if appropriate);

PLFAT
48431

Cryptococcus Antigen Titer, Lateral Flow Assay, Pleural Fluid

Specimen Requirements: Only orderable as a reflex. For more information see PLFA / Cryptococcus Antigen Screen, Lateral Flow Assay, Pleural Fluid. Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Pleural Fluid	Refrigerated (preferred)	21 days
	Frozen	30 days

CPT Code Information: 87899

SLFAT
62077

Cryptococcus Antigen Titer, Lateral Flow Assay, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899**CLFAT**
62076**Cryptococcus Antigen Titer, Lateral Flow Assay, Spinal Fluid****Specimen Requirements:** Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Submit specimen from collection vial 2 (preferred), 3, or 4.**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899**ULFAT**
604369**Cryptococcus Antigen Titer, Lateral Flow Assay, Urine****Specimen Requirements:** Only orderable as a reflex. For more information see ULFA / Cryptococcus Antigen Screen, Lateral Flow Assay, Random, Urine. Supplies: Urine Tubes, 10 mL (T068) Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899

LFACX
62703

Cryptococcus Antigen with Reflex, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Submit specimen from collection vial 2 (preferred), 3, or 4.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899-Cryptococcus Ag Screen w/Titer, CSF; 87899-Cryptococcus Ag Titer, LFA, CSF (as appropriate); 87102-Fungal Culture, CSF (as appropriate);

CRYPS
80335

Cryptosporidium Antigen, Feces

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Preserved feces Supplies: -Formalin 10% Buffered Neutral 15 mL (T466) -Stool Collection Kit, Random (T635) Container/Tube: Preferred: Stool container with 10% buffered formalin preservative Acceptable: SAF (sodium acetate formalin) Specimen Volume: 5 grams Specimen Stability Information: Ambient (preferred) 60 days Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz (T288) -Stool Collection Kit, Random (T635) Container/Tube: Stool container Specimen Volume: 5 grams Specimen Stability Information: Frozen 60 days

Specimen Minimum Volume: 1 gram

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies	

CPT Code Information: 87328

CRSBF
610646

Crystal Identification, Body Fluid

Specimen Requirements: Specimen Required Specimen Type: Synovial Fluid, Prosthetic Joint Fluid Container/Tube: Lavender top (EDTA) Acceptable: Green top (heparin) Specimen Volume: 2 mL

Specimen Type: Bile Fluid Container/Tube: Red top Specimen Volume: 2 mL Specimen Type: Bronchoalveolar Lavage (BAL) Container/Tube: Body fluid container Specimen Volume: 2 mL Specimen Type: Pleural Fluid, Peritoneal Fluid, Pericardial fluid Container/Tube: Preferred: Body fluid container Acceptable: Lavender top (EDTA) or Green top (heparin) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	
	Ambient	24 hours
	Frozen	

CPT Code Information: 89060

CSTB
616515

CSTB Gene, Repeat Expansion Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81188

FCUIP
57590

CU (Chronic Urticaria) Index Panel

Specimen Requirements: Patient preparation: Patients taking calcineurin inhibitors should stop medication 72 hours prior to draw. Patients taking prednisone should be off their medication for 2 weeks prior to draw. Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in Red-top tube (SST is acceptable). Separate from cells within 2 hours of draw. Send 3 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	5 days

CPT Code Information: 84443; 86343; 86376; 86800;

FCUIX
57549

CU Index

Specimen Requirements: Patient Preparation: Patients taking calcineurin inhibitors should stop medication 72 hours prior to draw. Patients taking prednisone should be off their medication for 2 weeks prior to draw. Specimen Type: Serum Collection Container/Tube: Red or SST Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw 5 mL blood in a serum separator tube (SST) (plain, red-top tube is acceptable). 2. Separate from cells within 2 hours of draw. Send 2 mL of serum ambient in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Ambient (preferred)	14 days
	Frozen	14 days
	Refrigerated	14 days

CPT Code Information: 86343

FCUKG
57651

Cucumber IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

CUKE
82861

Cucumber, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

OATC
82916

Cultivated Oat, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CRYE
82918

Cultivated Rye, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WHTC
82915

Cultivated Wheat, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CULAF
35244

Culture for Genetic Testing, Amniotic Fluid

Specimen Requirements: Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Container/Tube: Amniotic fluid container Specimen Volume: 5 to 10 mL Collection Instructions: 1. Discard the first 2 mL

of amniotic fluid. If the culture will be performed in conjunction with other cytogenetic testing, such as CHRAF / Chromosome Analysis, Amniotic Fluid or CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, a total of 25 to 30 mL will be needed. 4. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 5. Bloody specimens are undesirable.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88235; 88240;

FUNID 8223

Culture Referred for Identification, Fungus

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Preferred: Sabouraud dextrose agar slant Acceptable: Inhibitory mold agar slant Specimen Volume: Isolated mold or yeast Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87107-Culture, fungi, definitive identification; 87106-Culture, fungi, definitive identification, each organism; yeast (if appropriate); 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Culture, fungi, definitive identification, each organism; mold (if appropriate); 87107-Fungal identification Panel A (if appropriate); 87107-Fungal identification Panel B (if appropriate); 87150-Identification rapid PCR coccidioides (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing Identification (if appropriate); 87150-Id, Candida auris Rapid PCR (if appropriate);

TBIDS 64714

Culture Referred for Identification, Mycobacterium and Nocardia with Antimicrobial Susceptibility Testing, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook (7H10 or 7H11) or Lowenstein-Jensen medium

slant or in broth (eg, Mycobacteria Growth Indicator Tube [7H9] broth) Specimen Volume: Isolate
Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: Culture Referred for Identification, Mycobacterium; 87118-Identification of mycobacteria; 87158-Identification of mycobacteria by other methods (if appropriate); 87118 -Id MALDI-TOF Mass Spec AFB (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87186-Susceptibility Rapid Grower (if appropriate); 87186-Susceptibility Slow Grower (if appropriate); 87186-Susceptibility Nocardia species (if appropriate); 87188 x 3-Antimicrobial Susceptibility, Mycobacterium tuberculosis Complex, Broth Method (if appropriate); 87186-Susceptibility, Mtb Cx, 2nd Line (if appropriate); 87188-Susceptibility, Mycobacterium tuberculosis Complex, Pyrazinamide (if appropriate); 87153-Mtb PZA Confirmation, pncA Sequencing (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

CTBID
80278

Culture Referred for Identification, Mycobacterium and Nocardia, Varies

Specimen Requirements: Specimen Type: Mycobacterium species or aerobic actinomycetes organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook (7H10 or 7H11) or Lowenstein-Jensen medium slant or in broth (eg, Mycobacteria Growth Indicator Tube [7H9] broth) Specimen Volume: Solid media: Visible growth of isolate Isolate in broth media: > or =3 mL Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures. Additional Information: A minimum volume of 3 mL is recommended to perform all initial testing, this may include: stains, sub-culture media, nucleic acid probes, and any additional testing that may be required to determine the identification. If the broth sample volume is less than 3 mL, initial testing may be limited, and increased turnaround time is likely.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: Culture Referred for Identification, Mycobacterium; 87118-Identification of mycobacteria; 87158-Identification of mycobacteria by other methods (if appropriate); 87118 -Id MALDI-TOF Mass Spec AFB (if appropriate); 87153-Mycobacteria Identification by Sequencing (if

appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

CURL
82852

Curvularia lunata, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCURV
57898

Curvularia spicifera/Bipolaris IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

CGPH
605198

Custom Gene Panel, Hereditary, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: CPT codes are based on the gene content of the custom gene panel. Refer to the Custom Gene Ordering Tool for custom gene panel specific CPT code information.; 81165 (if appropriate); 81166 (if appropriate); 81167 (if appropriate); 81162 (if appropriate); 81201 (if appropriate); 81216 (if appropriate); 81218 (if appropriate); 81223 (if appropriate); 81249 (if appropriate); 81252 (if appropriate); 81286 (if appropriate); 81292 (if appropriate); 81295 (if appropriate); 81298 (if appropriate); 81307 (if appropriate); 81317 (if appropriate); 81319 (if appropriate); 81321 (if appropriate); 81351 (if appropriate); 81403 (if appropriate); 81404 (if appropriate); 81405 (if appropriate); 81406 (if appropriate); 81407 (if appropriate); 81408 (if appropriate); 81430 (if appropriate); 81431 (if appropriate); 81440 (if appropriate); 81443 (if appropriate); 81448 (if appropriate); 81479 (if appropriate); 81189 (if appropriate); 81419 (if appropriate);

CIB
607602

Cutaneous Direct Immunofluorescence Assay, Varies

Specimen Requirements: Processed as 1 specimen: Two or more biopsies from same site and sent in 1 specimen vial. Processed as 2 specimens: Two or more biopsies from different sites require separate specimen vials. Note: These can be ordered together. Tests performed on each site will be billed accordingly. Transport Medium Method Specimen Type: Tissue Supplies: Michel's Transport Media for Immunofluorescent Testing on Tissue (T321) Sources: Skin or 1 of the following mucosae: oral (oropharyngeal), nasal, genital, esophageal, conjunctival, laryngeal, or epiglottis Container/Tube: Screw-capped container or vial containing transport medium (Michel's, also called Zeus media) Specimen Volume: 2- to 8-mm punch specimen, intact or bisected; excisional biopsy specimen intact or bisected Collection Instructions: 1. Collect biopsy of skin or mucosa avoiding old lesions (including facial), ulcers, erosions, or bullae. Refer to Recommended Biopsy Site Selection Based on Disease State below. 2. Immediately place specimen into a labeled vial of transport medium and seal tightly. Acceptable Snap-Frozen Method Specimen Type: Tissue Sources: Skin or 1 of the following mucosae: oral (oropharyngeal), nasal, genital, esophageal, conjunctival, laryngeal, or epiglottis Container/Tube: Plastic vial Specimen Volume: 2-8 mm punch specimen, intact or bisected; excisional biopsy specimen, intact or bisected Collection Instructions: 1. Collect biopsy of skin or mucosa avoiding old lesions (including facial), ulcers, erosions, or bullae. Refer to Recommended Biopsy Site Selection Based on Disease State below. 2. Immediately place specimen into liquid nitrogen and allow to freeze thoroughly (do not allow specimen to desiccate). If liquid nitrogen is not available, specimen may be frozen by placing it on a small square of aluminum foil on a block of dry ice. Liquid nitrogen is preferred. 3. Immediately wrap specimen carefully in aluminum foil. At no time should the specimen be allowed to thaw. 4. Place the wrapped specimen into the pre-labeled plastic vial and seal tightly. Ship frozen. Recommended Biopsy Site Selection Based on Disease State 1. Pemphigus and pemphigoid groups (including linear IgA bullous

dermatosis and chronic bullous disease of childhood): Biopsy erythematous perilesional skin or mucosa. Avoid erosions, ulcers, and bullae while obtaining tissue adjacent to active lesions. Label as perilesional skin. 2. Dermatitis herpetiformis: Biopsy normal-appearing skin, 0.5-1 cm away from lesion. Label as perilesional skin. 3. Lupus erythematosus: Involved areas of skin such as erythematous or active borders are preferred biopsy sites to confirm the diagnosis of lupus erythematosus, either discoid or systemic. Label as involved skin. Avoid ulcers, old lesions, and facial lesions, if possible. Uninvolved, nonexposed skin is the preferred site to detect a lupus band as may be found in systemic lupus erythematosus. Should unexposed skin be desired, buttock or medial thigh is suggested. Label as uninvolved, nonexposed skin. 4. Mixed connective tissue disease: Biopsy as for lupus erythematosus except when sclerodermoid features are present. For sclerodermoid features, biopsy inflamed area. Label as involved or uninvolved, exposed or nonexposed skin. 5. Vasculitis and urticaria: The erythematous or active border of a new lesion is preferred. Avoid old lesions and ulcers. Label as involved skin. If appropriate, skin lesion is not present, diagnosis may sometimes be made from uninvolved skin. 6. Porphyria: Biopsy involved skin. Avoid old lesions and ulcers. Label as involved skin. 7. Lichen planus and lichenoid reactions: Biopsy involved skin. Avoid old lesions and ulcers. Label as involved skin.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	30 days
	Frozen	120 days
	Refrigerated	30 days

CPT Code Information: Per biopsy site;; 88346; 88350 x 5;

CIFA
610627

Cutaneous Immunofluorescence Antibodies, IgA, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 88346

CIFS
8052

Cutaneous Immunofluorescence Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 88346

CXC13
113163

CXCL13 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded tissue block

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCXCL
75827

CXCL9

Specimen Requirements: REQUIRED: Completed Cincinnati Children's Diagnostic Immunology Laboratory test requisition form. Specimen Type: Plasma Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a lavender top (EDTA) tube(s). Separate plasma from cells within 8 hours of collection and freeze immediately. Ship frozen in a plastic vial. REQUIRED to accompany all specimens (testing will

not proceed until all requirements are met): 1. Completed Cincinnati Children's Diagnostic Immunology Laboratory test requisition form. 2. See Special Instructions for a copy of the form.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	180 days

CPT Code Information: 83520

CXLPL
64759

CXCR4 Mutation Analysis, Somatic, Lymphoplasmacytic Lymphoma/Waldenstrom Macroglobulinemia, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA from blood or bone marrow 2. Provide volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 to 20 slides Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, acute myelocytic leukemia), not solid tumors. Specimen Stability Information: Ambient

Specimen Minimum Volume: Whole blood, Bone marrow: 1 mL Extracted DNA: at least 50 mcL with a concentration of at least 20 nanograms per mcL Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	10 days

CPT Code Information: 81479-Unlisted molecular pathology procedure

FCYNB
75370

Cyanide, Blood Test

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Container/Tube: Gray top (potassium oxalate/sodium fluoride) Specimen volume: 2 mL Collection instructions: Collect 2 mL whole blood in potassium oxalate/sodium fluoride Gray top tube, send frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood NaFl-KOx	Frozen (preferred)	90 days
	Refrigerated	7 days

CPT Code Information: 82600

CARU
609739

Cyclic Adenosine Monophosphate (cAMP), Urinary Excretion, Serum and Urine

Specimen Requirements: Both serum and urine are required. Serum must be obtained at the time of the urine collection. Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection. 3. Label specimen as serum. Specimen Type: Urine Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Label specimen as urine.

Specimen Minimum Volume: Serum: 0.5 mL Urine: 2.0 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 82030; 82570; 82565;

CCP
84182

Cyclic Citrullinated Peptide Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86200

CYC1
70411

Cyclin D1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FFLEX
90085

Cyclobenzaprine (Flexeril)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Specimen Type:
Plasma Container/Tube: Green Top Specimen Volume: 2 mL Collection Instructions: Draw blood in a
green-top (sodium heparin) tube, plasma gel tube is not acceptable. Spin down and send 2 mL of
sodium heparin plasma refrigerated in a plastic vial. Serum Specimen Type: Serum Container/Tube:
Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube, serum gel
tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 80369

CYCL
81506

Cyclospora Stain, Feces

Specimen Requirements: Patient Preparation: Patient should avoid use of antidiarrheal medication (eg, loperamide [Imodium-AD] or Pepto-Bismol). The presence of barium will interfere with this test. Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved stool Supplies: -ECOFIX Stool Transport Vial (Kit) (T219) -Formalin-Meridian 10% Buffered Neutral (T466) Container/Tube: Preferred: ECOFIX Stool Transport Vial (Kit) Acceptable: 10% Buffered Formalin Stool Transport (Kit), Sodium Acetate Formalin (SAF) Specimen Volume: 10 g Specimen Stability Information: Ambient 21 days (preferred)/Refrigerated 21 days Acceptable Specimen Type: Unpreserved stool Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 5 g Specimen Stability Information: Refrigerated 3 days (preferred)

Specimen Minimum Volume: Preserved stool: 1 g Unpreserved stool: 2 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies	

CPT Code Information: 87015; 87207;

CYSPR
35143

Cyclosporine, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Collect specimen immediately before a scheduled dose. 2. Do not centrifuge. 3. Send whole blood specimen in original tube. Do not aliquot. Additional Information: Therapeutic range applies to trough specimens collected immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80158

CYCPK
42427

Cyclosporine, Peak, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Do not centrifuge. 2. Send whole blood specimen in original tube. Do not aliquot. Additional Information: No definitive therapeutic or toxic ranges have been established for this peak testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80158

2D66Z
610616

CYP2D6 3' Gene Duplication/Multiplication (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA		

CPT Code Information: 0076U

2D65Z
610615

CYP2D6 5' Gene Duplication/Multiplication (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA		

CPT Code Information: 0075U

2D62Z
610612

CYP2D6 Gene CYP2D6-2D7 Hybrid (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA		

CPT Code Information: 0072U

2D63Z
610613

CYP2D6 Gene CYP2D7-2D6 Hybrid (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA		

CPT Code Information: 0073U

2D64Z
610614

CYP2D6 Nonduplicated Gene (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA		

CPT Code Information: 0074U

CSTCE
614154

Cystatin C with Estimated Glomerular Filtration Rate (eGFR), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82610

CFSMN
608349

Cystic Fibrosis and Spinal Muscular Atrophy Carrier Screen Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81220; 81329 ; 81222; 81479 (if appropriate for government payers);

CFTRN
619774

Cystic Fibrosis Transmembrane Conductance Regulator, CFTR, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 2 to 3 weeks is required to culture chorionic villi before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81223; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

CFMP
605197

Cystic Fibrosis, CFTR Gene, Variant Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81220; 81222;

CKDGP
618072

Cystic Kidney Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens: Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. If amniotic fluid or nonconfluent cultures are received, CULAF / Culture for Genetic Testing, Amniotic Fluid will be added at an additional charge. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media
 Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. If nonconfluent cultures are received, CULFB / Fibroblast Culture for Biochemical or Molecular Testing will be added at an additional charge. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid/CVS: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404; 81405; 81406 x 6; 81407 x 4; 81408 x 3; 81479; 81265-Maternal cell contamination (if appropriate); 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88235-Amniotic Fluid culture (if appropriate); 81479 (if appropriate for government payers);

CYSTG
616730

Cysticercosis (Taenia solium), IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 86682

FCAEC
75587

Cysticercus Antibody (IgG), ELISA, CSF

Specimen Requirements:

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86682

CYSGP
608027

Cystinuria Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CYSQN
8376

Cystinuria Profile, Quantitative, 24 Hour, Urine

Specimen Requirements: -Urine Tubes, 10 mL (T068) -Diazolidinyl Urea (Germall) 5.0 mL (T822) Specimen Volume: 5 mL Collection Instructions: 1. Collect before intravenous pyelogram. 2. Add 5 g of diazolidinyl urea (Germall) as preservative at start of collection. If preservative is not available, refrigerate during collection. 3. Collect urine for 24 hours. 4. Mix well before taking 5-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	70 days
	Refrigerated	14 days

CPT Code Information: 82136

CYSR
81067

Cystinuria Profile, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	70 days
	Refrigerated	14 days

CPT Code Information: 82136

METR1
65609

Cytochrome b5 Reductase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	18 days

CPT Code Information: 82657

1A2Q
610041

Cytochrome P450 1A2 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 0031U

2B6Q
610042

Cytochrome P450 2B6 Genotype, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Provide concentration of DNA and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Saliva, extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

2C19R
610043

Cytochrome P450 2C19 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Provide concentration of DNA and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva, extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81225

2C9QT
610044

Cytochrome P450 2C9 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2-mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Provide concentration of DNA and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva, extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81227

2D6Q
610045

Cytochrome P450 2D6 Comprehensive Cascade, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, testing cannot proceed to tier 2 sequencing and will stop after tier 1 testing is complete. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 0070U; 0071U (if appropriate); 0076U (if appropriate);

3A4Q 610046

Cytochrome P450 3A4 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81230-CYP3A4

3A5Q 610047

Cytochrome P450 3A5 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81231-CYP3A5

FCYTP
75139

Cytokine Panel 13, Serum

Specimen Requirements: Specimen Type: Serum Preferred: Serum gel tube Acceptable: Plain red top tube Submission Container/Tube: Plastic vial Specimen Volume: 1.0 mL Collection Instructions: Separate from cells within 2 hours of collection. Send 1.0 mL serum frozen in plastic vial. Critical frozen. Additional specimens must be submitted when multiple tests are ordered. Note: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	365 days

CPT Code Information: 83520 x 12; 83529;

CYPAN
610259

Cytokine Panel, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	21 days

CPT Code Information: 83520 x 10; 83529;

CTFNA
70334**Cytology Fine-Needle Aspiration, Varies**

Specimen Requirements: Specimen Type: Slide Container/Tube: Plastic slide container Specimen Volume: Smear Collection Instructions: 1. Smears should be immediately fixed in 95% ethanol or sprayed with commercially available fixative. Smears that have been air-dried or Diff-Quik stained may also be accepted. 2. Label containers with a minimum of 2 unique identifiers (eg, patient name and medical record number or date of birth), specimen source, and date of collection. Label each glass slide in pencil with a minimum of 2 unique identifiers. If multiple slides are submitted, each slide must have proper identification. Specimen Type: Fluid Container/Tube: 60-mL (2 oz) jar with screw cap, 50-mL disposable centrifuge tube with screw cap, or 15-mL test tube with screw cap Specimen Volume: Any amount Collection Instructions: 1. Preferred method is no fixative added to fluid prior to processing and the specimen must be received and processed by the Cytology Laboratory within 1 hour of collection. 2. If not possible to submit within 1 hour, specimen should be refrigerated no longer than 62 hours. Additional acceptable fixatives are specimens with equal volume of 50%, 70%, 80%, or 95% ethanol, PreservCyt solution, CytoRich Red, or CytoLyt. 3. Label containers with a minimum of 2 unique identifiers (eg, patient name and medical record number or date of birth), specimen source, and date of collection. Specimen Type: Tissue Container/Tube: 50-mL disposable centrifuge tube with screw cap or 60-mL (2 oz) jar with screw cap containing 10% neutral-buffered formalin Specimen Volume: Any amount Collection Instructions: 1. Tissue fragments must be submitted in 10% neutral-buffered formalin. 2. Label containers with a minimum of 2 unique identifiers (eg, patient name and medical record number or date of birth), specimen source, and date of collection.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88173; 88305-CBKPC (if appropriate);

CFNPC
113344**Cytology FNA (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88173

CYTNG
70330**Cytology Non-Gynecologic, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Contact the testing lab for specific instructions. Specimen Type: Non-gynecologic cytology specimen Supplies: CytoLyt Solution (T564) Container/Tube: Preferred: CytoLyt solution Acceptable: 1. PreservCyt solution in prefilled vial 2. Specimens with equal volume of 50%, 70%, 80%, or 95% ethanol 3. Specimens fixed in carbowax, CytoSpin collection fluid, or CytoRich red Specimen Volume: A minimum of 20 mL or entire collection Collection Instructions: 1. Specimen containers must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number). 2. Indicate the specimen source and source location on the label. Specimen Type: Spinal fluid Collection Container/Tube: Sterile vial Submission Container/Tube: Container with equal volume of 50%, 70%, 80%, or 95% ethanol Specimen Volume: A minimum of 1 mL Collection Instructions: Specimen containers must be labeled with a minimum of 2 unique identifiers (patient's name and clinic number). Specimen Type: Smear Container/Tube: Plastic slide container Specimen Volume: Glass slide Collection Instructions: 1. Slides should be immediately fixed in 95% ethanol or sprayed with commercially available fixative. Smears that have been air-dried or Diff-Quik stained may also be accepted. 2. Label containers with a minimum of 2 unique identifiers (eg, patient name and medical record number or date of birth), specimen source, and date of collection. Label each glass slide in pencil with a minimum of 2 unique identifiers. If multiple slides are submitted, each slide must have proper identification.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88104-NDSPC (if appropriate); 88108-NCSPC (if appropriate); 88112-NTPPC (if appropriate); 88161-CSOPC (if appropriate); 88162-CSAPC (if appropriate); 88305-CBKPC (if appropriate);

CTPPC
113340

Cytology Touch Prep (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88333

CTAPC
113341

Cytology Touch Prep Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88334

CMVG
34970

Cytomegalovirus (CMV) Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86644

CMVP
62067

Cytomegalovirus (CMV) Antibodies, IgM and IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86644-CMV, IgG; 86645-CMV, IgM;

CMVM
34971

Cytomegalovirus (CMV) Antibodies, IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86645

CMVC8
88826

Cytomegalovirus (CMV) CD8 T-Cell Immune Competence, Quantitative Assessment by Flow Cytometry, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Green top (sodium heparin) Specimen Volume: 20 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86356 x 6; 86359; 86352;

CMVQN
601954

Cytomegalovirus (CMV) DNA Detection and Quantification by Real-Time PCR, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into a plastic vial per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87497

CMVI
70406

Cytomegalovirus (CMV) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CMVLR
621770

Cytomegalovirus (CMV) Molecular Detection, PCR, Lower Respiratory

Specimen Requirements: Specimen Type: Lower respiratory Source: Bronchial washing, bronchoalveolar lavage, fluid/washings from lung, sputum, tracheal secretions, tracheal aspirates Container/Tube: Preferred: Sterile, screwcap, 5-mL aliquot tube Acceptable: Sterile container Specimen

Volume: 1 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87496

CMVPV
618968

Cytomegalovirus (CMV) Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Spinal, pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Preferred: Sterile, screwcap, 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Upper respiratory tract fluid Sources: Nasopharyngeal aspirate or washing Container/Tube: Preferred: Sterile, screwcap, 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 1.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Swab Sources: Dermal, eye, nasal, saliva, throat, or genital Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT, M4, M5, Bartels, or Jiangsu) and ESwab or Culturette Collection Instructions: Place swab back into multimicrobe media. Specimen Type: Tissue Sources : Brain, colon, kidney, liver, lung, etc. Supplies: M4-RT (T605) Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, M5, Bartels, or Jiangsu) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) Specimen Volume: 0.5 mL Collection Instructions: Send bone marrow in original tube. Do not aliquot.

Specimen Minimum Volume: Ocular Fluid, Spinal Fluid, or Urine: 0.3 mL; Body Fluid (pleural, peritoneal, ascites, pericardial): See Specimen Required; Upper respiratory tract specimens: (Nasopharyngeal aspirate or washing): 1 mL; Tissue: 2 x 2-mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87496

Cytomegalovirus (CMV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Spinal, pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Preferred: Sterile screw cap 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Genital swab Sources: Cervix, vagina, urethra, anal/rectal, or other genital sources Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT) and ESswabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5) Specimen Type: Swab Sources: Dermal, eye, nasal, saliva, or throat Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT) and ESswabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5) Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Supplies: M4-RT (T605) Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in multimicrobe media (M4-RT) or a sterile container with 1 to 2 mL sterile saline Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) Specimen Volume: 0.5 mL Collection Instructions: Send bone marrow in original tube. Do not aliquot.

Specimen Minimum Volume: Body fluid, ocular fluid, spinal fluid, or urine: 0.3 mL; Respiratory specimens: 1 mL; Tissue: 2 x 2-mm Biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87496

Cytomegalovirus IgG Avidity

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube, serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86644

ANCA2
610030

Cytoplasmic Neutrophil Antibodies, Inflammatory Bowel Disease Panel, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see IBDP2 / Inflammatory Bowel Disease Serology Panel, Serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86036

ANCA
9441

Cytoplasmic Neutrophil Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86036 x2; 86037-Titer (if appropriate);

DDITT
40936

D-Dimer, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen (preferred)	90 days
	Ambient	4 hours

CPT Code Information: 85379

DIMER 602174

D-Dimer, Plasma

Specimen Requirements: Only orderable as part of a profile or reflex. For more information see: ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85379

DLAC 8878

D-Lactate, Plasma

Specimen Requirements: Supplies: Sodium Fluoride/Potassium Oxalate Tube, 2 mL (T275) Collection Container/Tube: Preferred: Sodium fluoride/potassium oxalate tube Acceptable: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge, aliquot plasma into a plastic vial, and freeze immediately. NOTE: If collecting in sodium heparin tubes, centrifugation must occur within one hour of collection.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma NaFl-KOx	Frozen (preferred)	91 days
	Ambient	91 days
	Refrigerated	91 days

CPT Code Information: 83605

DLAU
8873

D-Lactate, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic urine tube Specimen Volume: 0.50 mL Collection Instructions: 1. Collect a timed or random urine specimen. 2. No preservative. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	90 days
	Ambient	90 days
	Refrigerated	90 days

CPT Code Information: 83605

DAGR
31768

Dairy and Grain Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 5

DAND
82694

Dandelion, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DATE
82358

Date, Fruit, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DATRE
82481

Date, Tree, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DCALP
622511

Decalcification (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88311

DOCK8
608112

Dedicator of Cytokines 8 (DOCK8) Deficiency, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 4

DHEA_
81405

Dehydroepiandrosterone (DHEA), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Additional Information: Requests for this test cannot be added to a previously received specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	28 days
	Refrigerated	21 days
	Ambient	6 hours

CPT Code Information: 82626

DHES1
113595

Dehydroepiandrosterone Sulfate, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82627

THCCR
616333

Delta 9-Carboxy-Tetrahydrocannabinol (THC-COOH) Confirmation and Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: 10-mL tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 10 mL in a plastic container. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Submitting less than 10 mL may compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 82570; 80349; G0480, if appropriate;

THCX
62743

**Delta-8 and Delta-9-Carboxy-Tetrahydrocannabinol (THC)
Confirmation, Chain of Custody, Random, Urine**

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and required documentation. Specimen Volume: 5 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80349; G0480 (if appropriate);

THCU
8898

**Delta-8 and Delta-9-Carboxy-Tetrahydrocannabinol (THC)
Confirmation, Random, Urine**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: G0480; 80349 (if appropriate for select payers);

THCCU
616334

Delta-9-Carboxy-Tetrahydrocannabinol Confirmation and Creatinine Ratio, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see THCCR / Delta 9-Carboxy-Tetrahydrocannabinol (THC-COOH) Confirmation and Creatinine Ratio, Random, Urine Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: G0480; 80349 (if appropriate for select payers);

DLL3
603332

Delta-Like 3 Protein (SP347), Semi-Quantitative Immunohistochemistry, Manual, Tissue

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

DMS2
92114

Dementia, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended before starting immunosuppressant medication or intravenous immunoglobulin (IVIG) treatment. 2. For 24 hours before specimen collection, patient should not receive general anesthetic or take muscle-relaxant drugs. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 21; 86341; 84182-AGNBS (if appropriate); 86256 AGNTS (if appropriate); 86255-AINCS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 86256-AN1TS (if appropriate); 84182-AN2BS (if appropriate); 86256-AN2TS (if appropriate); 86256-AN3TS (if appropriate); 86256-APHTS (if appropriate); 86256-CRMTS (if appropriate); 84182-CRMWS (if appropriate); 86256-DPPTS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86256-IG5TS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-NCDCS (if appropriate); 86256-NCDTS (if appropriate); 86255-NFHCS (if appropriate); 86256-NIFTS (if appropriate); 86255-NFLCS (if appropriate); 86256-NMDIS (if appropriate); 86256-PC2TS (if appropriate); 84182-PCTBS (if appropriate); 86256-PCTTS (if appropriate); 86256 PDETS (if appropriate); 86255 T46CS (if appropriate); 86256 T46TS (if appropriate);

DMC2
92115

Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Collection vial number 1

Acceptable: Any collection vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 21; 86341; 84182-AGNBC (if appropriate); 86256 AGNTC (if appropriate); 86255-AINCC (if appropriate); 86256-AMPIC (if appropriate); 84182-AMIBC (if appropriate); 84182-AN1BC (if appropriate); 86256 AN1TC (if appropriate); 84182-AN2BC (if appropriate); 86256 AN2TC (if appropriate); 86256 AN3TC (if appropriate); 86256 APHTC (if appropriate); 86256 CRMTC (if appropriate); 84182-CRMWC (if appropriate); 86256-DPPTC (if appropriate); 86256-GABIC (if appropriate); 86255-GFACC (if appropriate); 86256-GFATC (if appropriate); 86256-IG5TC (if appropriate); 86255 NCDCC (if appropriate); 86256 NCDTC (if appropriate); 86255-GL1CC (if appropriate); 86256-GL1TC (if appropriate); 86255-NFHCC (if appropriate); 86256-NIFTC (if appropriate); 86255-NFLCC (if appropriate); 86256-NMDIC (if appropriate); 86256 PC2TC (if appropriate); 84182-PCTBC (if appropriate); 86256 PCTTC (if appropriate); 86256 PDETC (if appropriate); 86255 T46CC (if appropriate); 86256 T46TC (if appropriate);

DCME
609795

Dendritic Cell and Monocyte Enumeration, Blood

Specimen Requirements: Container/Tube: Green top (sodium heparin) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not open tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	36 hours	GREEN TOP/HEP

CPT Code Information: 86356 x 3

DENGM
83865

Dengue Virus Antibody, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial

Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: IgM-86790; IgG-86790;

DENVP
62869

Dengue Virus Antibody/Antigen Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86790 x 3

DNSAG
36781

Dengue Virus NS1 Antigen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86790

DENGS 606372

Dengue Virus, Molecular Detection, PCR, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot the serum into a sterile container. 2. Serum specimens not aliquoted from the serum gel collection tube into a sterile container will be rejected.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

DENGC 606371

Dengue Virus, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Preferred: Vial number 2 Acceptable: Any vial number Submission Container/Tube: Sterile screw cap vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge or heat inactivate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

Dentatorubral-Pallidoluysian Atrophy (DRPLA) Gene Analysis, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81177-ATN1 (ataxin 2) (eg, dentatorubral-pallidoluysian atrophy) gene analysis, evaluation to detect abnormal (eg, expanded) alleles

Deoxypyridinoline Crosslinks, Urine

Specimen Requirements: Transfer 3.5 mL aliquot from well-mixed first morning urine collection, no preservatives, shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	90 days
	Refrigerated	7 days

CPT Code Information: 82523

DEXT
70596

Dermatopathology Consultation, Wet Tissue

Specimen Requirements: Supplies: Dermatopathology Media (T101) Sources: Skin or oral mucosa Container/Tube: Screw-capped container or vial containing 10% formalin Specimen Volume: Entire specimen Collection Instructions: For scalp biopsies: when the differential diagnosis includes a scarring alopecia, 2 separate 4-mm punch biopsies are recommended (1 for vertical and 1 for horizontal sections). If a single scalp biopsy is received with the clinical diagnosis of a scarring alopecia, the specimen will be processed with horizontal sections. Additional Information: STAT requests are not accepted for this test.

Specimen Minimum Volume: Size needed depends on diagnosis and size of lesion.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient	

CPT Code Information: 88302 (if appropriate); 88304 (if appropriate); 88305 (if appropriate);

DMIC
82828

Dermatophagoides microceras, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DCP
61844

Des-Gamma-Carboxy Prothrombin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 83951

DESPR
37123

Desipramine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299

DESMN
70421

Desmin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

DSGAB
606818

Desmoglein 1 (DSG1) and Desmoglein 3 (DSG3), IgG Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 83516 x 2

DESG3
70420

Desmoglein 3 (DSG3) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

DEXA
609439

Dexamethasone, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw
blood between 7:30 a.m. and 9:00 a.m. the morning following an evening dose. 2. Centrifuge and
aliquot serum into plastic vial within one hour of collection and freeze immediately.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 80299

FDXAP
57720

Dexedrine (Dextroamphetamine)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a
green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium
heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel
tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 80324

FCDU8
75783

Dextro/Levo Methorphan, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

FDM
90117

Dextromethorphan (DM), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 80362

DBS1
48400

Diabetes Mellitus Type 1 Evaluation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86337; 86341 x3;

Diazepam and Nordiazepam, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80299

DICER1 Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm² -Minimum amount of tumor area: tissue 36 mm² -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm² and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm². Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479;

FDGTX 75374 **Digitoxin, Serum**

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. 2. Centrifuge and send 1 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 80299

FRDIG 82130 **Digoxin, Free, Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood 6 to 8 hours after last dose of digoxin. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days

CPT Code Information: 80163

DIG
8674

Digoxin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood 6 to 8 hours after the last dose of digoxin. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days

CPT Code Information: 80162

DPYDQ
610052

Dihydropyrimidine Dehydrogenase Genotype, Varies

Specimen Requirements: Patient Preparation: A previous hematopoietic stem cell transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have a hematopoietic stem cell transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send cord blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be

evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 µL at a concentration of 75 ng/µL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81232

DPYDZ
610051

Dihydropyrimidine Dehydrogenase, DPYD Full Gene Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required

to complete testing.

Specimen Minimum Volume: Blood: 0.45 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81232

DHRF
62766

Dihydrorhodamine Flow Cytometric N-Formyl-Methionyl-Leucyl-Phenylalanine Test, Blood

Specimen Requirements: Two whole-blood sodium heparin specimens are required, one from the testing patient and the other from an unrelated healthy donor as a control. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Patient: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Normal Control: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Collect a control specimen from the unrelated healthy donor within an hour of the patient's specimen collection time. 2. Clearly label as Normal Control on the outermost label. 3. Send the whole blood specimen in the original tube. Do not aliquot. 4. Rubber band patient specimen and control vial together.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86352

DHRP
62765

Dihydrorhodamine Flow Cytometric Phorbol Myristate Acetate Test, Blood

Specimen Requirements: Two whole-blood sodium heparin specimens are required, one from the testing patient and the other from an unrelated healthy donor as a control. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Patient: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Normal Control: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Collect a control specimen from the unrelated healthy donor within an hour of the patient's specimen collection time. 2. Label clearly as Normal Control and the corresponding

patient information. 3. Send the whole blood specimen in the original tube. Do not aliquot. 4. Rubber band patient specimen and control vial together.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86352

DHR
62764

Dihydrorhodamine Flow Cytometric Test, Blood

Specimen Requirements: Two whole-blood sodium heparin specimens are required, one from the testing patient and the other from an unrelated healthy donor as a control. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Patient: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Normal Control: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Collect a control specimen from the unrelated healthy donor within an hour of the patient's specimen collection time. 2. Clearly label as Normal Control on the outermost label. 3. Send the whole blood specimen in the original tube. Do not aliquot. 4. Rubber band patient specimen and control vial together.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86352 x2

DHTS
81479

Dihydrotestosterone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	90 days
	Ambient	28 days

CPT Code Information: 82642

DCLNG
617239

Dilated Cardiomyopathy and Left Ventricular Noncompaction Cardiomyopathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81439

DILL
82602

Dill, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FDILT
91118

Diltiazem (Cardizem, Dilacor)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

DRV13
602181

Dilute Russell's Viper Venom Time (DRVVT) Confirmation Ratio, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85613

DRV3
602178

Dilute Russell's Viper Venom Time (DRVVT) Confirmation, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85613

DRV14
603310

Dilute Russell's Viper Venom Time (DRVVT) Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

DRV12
602180

Dilute Russell's Viper Venom Time (DRVVT) Mix Ratio, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85613

DRV2
602177

Dilute Russell's Viper Venom Time (DRVVT) Mix, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85613

DRV1
602176

Dilute Russell's Viper Venom Time (DRVVT), Plasma

Specimen Requirements: Only orderable as part of a profile or reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85613-DRVVT; 85613-DRVVT mix (if appropriate); 85613-DRVVT confirmation (if appropriate);

DRV11
602179

Dilute Russell's Viper Venom Time (DRVVT), with Reflex, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85613; 85613 (if appropriate); 85613 (if appropriate);

DIPGS
36664

Diphtheria Toxoid IgG Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86317

DTABS
36670

Diphtheria/Tetanus Antibody Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86317 x 2

DCTR
113489

Direct Antiglobulin Test (Polyspecific), Blood

Specimen Requirements: Container/Tube: Pink top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL; Neonates: EDTA Micro tube 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient (preferred)	48 hours
	Refrigerated	48 hours

CPT Code Information: 86880

DSAC
608236

Disaccharidase Activity Panel, Tissue

Specimen Requirements: Specimen Type: Tissue Source: Intestinal biopsy Supplies: 15 mL Tissue Tube-DSAC (T993) Container/Tube: 15 mL tissue tube Specimen Volume: 5 mg Collection Instructions: 1. Place specimen in tissue tube. 2. Specimen should not be placed on gauze, filter paper, or swabs/wooden sticks and should not have any saline, water, support, or embedding material added.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Frozen	28 days

CPT Code Information: 82657

ADICI
603182

Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26 Special Coagulation Interpretation

ADIC
603306

Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85610-PTSC; 85730-APTSC; 85670-TTSC; 85379-DIMER; 85384-CLFIB; 85390-26-ADICI; 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85240-Coagulation factor VIII assay (if appropriate); 85250-Factor IX (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Hex LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirm (if appropriate); 85635-Reptilase time (if appropriate); 85732-APTT mix 1:1 (if appropriate);

FDIRU
57280

Diuretic Screen, Urine

Specimen Requirements: 10 mL aliquot of random or spot urine collected without preservative in a plastic container. Send specimen refrigerated.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80377

DMDZ
617532

DMD Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81408

FDM1
91592

DMPK DNA Test (DM1)

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA) Specimen volume: 8 mL Collection instructions: 1. Draw blood in a lavender-top (EDTA) tube. 2. Invert several times to mix. 3. Send ambient Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient (preferred)	10 days
	Refrigerated	10 days

CPT Code Information: 81234

CRITH
62925

DNA Double-Stranded (dsDNA) Antibodies by Crithidia luciliae IFA, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86255

DNJB9
71739

DNAJB9 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FDKYE Dock Yellow (*Rumex crispus*) IgE

57528

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

DOGD Dog Dander, IgE, Serum

60108

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DOGPF
616091

Dog Dander, IgE, with Reflex to Dog Dander Components, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DFDEN
75547

Dog Fennel (*Anthemis cotula*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

DOG1
70422

DOG-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,

paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FDLS
58007

Donath Landsteiner

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Ambient	72 hours

CPT Code Information: 86940, 86941

ADNA1
620809

Double-Stranded DNA (dsDNA) Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86225

DXPIN
63507

Doxepin and Nordoxepin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299

CDA7X
62716

Drug Abuse Survey with Confirmation, Panel 9, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required Specimen Volume: 30 mL Collection Instructions: Collect specimen in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307

CDAU7
81410

Drug Abuse Survey with Confirmation, Panel 9, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Submitting less than 30 mL will compromise the ability to perform all necessary testing. 3. STAT requests are not accepted for this test

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307

PNRCH
65061

Drug Immunoassay Panel, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CSMPU / Controlled Substance Monitoring Panel, Random, Urine -ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

PDSUX
62741

Drug Screen, Prescription/Over the Counter, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-

Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 30 mL Collection Instructions: Collect a random specimen without preservative in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	3 hours

CPT Code Information: 80307

PDSU
88760

Drug Screen, Prescription/Over the Counter, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Specimens containing preservative may be canceled.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	3 hours

CPT Code Information: 80307

DSS
8421

Drug Screen, Prescription/Over the Counter, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.75 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	3 hours

CPT Code Information: 80307

FDA1S
75525

Drugs of Abuse (10 panel) and Alcohol Screen, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Collect sample using alcohol-free skin preparation. 2. Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. 3. Centrifuge and send 4 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 2.00 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307x2; ;

DSM4X
62721

Drugs of Abuse Screen 4, Chain of Custody, Meconium

Specimen Requirements: Container/Tube: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain-of-custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	21 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: 80307; 80324 (if appropriate); 80359 (if appropriate); 80353 (if appropriate); 80361 (if appropriate); 80365 (if appropriate); 80349 (if appropriate);

DSM5X 62722

Drugs of Abuse Screen 5, Chain of Custody, Meconium

Specimen Requirements: Container/Tube: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain-of-custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	21 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: 80307; 80324 (if appropriate); 80359 (if appropriate); 80353 (if appropriate); 80361 (if appropriate); 80365 (if appropriate); 80349 (if appropriate); 83992 (if appropriate);

DASM4 60553

Drugs of Abuse Screen, Meconium 4

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	21 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: 80307; 80324 (if appropriate); 80359 (if appropriate); 80353 (if appropriate); 80361 (if appropriate); 80365 (if appropriate); 80349 (if appropriate);

DASM5 Drugs of Abuse Screen, Meconium 5 60250

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288)
Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	21 days
	Refrigerated	21 days
	Ambient	72 hours

CPT Code Information: 80307; 80324 (if appropriate); 80359 (if appropriate); 80353 (if appropriate); 80361 (if appropriate); 80365 (if appropriate); 80349 (if appropriate); 83992 (if appropriate);

FD10S Drugs of Abuse Screen, Serum 75352

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. 2. Centrifuge and send 4 mL of serum refrigerated in plastic, preservative-free vial.

Specimen Minimum Volume: 1.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307

DBMD
58125

Duchenne/Becker Muscular Dystrophy, DMD Gene, Large Deletion/Duplication Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks are required to culture amniotic fluid before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Prenatal cultured fibroblasts (eg, products of conception), amniocytes, or other confluent cultured cells. This does not include cultured chorionic villi. Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for

Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year /Ambient/ Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81161-DMD (dystrophin) (eg, Duchenne/Becker muscular dystrophy) deletion analysis and duplication analysis, if performed; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

DUCK
82708

Duck Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FDME
57926

Duck Meat IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

DULOX
89305

Duloxetine, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before the next scheduled dose (trough). 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

DYS2
92121

Dysautonomia, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Requirements:

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83519; 86255 x 7; 84182 AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182 AN2BS (if appropriate); 86255 APBCS (if appropriate); 86256 APBTS (if appropriate); 86256 CRMTS (if appropriate); 84182 CRMWS (if appropriate); 86256 DPPTS (if appropriate); 86256 PC2TS (if appropriate);

ECADB
603211

E-Cadherin Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ECAD
70423

E-Cadherin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

EOIBD
620120

Early Onset Monogenic Inflammatory Bowel Disease (IBD) Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

EEPC
83917

Eastern Equine Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.8 mL Collection Instructions: Submit specimen from collection vial 2 (preferred), 3, or 4

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86652 x 2

EEEEP
83155

Eastern Equine Encephalitis Antibody, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86652 x 2

ESYC
82721

Eastern Sycamore, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ECHNG
616731

Echinococcus Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 86682

ECMP
618696

Eculizumab Monitoring Panel, Serum

Specimen Requirements:

Specimen Minimum Volume: 1 mL total in 2 plastic vials, each vial containing 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days
Serum Red	Frozen	14 days

CPT Code Information: 80299; 86161;

ECULI
65676

Eculizumab, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Ambient	28 days
	Refrigerated	28 days

CPT Code Information: 80299

EGFRS
614665

EGFR Gene, Targeted Mutation Analysis, 51 Mutation Panel, Tumor

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue, smear stained with Diff Quik, fine needle aspirate (FNA), or pleural fluid in cell blocks Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tissue block. Acceptable: Specimen Type: Tissue, smear stained with Diff Quik, FNA, or pleural fluid in cell block or cytology blood smear Container/Tube: Slides Specimen Volume: 1 Hematoxylin and eosin stained and 5 unstained Collection Instructions: 1. For FFPE tissue, FNA or pleural fluid: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, non-baked slides with 5 to 10-micron thick sections of the tumor tissue. 2. For cytology blood smear: Submit up to 2 slides stained with Diff Quik

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded tissue block or Slides: see Specimen Required Cytology smear stained with Diff Quik: >1000 cells

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81235-EGFR (epidermal growth factor receptor) (eg, non-small cell lung cancer) gene analysis, common variants (eg, exon 19 LREA deletion, L858R, T790M, G719A, G719S, L861Q); 88381-Microdissection, manual;

EGFRW 614666

EGFR Targeted Mutation Analysis with ALK Reflex, Tumor

Specimen Requirements: Pathology report must accompany specimen for testing to be performed. Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 12 unstained, positively charged, unbaked slides or 2 hematoxylin and eosin-stained slides (will not be returned) and 10 unstained, positively charged, unbaked slides Collection Instructions: Submit 12 unstained, positively charged, unbaked slides cut at 5-microns or 2 hematoxylin and eosin-stained slides and 10 unstained, positively charged, unbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81235-EGFR (epidermal growth factor receptor) (eg, non-small cell lung cancer) gene analysis, common variants(eg, exon 19 deletions, L858R, T790M, G719S, L861Q); 88381-Microdissection, manual; 88271 x 2-DNA Probe (if appropriate); 88274-Interphase in situ hybridization (if appropriate) ; 88291-Interpretation and report (if appropriate);

EGGPF 610705

Egg Comprehensive Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL; if needed, 0.5 mL for every 5 additional allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 3; 86008 x 2;

EGWTP 610706

Egg White Component Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.75 mL; if needed, 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 1; 86008 x 2;

FEGWH 57584

Egg White IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FEWG4
57529

Egg White IgG4

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

EGG
82872

Egg White, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FEWHG
57530

Egg Whole IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FEGYK
57582

Egg Yolk IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

YOLK
82753

Egg Yolk, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

EGGP
82477

Eggplant, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

EDSGG
617253

Ehlers-Danlos Syndrome Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710 Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81408 x2; 81479; 81479 (if appropriate for government payers);

EHRCP Ehrlichia Antibody Panel, Serum

81480

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86666 x 2

EHRC Ehrlichia chaffeensis (HME) Antibody, IgG, Serum

81478

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86666

EPCRB
618301

Ehrlichia/Anaplasma, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube (preferred).

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 87468; 87484; 87798 x 2; 87999 (if appropriate for government payers);

EHBAP
608396

Ehrlichia/Babesia Antibody Panel, Immunofluorescence, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86666 x 2; 86753;

FPCEL
75901

Elastase, Pancreatic, Serum

Specimen Requirements: Patient Preparation: 1. The patient should fast for 10 to 12 hours prior to specimen collection. 2. Medications that affect pancreatic activity should be discontinued, if possible, for at least 48 hours prior to specimen collection. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain, red-top or a serum gel tube(s). 2. Centrifuge as soon as possible, aliquot 3 mL of serum into a plastic vial, and freeze immediately. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 83520; ;**ELDR**
82392**Elder, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**EFPO**
35091**Electrolyte and Osmolality Panel, Feces**

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers-24, 48, 72 Hour Kit (T291) Note: A random collection is required, but may be submitted in containers provided for timed collection.
 Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: 1. Collect a very liquid, random stool specimen. 2. Do not add preservative to the specimen. If a preservative is added, testing will be canceled.

Specimen Minimum Volume: 5 g**Transport Temperature:**

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 82438-Chloride; 83735-Magnesium; 84302-Sodium; 84100-Phosphorus; 84999 x 2-Osmolality, Potassium;

ELPSR
113632

Electrolyte Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	24 hours

CPT Code Information: 80051-Electrolyte Panel (if all 4 are performed); 82435-Chloride (if all 4 are not performed); 84295- Sodium (if all 4 are not performed); 84132-Potassium (if all 4 are not performed); 82374-Bicarbonate (if all 4 are not performed);

EM
70316

Electron Microscopy, Varies

Specimen Requirements: Specimen Type: Fixed wet tissue Supplies: Electron Microscopy Kit (T660) Container/Tube: Electron Microscopy Kit or leak-proof container Specimen Volume: Entire specimen Collection Instructions: Collect specimen according to the instructions in Electron Microscopy Procedures of Handling Specimens for Electron Microscopy. Do not place on ice, dry ice, or freeze. Additional Information: 1. PATHC / Pathology Consultation may be added if deemed necessary by the reviewing pathologist. 2. Liver/gastrointestinal and hair shaft specimens are not acceptable. Testing will be canceled if one of these specimen types is received. For neuronal ceroid lipofuscinosis (NCL) testing only Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) or yellow top (ACD solution B) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: If test indication is for NCL, whole blood may be submitted in lieu of fixed wet tissue. This is only applicable for a presumptive diagnosis of NCL; whole blood specimens submitted for any other reason will be rejected.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
EM	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88348**PEL**
800301**Electrophoresis, Protein, Serum**

Specimen Requirements: Patient Preparation: Fasting (12 hour) preferred but not required
Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 84155; 84165; 86334-Immunofixation (if appropriate);
86334-Immunofixation Delta and Epsilon (if appropriate);

ELM
82672**Elm, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

EMR
113366

EM, Renal Biopsy (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88348

EMICZ
610074

Emicizumab, Modified One Stage Assay Factor VIII, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	42 days

CPT Code Information: 80299

FENC
90087

Encainide (Enkaid), ODE and MODE

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a green-top (sodium heparin) tube(s). Plasma gel tube is not acceptable. Spin down and send 1 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s). Serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

ENS2
92116

Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended before starting immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 23; 86341 x 1; 84182-AGNBS (if appropriate); 86256 AGNTS (if appropriate); 86255-AINCS (if appropriate); 86256-AMPIS (if appropriate); 86256 APHTS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182-AN2BS (if appropriate); 86256 AN2TS (if appropriate); 86256 AN3TS (if appropriate); 86256 CRMTS (if appropriate); 84182-CRMWS (if appropriate); 86256-DPPTS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86256-IG5TS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255 NCDCS (if appropriate); 86256 NCDTS (if appropriate); 86255-NFHCS (if appropriate); 86256-NIFTS (if appropriate); 86255-NFLCS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 86256 PC1TS (if appropriate); 86256 PC2TS (if appropriate); 84182-PCTBS (if appropriate); 86256 PCTTS (if appropriate); 86256 PDETCS (if appropriate); 86255 SP7CS (if appropriate); 86256 SP7TS (if appropriate); 86255 T46CS (if appropriate); 86256 T46TS (if appropriate);

Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Collection vial number 1 Acceptable: Any collection vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x23; 86341 x1; ; 84182 AGNBC (if appropriate); 86256 AGNTC (if appropriate); 86255 AINCC (if appropriate); 86256 AMPIC (if appropriate); 84182 AMIBC (if appropriate); 84182 AN1BC (if appropriate); 86256 AN1TC (if appropriate); 84182 AN2BC (if appropriate); 86256 AN2TC (if appropriate); 86256 AN3TC (if appropriate); 86256 APHTC (if appropriate); 86256 CRMTC (if appropriate); 84182 CRMWC (if appropriate); 86256 DPPTC (if appropriate); 86256 GABIC (if appropriate); 86255 GFACC (if appropriate); 86256 GFATC (if appropriate); 86256 IG5TC (if appropriate); 86255 GL1CC (if appropriate); 86256 GL1TC (if appropriate); 86255 NCDCC (if appropriate); 86256 NCDTC (if appropriate); 86255 NFHCC (if appropriate); 86256 NIFTC (if appropriate); 86255 NFLCC (if appropriate); 86256 NMDIC (if appropriate); 84182 PC1BC (if appropriate); 86256 PC1TC (if appropriate); 86256 PC2TC (if appropriate); 84182 PCTBC (if appropriate); 86256 PCTTC (if appropriate); 86256 PDETC (if appropriate); 86255 SP7CC (if appropriate); 86256 SP7TC (if appropriate); 86255 T46CC (if appropriate); 86256 T46TC (if appropriate);

Endogenous Mucopolysaccharidosis Type I (IDUA [Alpha-L-Iduronidase]) Biomarker Reflex, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 filter paper, Munktell filter paper, local newborn screening card, or postmortem screening card. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	13 days	FILTER PAPER

CPT Code Information: 82542**MPS1B**
622354**Endogenous Mucopolysaccharidosis Type I (IDUA [Alpha-L-Iduronidase]) Biomarker, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 filter paper, Munktell filter paper, local newborn screening card, or postmortem screening card. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	13 days	FILTER PAPER

CPT Code Information: 82542**MPS2R**
622363**Endogenous Mucopolysaccharidosis Type II (I2S [Iduronate-2-Sulfatase]) Biomarker Reflex, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper,

PerkinElmer 226 filter paper, Munktell filter paper, local newborn screening card, or postmortem screening card. Specimen Volume: 2 Blood spots Collection Instructions 1. An alternative blood collection option for patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	13 days	FILTER PAPER

CPT Code Information: 82542

MPS2B
622357

Endogenous Mucopolysaccharidosis Type II (I2S [Iduronate-2-Sulfatase]) Biomarker, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 filter paper, Munktell filter paper, local newborn screening card, or postmortem screening card. Specimen Volume: 2 Blood spots Collection Instructions 1. An alternative blood collection option for patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	13 days	FILTER PAPER

CPT Code Information: 82542

ESTUF
35851

Endometrial Stromal Tumors (EST), 7p15 (JAZF1), 6p21.32 (PHF1), 17p13.3 (YWHAE) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 6 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 6 consecutive unstained, positively-charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 3 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2; 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate);

EMA
9360

Endomysial Antibodies, IgA, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 86231; 86231-titer (if appropriate);

EMAT
65091

Endomysial Antibodies, IgA, Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see EMA / Endomysial Antibodies, IgA, Serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 86231

EMAIG
608880

Endomysial Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 86231-screen; 86231-titer (if appropriate);

FENDI
75913

Endothelin I

Specimen Requirements: Patient Preparation: Patient should NOT be on any ACTH, Corticosteroids, or hypertension medications, if possible, for at least 48 hours prior to collection of specimen. Submit only one of the following: Specimen Type: Serum Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: 12x75 mm screw capped vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain, red-top or serum-gel tube(s). 2. Centrifuge and immediately aliquot 3 mL of serum into a plastic vial. 3. Send frozen. Specimen Type: Plasma Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: 12x75 mm screw capped vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a lavender top (EDTA) tube(s). 2. Centrifuge and immediately aliquot 3 mL plasma into a plastic vial. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	180 days
	Refrigerated	7 days

CPT Code Information: 83520

EGPL
82704

English Plantain, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

EHOLG
616732

Entamoeba histolytica Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 86753

FEHAG
75350

Entamoeba histolytica Antigen, EIA

Specimen Requirements: Preferred Specimen Type: Unpreserved stool Supplies: Sterile stool
container Container/Tube: Sterile stool container Specimen Volume: 2 g Specimen Stability
Information: Frozen Collection Instructions: Collect 2 grams of fresh unpreserved stool in sterile
container. Send specimen frozen. NOTE: Separate specimens must be submitted when multiple tests are
ordered.

Specimen Minimum Volume: 1 gram

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	7 days
	Refrigerated	48 hours

CPT Code Information: 87337

STL
8098

Enteric Pathogens Culture, Feces

Specimen Requirements: Patient Preparation: Patient should not use barium or bismuth for 7 to
10 days before specimen collection. Submit only 1 of the following specimens: Preferred: Specimen
Type: Fecal Swab Supplies: Copan Fecal Swab (T995) Container/Tube: Culture transport swab (Dacron
or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen
Volume: Representative portion of fecal specimen Collection Instructions: 1. Remove swab from
packaging. 2. Collect a small amount of stool by inserting all the tip of the flocced swab into the stool

sample and rotate. 3. Transfer swab into the tube with preservative medium within 2 hours of collection and visually check to ensure MAX fill line is not exceeded. 4. Mix stool specimen against side of tube to evenly disperse. 5. Break swab off into the tube. 6. Place screw cap in tube and tighten. 7. Shake vial until sample homogenous. 8. Place vial in a sealed plastic bag. Specimen Stability Information: Refrigerated 3 days (preferred)/Ambient 2 days Acceptable: Specimen Type: Preserved Feces Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag. Specimen Stability Information: Ambient 4 days (preferred)/Refrigerated 4 days

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies (preferred)	
	Ambient	
	Refrigerated	

CPT Code Information: 87045-Enteric Pathogens Culture, Stool-with isolation and preliminary examination; 87046 x 3-Stool Culture Aerobic Bacteria, each; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 3-Serologic Agglut Method 1 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87150 Carbapenem resistance genes (if appropriate);

ENTP
89893

Enterovirus, Molecular Detection, PCR, Plasma

Specimen Requirements: Submit a raw clinical sample (not a culture isolate) for enterovirus polymerase chain reaction . Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge blood collection tube and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87498

LENT
80066

Enterovirus, Molecular Detection, PCR, Varies

Specimen Requirements: Submit a raw clinical sample (not a culture isolate) for enterovirus testing. Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Pericardial, peritoneal Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: 1. Submit specimen from collection vial 2. 2. Do not centrifuge. Specimen Type: Swab Sources: Dermal, eye, rectal, genital, nasopharyngeal, oropharyngeal, throat, nasal, or urethral Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT, M4, M5, Bartels, or Jiangsu) and E-Swab or Culturette Specimen Volume: Entire specimen Collection Instructions: 1. Rectal swab must have no visible fecal matter 2. Place swab back into multimicrobe media. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, pleural fluid, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: Body and Respiratory fluids: 0.5 mL; Spinal fluid: 0.3 mL; Swab: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87498

EDN
618211

Eosinophil Derived Neurotoxin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 12 hours of collection. Serum cannot sit on either gel or cells for longer than 12 hours.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	21 days

CPT Code Information: 83520

EOSU1
610552

Eosinophils, Random, Urine

Specimen Requirements: Container/Tube: Unstained cytospin slide Specimen Volume: 1 slide
Collection Instructions: 1. Collect a random urine specimen. 2. Centrifuge 10 mL of a random urine collection. 3. Pour off supernatant. Assess urine sediment for presence of white blood cells (WBC). If no WBC are seen, the eosinophil test cannot be performed. If WBC are present, prepare slides using the centrifuged sediment. 4. The unstained slide should be prepared within 2 hours of collection. Only an unstained slide will be accepted. Any other specimen, including the raw urine specimen, will be rejected. 5. Centrifuge urine in cytospin centrifuge at speed of 750 rpm for 5 minutes. 6. Slides need to be labeled with patient name and date of birth 7. Guidelines for slide preparation. Use the sediment to prepare slides as follows: a. 150 mcL of sample for 1 to 3 WBC/high power field (hpf) b. 100 mcL of sample for moderate to normal sediment (<50 cell/hpf) c. 50 mcL of sample for heavier sediment (>50 cells/hpf) d. 25 mcL for packed fields of sediment

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Ambient (preferred)	14 days	SLIDE
	Frozen	14 days	SLIDE
	Refrigerated	14 days	SLIDE

CPT Code Information: 85999

FEPHD
90109

Ephedrine, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. If specimen is not light protected foil wrap specimen to protect from light. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial. If specimen is not light protected foil wrap specimen to protect from light.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	LIGHT PROTECTED
	Frozen	180 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 80324; G0480 (if appropriate);

EPUR
82854

Epicoccum purpurascens, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SPBX
70599

Epidermal Nerve Fiber Density Consultation, Varies

Specimen Requirements: Preferred: Specimen Type: Skin punch biopsy Supplies: Skin Punch Biopsy Kit (to order call either 507-284-8065 or 800-533-1710) containing fixatives, buffer, and cryoprotectant Source: Distal leg, mid-thigh, dorsal foot, or lower abdomen Container/Tube: A Skin Punch Biopsy Kit is required (no substitutions accepted) for collection. Collection Instructions: 1. The standard biopsy for evaluating distal small fiber sensory neuropathy includes two 3-mm skin punch biopsies from the same side of the body. 2. Prepare specimen per instructions on the Epidermal Nerve Fiber Density Preparation Instructions (T703). Acceptable: Specimen Type: PGP 9.5-reacted slides Additional Information: 1. At least one slide reacted with PGP 9.5, using a PGP 9.5 protocol for visualizing epidermal nerve fibers, is required. 2. At least one hematoxylin and eosin-stained slide and one Congo red-stained slide are optional. Specimen Type: PGP 9.5-reacted slides and tissue block Note: Visualization of epidermal nerve fibers cannot be done on paraffin blocks. Additional Information: 1. At least one slide reacted with PGP 9.5, using a PGP 9.5 protocol for visualizing epidermal nerve fibers, is required. 2. Tissue block may only be used to create hematoxylin and eosin-stained slides and Congo red-stained slides.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88305 (if appropriate); 88313 (if appropriate); 88321 (if appropriate); 88323 (if appropriate); 88323-26 (if appropriate); 88325 (if appropriate); 88348 (if appropriate); 88356 (if appropriate); 88342 (if appropriate);

FEPI
57960

Epidermophyton floccosum IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

EPS2
92118

Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 19; 86341; 84182-AGNBS (if appropriate); 86256-AGNTS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 86256-AN1TS (if appropriate); 84182-AN2BS (if appropriate); 86256-AN2TS (if appropriate); 86256-AN3TS (if appropriate); 86256-APHTS (if appropriate); 86256-CRMTS (if appropriate); 84182-CRMWS (if appropriate); 86256-DPPTS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-NCDCS (if appropriate); 86256-NCDTS (if appropriate); 86256-NMDIS (if appropriate); 86256-PC2TS (if appropriate); 84182-PCTBS (if appropriate); 86256-PCTTS (if appropriate); 86256-PDETS (if appropriate); 86255-T46CS (if appropriate); 86256-T46TS (if appropriate);

EPC2 92119

Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 19; 86341 x 1; 84182-AGNBC (if appropriate); 86256-AGNTC (if appropriate); 86256-AMPIC (if appropriate); 84182-AMIBC (if appropriate); 84182-AN1BC (if appropriate); 86256-AN1TC (if appropriate); 84182-AN2BC (if appropriate); 86256-AN2TC (if appropriate); 86256-AN3TC (if appropriate); 86256-APHTC (if appropriate); 86256-CRMTC (if appropriate); 84182-CRMWC (if appropriate); 86256-DPPTC (if appropriate); 86256-GABIC (if appropriate); 86255-GFACC (if appropriate); 86256-GFATC (if appropriate); 86255-GL1CC (if appropriate); 86256-GL1TC (if appropriate); 86255-NCDC (if appropriate); 86256-NCDTC (if appropriate); 86256-NMDIC (if appropriate); 86256-PC2TC (if appropriate); 84182-PCTBC (if appropriate); 86256-PCTTC (if appropriate); 86256-PDETC (if appropriate); 86255-T46CC (if appropriate); 86256-T46TC (if appropriate);

EPIP1 81709

Epithelia Panel # 1, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**EPIP2**
81881**Epithelia Panel # 2, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**EMAI**
70424**Epithelial Membrane Antigen (EMA) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
 Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
 paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
 test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

EBNA2
71487

Epstein Barr Nuclear Antigen 2 (EBNA2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

EBLPD
619788

Epstein Barr Virus (EBV) Susceptibility and Lymphoproliferative Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

LMP11
70502

Epstein Barr Virus Latency Membrane Protein 1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SEBV
800033

Epstein-Barr Virus (EBV) Antibody Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86664-EBNA; 86665 x 2-VCA, IgG and IgM;

EBV
70469

Epstein-Barr Virus (EBV) In Situ Hybridization, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -4 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-TC, primary; 88364-TC, if additional ISH;

EBVE
800748

Epstein-Barr Virus (EBV), IgG Antibody to Early Antigen, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86663

LEBV
800244

Epstein-Barr Virus (EBV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Spinal, peritoneal, ascites, pericardial, pleural, thoracentesis, amniotic, or ocular Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Sterile, screw cap, 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Respiratory fluid Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Supplies: Sarstedt Aliquot Tube, 5 mL Container/Tube: Preferred: Sterile, screw cap, 5-mL aliquot tube Acceptable: Sterile container

Specimen Volume: 1.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Swab Sources: Eye and upper respiratory (nasal, throat) Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT) and Eswabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4 or M5) Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) Specimen Volume: 0.5 mL Additional Information: Clotted specimens will be rejected. Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, cornea, etc. Supplies: M4-RT (T605) Container/Tube: Preferred: Multimicrobe medium (M4-RT) Acceptable: Sterile container containing 1 to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4 or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue

Specimen Minimum Volume: Fluids: 0.3 mL; Respiratory Specimens: 1 mL; Tissue: 2 x 2-mm biopsy; Swab: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

EBVPV
618306

Epstein-Barr Virus (EBV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Fluid Sources: Spinal fluid, sterile body fluids (peritoneal fluid/ascites, pericardial fluid, pleural fluid/thoracentesis), amniotic, or ocular Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Preferred: Sterile screwcap 5-mL plastic vial Acceptable: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Fluid Sources: Respiratory; bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Sterile screwcap 5-mL plastic vial Acceptable: Sterile container Specimen Volume: 1.5 mL Specimen Type: Swab Sources: Eye and upper respiratory (nasal, throat) Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -M4-RT(T605) Container/Tube: Multimicrobe media (M4-RT, M4, M5, Bartels, or Jiangsu) and E-Swab or Culturette Collection Instructions: Place swab back into multimicrobe media. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) only Specimen Volume: 0.5 mL Additional Information: Clotted specimens will be rejected. Specimen Type: Fresh tissue Supplies: M4-RT (T605) Container/Tube: Preferred: Sterile container containing multimicrobe medium (M4-RT, M4, M5, Bartels, or Jiangsu) Acceptable: Sterile container containing 1-2 mL of sterile saline Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue. Fixed tissue is not acceptable.

Specimen Minimum Volume: Ocular Fluid, Spinal Fluid: 0.3 mL Sterile body fluids (peritoneal fluid/ascites, pericardial fluid, pleural fluid/thoracentesis): See Specimen Required Respiratory Specimens: 1 mL Tissue: 2 x 2-mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

EBVAB
621373

Epstein-Barr Virus Antibody Profile, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	48 hours

CPT Code Information: 86664-EBNA; 86665 x 2-VCA, IgG and IgM;

EBVQN
615297

Epstein-Barr Virus DNA Detection and Quantification, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into a plastic vial per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87799

EAEBV
621374

Epstein-Barr Virus Early Antigen, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	48 hours

CPT Code Information: 86663

ERG
70426

ERG Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

REVE2
618830

Erythrocytosis Evaluation, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow
top (ACD solution B) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in
original tube. Do not aliquot.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 83020-26; 83020; 83021; 83789; 83068 (if appropriate); 82664 (if appropriate); 88184 (if appropriate);

REVEI
608426

Erythrocytosis Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 83020-26

REVE0
608094

Erythrocytosis Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	

EPOR
61679

Erythropoietin Receptor (EPOR) Gene, Exon 8 Sequencing, Whole Blood

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations, Whole Blood. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	30 days
	Ambient	14 days

CPT Code Information: 81479

EPO
80173

Erythropoietin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Morning collection, 7:30 a.m.-12 p.m. is preferred due to diurnal variation. For more information see Cautions. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 82668

E157C
606219

Escherichia coli O157:H7 Culture, Feces

Specimen Requirements: Patient Preparation: Patient should not use barium or bismuth for 7 to 10 days before specimen collection. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Escherichia coli O157:H7 Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

ESR1T
616500

ESR1 Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. NOTE: Submit tissue from either local recurrence or metastatic disease collected after endocrine therapy has been administered (see Clinical Information for more details). -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381 - Microdissection, manual; 81479;

FFES
91215

Estradiol Free, Serum (includes Estradiol and SHBG)

Specimen Requirements: Draw blood in a plain red-top tube (serum gel tube is acceptable). Spin down, pour off into plastic vial within 45 minutes of collection, and send 3 mL serum frozen.

Specimen Minimum Volume: 1.0 mL Note: This volume does not allow for repeat testing.

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	180 days
	Ambient	48 hours
	Refrigerated	48 hours

CPT Code Information:

ESTS
8575

Estradiol, Rapid, Immunoassay, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	5 days	
	Ambient	24 hours	

CPT Code Information: 82670

EEST
81816

Estradiol, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (SST/serum gel tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Additional Information: For more information see Steroid Pathways.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82670**UE3**
81711**Estriol, Unconjugated, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82677**ESTR**
70427**Estrogen Receptor Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ERPR
70589

Estrogen/Progesterone Receptor, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Breast carcinoma Preferred: A paraffin-embedded tissue block containing in-situ, invasive or metastatic breast carcinoma tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours and shipped at ambient temperature Acceptable: 3 unstained sections, containing carcinoma, on charged slides cut at 4 microns <1 month ago and shipped at ambient temperature Collection Instructions: Submit paraffin-embedded carcinoma tissue Specimen Type: Non-breast carcinoma Preferred: A paraffin-embedded tissue block containing carcinoma tissue that has been fixed in 10% neutral buffered formalin and shipped at ambient temperature Acceptable: 3 unstained sections, containing carcinoma, on charged slides cut at 4 microns <1 month ago and shipped at ambient temperature Collection Instructions: Submit paraffin-embedded carcinoma tissue Additional Information: 1. According to the American Society of Clinical Oncology (ASCO)/College of American Pathologists (CAP) guidelines, estrogen/progesterone receptor protein immunohistochemical test results are only valid for nondecalfied, paraffin-embedded specimens fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total time of 6 to 72 hours. Delay to fixation, under- or overfixation may affect these results. 2. Paraffin blocks will be returned with final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360 x 2

ESTF
84230

Estrogens, Estrone (E1) and Estradiol (E2), Fractionated, Serum

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82671-Estrogens, fractionated; 82670-Estradiol (If applicable); 82679-Estrone (If applicable);

E1
81418

Estrone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Additional Information: For more information see Steroid Pathways.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82679

ALC
8264

Ethanol, Blood

Specimen Requirements: Container/Tube: Preferred: Gray top (potassium oxalate/sodium fluoride) Acceptable: Lavender top (EDTA) or green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Do not use alcohol to clean arm. Use an alternative, such as Betadine, to cleanse arm before collecting any specimen for volatile testing. 2. Specimen must be sent in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood NaFl-KOx	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: G0480; 80320 (if appropriate for select payers);

ALCX
62709

Ethanol, Chain of Custody, Blood

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit (T282) containing the specimen container seals and documentation required. Preferred: Gray top (potassium oxalate/sodium fluoride) Acceptable: Lavender (EDTA) or green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Do not use alcohol to clean arm. Use an alternative, such as Betadine, to cleanse arm before collecting any specimen for volatile testing. 2.

Specimen must be sent in original tube. Collect specimen, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood NaFl-KOx	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: 80320; G0480 (if appropriate);

ETX
8769

Ethosuximide, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80168

ETGX
63418

Ethyl Glucuronide Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-custody kit containing the specimen containers, seals, and documentation is required. Specimen Volume: 5 mL Collection Instructions: Collect specimen in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 5 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80307; 80321 ; G0480 (if appropriate);

ETGC
63421

Ethyl Glucuronide Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80321; G0480 (if appropriate)

ETGR
63419

Ethyl Glucuronide Screen with Reflex, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5 mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80307

ETGSR
616033

Ethyl Glucuronide Screen with Reflex, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine. Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80307

ETGS
63420

Ethyl Glucuronide Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5 mL tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80307

ETGL
8749

Ethylene Glycol, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: G0480; 80320 (if appropriate for select payers);

EOXD
82767

Ethylene Oxide, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ETV6F
63433

ETV6 (12p13.2) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained,

positively-charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2; 88291 -DNA probe, each (first probe set), Interpretation and report; 88271x2 -DNA probe, each; each additional probe set (if appropriate); 88271x1 -DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 -DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 -DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 -Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 -Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 -Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

EUCL
82758

Eucalyptus, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FEUCT
75738

Euglobulin Clot Lysis Time

Specimen Requirements: Specimen Type: Citrated plasma Collection Container/Type: Light-blue top (sodium citrate) Specimen Volume: 2 mL Collection Instructions: Collect blood in 3/2% sodium citrate light blue top tube. Centrifuge within 30 minutes after collection, freeze immediately. Send 2 mL platelet-poor plasma in plastic vial frozen. Note: 1. Prohibit exercise prior to drawing sample. 2. To avoid release of plasminogen activator, do not massage vein vigorously, pump fist excessively or leave

tourniquet in place for a prolonged period.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	21 days

CPT Code Information: 85360

EMAY
82846

Euroglyphus maynei, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

EHOR
82662

European Hornet, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

EVROL
35146

Everolimus, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Do not centrifuge. 3. Send whole blood specimen in original tube. Do not aliquot. **Additional Information:** Therapeutic range applies to trough specimens collected immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80169

EWSF
35268

Ewing Sarcoma, 22q12 (EWSR1) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block **Collection Instructions:** Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides **Slides:** 1 Hematoxylin and eosin stained and 4 unstained **Collection Instructions:** Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained, positively-charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2 ; 88291 - NA probe, each (first probe set), Interpretation and report; 88271x2 -DNA probe, each; each additional probe set (if appropriate); 88271x1 -DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 -DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 -DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 -Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 -Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 -Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

EXT2 614548

Exostosin 2 (EXT2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FEBGP 75552

Exotic Bird Panel IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 86001 x4

ESBLS 607828

Extended-Spectrum Beta-Lactamase-Producing Gram-Negative Bacteria Surveillance Culture, Feces

Specimen Requirements: Patient Preparation: Do not use barium or bismuth before specimen collection. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Specimen Type: Preserved feces Container/Tube: Cary-Blair or modified Cary-Blair transport system is required. Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator. Submit sample in original Cary Blair medium container (not an aliquot of Cary Blair medium). Specimen Volume: Representative portion of feces; 1 gram or 5 mL Collection Instructions: 1. Collect fresh fecal specimen and place 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87081-ESBL GNB surveillance culture; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87184-ESBL SUS test charge (if appropriate);

F2ISO 607698

F2-Isoprostanes, Random, Urine

Specimen Requirements: Patient Preparation: Patient should not take nonsteroidal anti-inflammatory drugs within the 72 hours or aspirin within the 2 weeks prior to specimen collection. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 82542

FABRZ
35415

Fabry Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) tube or yellow top (ACD) tube Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentrations of DNA yielded from blood spots, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be needed to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405-GLA (galactosidase, alpha) (eg, Fabry disease), full gene sequence

FA13R 75852

Factor 13 1:1 Mix

Specimen Requirements: Only orderable as a reflex test. For more information, see FA13Q.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85291

FA13Q 75851

Factor 13, Qualitative, with Reflex to Factor 13 1:1 Mix

Specimen Requirements: Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (3.2% sodium citrate) tube(s). Spin down immediately and send 2 mL platelet poor citrated plasma frozen in a plastic vial. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85291-Factor 13, Qualitative; 85291-Factor 13, 1:1 Mix (if appropriate);

FC13A 70428

Factor 13a Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FACR8
70430

Factor 8 Related Antigen Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AFH
615249

Factor H Autoantibody, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	28 days
	Refrigerated	28 days
	Ambient	14 days

CPT Code Information: 83520

2INHE
607427

Factor II Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390; 85210; 85335 (if appropriate); 85335 (if appropriate); 85390 (if appropriate);

2AINH
607445

Factor II Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

2INHT
607438

Factor II Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 2INHE / Factor II Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

F2_IS
7806

Factor II Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 2INHE / Factor II Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma For information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

9INHE
607425

Factor IX Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390; 85250; 85335 (if appropriate); 85335 (if appropriate); 85390 (if appropriate);

9INHT
607436

Factor IX Inhibitor Profile Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 9INHE / Factor IX Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

9AINH
607443

Factor IX Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

F9_IS
7802

Factor IX Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: 9INHE / Factor IX Inhibitor Evaluation, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

FC9K
83310

Factor IX Known Mutation Sequencing

Specimen Requirements: Only orderable as a reflex at order entry for unit code FIXKM / Hemophilia B, Factor IX Gene Known Mutation Screening (Carrier Detection).

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information:

5BETH
607433

Factor V Bethesda Units, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: -ALUPP / Lupus Anticoagulant Profile, Plasma -ALBLD / Bleeding Diathesis Profile, Limited, Plasma -APROL / Prolonged Clot Time Profile, Plasma -5INHE / Factor V Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

5INHE
607426

Factor V Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390; 85220; 85335 (if appropriate); 85335 (if appropriate); 85390 (if appropriate);

5AINH
607444

Factor V Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

5INHT
607437

Factor V Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 5INHE / Factor V Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

F5_IS
7808

Factor V Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 5INHE / Factor V Inhibitor Evaluation, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

F5DNA
81419

Factor V Leiden (R506Q) Mutation, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B), light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	14 days
	Frozen	14 days
	Refrigerated	14 days

CPT Code Information: 81241; ;

GNF7
619089

Factor VII Deficiency, F7 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Whole blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate);

7INHE
607428

Factor VII Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390; 85230; 85335 (if appropriate); 85335 (if appropriate); 85390 (if appropriate);

7AINH
607446

Factor VII Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

7INHT
607439

Factor VII Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 7INHE / Factor VII Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

F7_IS
7810

Factor VII Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 7INHE / Factor VII Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

8INHE
607424

Factor VIII Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-Factor VIII Tech Interp; 85240-Factor VIII activity assay; 85335-Bethesda titer (if appropriate); 85335-Factor VIII inhibitor screen (if appropriate); 85390-Factor VIII Professional Interp (if appropriate);

8AINH
607442

Factor VIII Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

8INHT
607435

Factor VIII Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 8INHE / Factor VIII Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

10INE
607429

Factor X Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390; 85260; 85335 (if appropriate); 85335 (if appropriate); 85390 (if appropriate);

10AIH
607447

Factor X Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

10INT
607440

Factor X Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 10INE / Factor X Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

10 IS
7812

Factor X Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: 10INE / Factor X Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

11INE
607430

Factor XI Inhibitor Evaluation, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390; 85270; 85335 (if appropriate); 85335 (if appropriate); 85390 (if appropriate);

11AIH
607448

Factor XI Inhibitor Profile, Professional Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26

11INT
607441

Factor XI Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 11INE / Factor XI Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

11_IS
7804

Factor XI Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 11INE / Factor XI Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

FXIII
9068

Factor XIII (13), Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see ALBLD / Bleeding Diathesis Profile, Limited, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85291

GNF13
619145

Factor XIII Deficiency, F13A1 and F13B Genes, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

FFX3F 75567

Factor XIII, Functional

Specimen Requirements: Collection Container/Tube: Light-blue top (3.2% sodium citrate)
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL platelet-poor plasma, in plastic vial
Collection Instructions: Draw blood into a 3.2% sodium citrate (light blue-top) tube. Centrifuge light blue-top tube 15 minutes at approx. 1500 g within 60 minutes of collection. Using a plastic pipette, remove plasma, taking care to avoid the WBC/platelet buffy layer and place into a plastic vial. Centrifuge a second time and transfer platelet-poor plasma into a new plastic vial. Plasma must be free of platelets (<10,000/mcl). Freeze immediately, ship frozen. Note: Note oral anticoagulant therapy

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85290

FRW 82684

False Ragweed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

Familial Variant, Targeted Testing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimen types: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, PerkinElmer 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Send specimen in original tube 2. Label specimen as cord blood Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured amniocytes Container/Tube: T-25 flask Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15-mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal

specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Chorionic villi: 10 mg All other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: The applicable CPT code will be applied on a case-by-case basis.; ; Gene; CPT Code (as appropriate); Any gene not listed below; 81403; APC ; 81202; AR; 81174; BRCA1; 81215; BRCA2; 81217; CACNA1A; 81186; CFTR; 81221; CSTB; 81190; FXN; 81289; G6PD; 81248; GJB2; 81253; HBA1; 81258; HBA2; 81258; HBB; 81362; MECP2; 81303; MLH1; 81293; MSH2; 81296; MSH6; 81299; PALB2; 81308; PMP22; 81326; PMS2; 81318; PTEN; 81322; SMN1; 81337; TP53; 81353; ; 81265-Maternal cell contamination (if appropriate); 88233-Tissue culture, skin or solid tissue biopsy (if appropriate) ; 88235-Tissue culture for amniotic fluid (if appropriate) ; 88240-Cryopreservation (if appropriate);

**CMPRE
616069**

Family Member Comparator Specimen for Exome Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood

collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CMPRG
614611

Family Member Comparator Specimen for Genome Sequencing, Varies

Specimen Requirements:

Specimen Minimum Volume: Whole blood: 1 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

FASC
70431

Fascin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per

test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

INTC1
617028

Fasting (8 Hours or more)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

FATF
607701

Fat, Feces

Specimen Requirements: Patient Preparation: 1. For 3 days prior to and during the collection period: a. Patient should be on a fat-controlled diet (100-150 g fat per day). b. No laxatives (particularly mineral oil and castor oil). c. No synthetic fat substitutes (eg, Olestra) or fat-blocking nutritional supplements. 2. The use of diaper rash ointments will falsely elevate test results. Discontinue use during collection period. 3. Barium interferes with test procedure; a waiting period of 48 hours before stool collection analysis is recommended. Supplies: Stool Containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container complies with shipping requirements, do not use other containers. Specimen Volume: Preferred: Entire 48-hour or 72-hour collection Acceptable: Entire 24-hour or a minimum of 5 g from a random collection Collection Instructions: 1. All containers must be sent together. 2. The entire collection must contain at least 5 g of feces. 3. For a random collection, a minimum of 5 g (do not send entire collection) is required. 4. The number of containers sent should be indicated on the labels (1 of 4, for example). Additional Information: 1. Patient can store sample at refrigerate temperature during collection period. 2. A separate order and collection should take place if stool, chloride, magnesium, osmolality, phosphorus, pH, or any microbiology testing is desired.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	180 days
	Refrigerated	180 days

CPT Code Information: 82710

HFAOP
608028

Fatty Acid Oxidation Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ;

FAO
81927

Fatty Acid Oxidation Probe Assay, Fibroblast Culture

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Varies	

CPT Code Information: 82017

PFAPC
60466

Fatty Acid Profile, Comprehensive (C8-C26), Plasma

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect immediately before next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	92 days
	Refrigerated	72 hours

CPT Code Information: 82725

FAPCP
82042

Fatty Acid Profile, Comprehensive (C8-C26), Serum

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect immediately before to next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red Top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	92 days
	Refrigerated	72 hours

CPT Code Information: 82725

PFAPPE
60464

Fatty Acid Profile, Essential, Plasma

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect immediately before next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	92 days
	Refrigerated	72 hours

CPT Code Information: 82725

FAPEP
82426

Fatty Acid Profile, Essential, Serum

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect immediately before next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	92 days
	Refrigerated	72 hours

CPT Code Information: 82725

FAPM
81939

Fatty Acid Profile, Mitochondrial (C8-C18), Serum

Specimen Requirements:

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	92 days
	Refrigerated	72 hours

CPT Code Information: 82725

POXP
60468

Fatty Acid Profile, Peroxisomal (C22-C26), Plasma

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours). If fasting not possible for babies or infants, collect specimen prior to next feeding. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	92 days
	Refrigerated	15 days

CPT Code Information: 82726

POX
81369

Fatty Acid Profile, Peroxisomal (C22-C26), Serum

Specimen Requirements: Patient Preparation: Fasting 12 hours or more. (Collect specimens from infants and small children just before next feeding) Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	92 days
	Refrigerated	15 days

CPT Code Information: 82726

MFBNG
617365

FBN1 Full Gene Sequencing with Deletion/Duplication, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred:

Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81408

FETH2
81880

Feather Panel # 2, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LEU
8046

Fecal Leukocytes, Feces

Specimen Requirements: Supplies: ECOFIX Stool Transport Medium only (T790)
Container/Tube: Preferred: ECOFIX preservative Acceptable: Zinc Polyvinyl alcohol (Zn-PVA)
preservative Specimen Volume: Representative portion of collection Collection Instructions: 1. Collect a
random fecal specimen. 2. Carefully follow instructions on container. a. Place specimen into ECOFIX
preservative vial OR Zinc-PVA preservative vial within 30 minutes of passage or collection. Refer to the
fill line on the preservative vial. Do not fill above the line indicated on the container. b. Mix the contents
of the tube with the spoon, twist the cap tightly closed, and shake vigorously until the contents are well
mixed.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	21 days	PVA OR ECOFIX
	Refrigerated	21 days	PVA OR ECOFIX

CPT Code Information: 89055**FOBT**
607700**Fecal Occult Blood, Colorectal Cancer Screen, Qualitative, Immunochemical, Feces**

Specimen Requirements: Supplies: Fecal Occult Blood Test Kit (T682) Container/Tube: Fecal Occult Blood Test Kit Specimen Volume: Specimen must fill the grooved portion of the sample probe
Collection Instructions: 1. Collect a random stool specimen. 2. See Fecal Occult Blood Test Kit package insert for instructions. 3. Specimen must be collected in specific sample vial within 4 hours of defecation.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	30 days	FOBT
	Ambient	15 days	FOBT

CPT Code Information: 82274; G0328 (if appropriate for government payers);**FELBA**
80782**Felbamate (Felbatol), Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge the specimen. 3. For red-top tubes, immediately aliquot serum into a plastic vial. 4. For serum-gel tubes, aliquot serum into a plastic vial within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80167

FENR
63061

Fentanyl Screen with Reflex, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
 Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube
 Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

FENS
63060

Fentanyl Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
 Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube
 Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

FENTX
62726

Fentanyl with Metabolite Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 5 mL Collection Instructions: Collect urine specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 5 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 80354; G0480 (if appropriate);

FENTU
89655

Fentanyl with Metabolite Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this procedure. 3. Submitting less than 5 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: G0480; 80354 (if appropriate for select payers);

FENTS
89654

Fentanyl, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial

Specimen Volume: 2.3 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	28 days
	Refrigerated	14 days
	Ambient	72 hours

CPT Code Information: 80354; G0480 (if appropriate);

FEEP
82143

Ferret Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FERR1
619953

Ferritin, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days
	Ambient	24 hours

CPT Code Information: 82728

FMB
88841

Fetomaternal Bleed, Flow Cytometry, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 6 mL
Collection Instructions: 1. Fill evacuated tube as completely as possible. 2. Do not centrifuge. 3. Invert several times to mix blood. 4. Send whole blood specimen in original tube. Do not aliquot as aliquoting into or out of a sample tube can adversely affect test results.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	5 days	
	Ambient	5 days	

CPT Code Information: 88184-Flow cytometry, cell surface, cytoplasmic

FMBNY
30320

Fetomaternal Bleed, New York, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 6 mL
Collection Instructions: 1. Fill evacuated tube as completely as possible. 2. Do not centrifuge. 3. Invert several times to mix blood. 4. Send specimen in original tube. Do not aliquot as aliquoting into or out of a sample tube can adversely affect test results.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	5 days	
	Ambient	5 days	

CPT Code Information: 88184-Flow cytometry; cell surface cytoplasmic

FGF1F 58124

FGFR1 (8p11.2) Amplification, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained, positively charged, unbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

FGFR2 63432

FGFR2 (10q26.1) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained, positively charged, unbaked slides with 5 micron thick sections of the tumor tissue

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TFH
619658

FH Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81405;

MSFGN
620248

Fibrillary Glomerulonephritis Confirmation, Mass

Spectrometry, Paraffin Tissue

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed or B5-fixed, paraffin-embedded tissue block Collection Instructions: 1. Do not send fixed tissue slides. Testing can only be done on paraffin-embedded tissue blocks. 2. Attach the green pathology address label included in the kit to the outside of the transport container.

Transport Temperature:

Specimen Type	Temperature	Time
AMYLOID	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 82542; 88380;

FIBAG 606887

Fibrinogen Antigen, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Light-blue top (3.2% sodium citrate at 9:1 ratio) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 85385

CLFIB 602173

Fibrinogen, Clauss, Plasma

Specimen Requirements: Only orderable as part of a profile or reflex. For more information, see: ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85384

FIBTP
40937

Fibrinogen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen (preferred)	14 days
	Ambient	24 hours

CPT Code Information: 85384

CULFB
35257

Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Autopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 4-mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15 mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Products of conception or stillbirth Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) of placenta (including 20 mg of chorionic villi) and a 1 cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: If a fetus cannot be specifically identified, collect 50 mg villus material or tissue that appears to be of fetal origin. Additional Information: Do not send entire fetus. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin).

Specimen Volume: 4-mm punch

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88233; 88240;

FGFRC
71483

Fibroblast Growth Factor Receptor 1, Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

23FBG
620249

Fibroblast Growth Factor-23 (FGF23), In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block Specimen Volume: Entire block Specimen Type: Tissue slides Slides: 5 Unstained glass, positively charged slides with 5 (+ or -1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-Primary

PRKAF
64777

Fibrolamellar Carcinoma, 19p13.1 (PRKACA) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Slides/Slide Count: Three consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274-w/modifier 52 -Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MSFNG
615305

Fibronectin Glomerulopathy Confirmation, Mass Spectrometry

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 82542; 88380;

FIBRO
38292

FibroTest-ActiTest, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge and aliquot serum into an amber vial within 2 hours of collection. 2. Centrifuged serum must be light protected within 4 hours of collection. It is acceptable to draw the blood and then protect it from light after centrifugation as long as it is within 4 hours of collection.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 81596

3FBLN
609271

Fibulin 3 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FIGE
57916

Fig (*Ficus carica*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FACT
61620

Filamentous-Actin (F-actin) Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

FFAG4
57875

Filaria Antibody (IgG4)

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and send 0.5 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86682

FIL
9232

Filaria, Blood

Specimen Requirements: Container/Tube: Light-blue top (3.2% sodium citrate) Specimen Volume: 2.7 mL Collection Instructions: Certain microfilariae have a nocturnal or diurnal periodicity, therefore the blood collection should be timed to correspond with the release of microfilariae in the peripheral circulation. For the agents of lymphatic filariasis (*Wuchereria bancrofti* and the *Brugia* species), blood should be collected between 10 p.m. and 2 a.m., whereas for detection of *Loa loa*, blood should be collected between 10 a.m. and 2 p.m.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood Na Cit	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 87015; 87210;

FINCH
82146

Finch Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FANT
82698

Fire Ant, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBSH
82735

Firebush (Kochia), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FFSPG
57927

Fish and Shellfish Panel IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 12

FLEC
9243

Flecainide, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80181

FLI1
70432

FLI-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,

paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FLNDR
57895

Flounder (Bothidae/Pleuronectidae Fam) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FCINS
88467

Flow Cytometry Interpretation, 16 or More Markers (Bill Only)

Specimen Requirements: Only to be ordered by pathology consultant. This test is for billing purposes only.

CPT Code Information: 88189

FLT
19739

FLT3 Mutation Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collections Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen

Volume: 2 mL Collections Instructions: 1. Invert several times to mix bone marrow. 2. Send specimens in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA from blood or bone marrow 2. Indicate volume and concentration of DNA on the label. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 50 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81245-FLT3 (fms-related tyrosine kinase) (eg, acute myeloid leukemia), gene analysis, internal tandem duplication (ITD) variants (ie, exons 14, 15); 81246-FLT3 (fms-related tyrosine kinase 3) (eg, acute myeloid leukemia), gene analysis; tyrosine kinase domain (TKD) variants (eg, D835, I836);

FLUCS
75885

Fluconazole (Diflucan) Susceptibility Testing

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999 - Unlisted Microbiology Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen source.); 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate);

FFLRO
91795

Flunitrazepam Confirmation, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	48 hours

CPT Code Information: 80346**FL**
8641**Fluoride, Plasma**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial. Glass tubes are not acceptable.

Specimen Minimum Volume: 1.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Plasma Heparin	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 82735**FLUOX**
80228**Fluoxetine, Serum**

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before the next scheduled dose (trough). 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80299

PROLX
80458

Fluphenazine (Prolixin), Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube is not acceptable. Centrifuge and send 3 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

FFLUR
90091

Flurazepam (Dalmane) and Desalkylflurazepam

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma frozen in plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum frozen in plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen	180 days

CPT Code Information: 80346

FFVOX
57731

Fluvoxamine (Luvox)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 3mL of plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80332

IAPC
113345

FNA Immediate Adequacy (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88172

IAAPC
113346

FNA Immediate Adequacy Add'I (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88177

RFSGS
618114

Focal Segmental Glomerulosclerosis (FSGS) and Nephrotic Syndrome Gene Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81408 x 2; 81405 x 2; 81406 x 4; 81407 x 4; 81479; 81479 (if appropriate for government payers);

ADPKP
618002

Focused Autosomal Dominant Polycystic Kidney Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

PGXQP
610057

CPT Code Information: 81495, 81400, 81407, 81479 (if appropriate for government payers);
Focused Pharmacogenomics Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, testing cannot proceed to reflex testing for 2D6 sequencing and will stop after initial testing is complete. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2-mL screw top tube Specimen Volume: 100 mL (microliters) Collection Instructions: 1. The preferred volume is 100 mL at a concentration of 50 ng/mL. 2. Provide concentration of DNA and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Whole Blood: 1 mL; Saliva, extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 0029U; 0071U (if appropriate); 0072U (if appropriate); 0073U (if appropriate); 0074U (if appropriate); 0075U (if appropriate); 0076U (if appropriate);

AFOLR
620731

Folate Receptor Alpha (FOLR1), Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Specimen Type: Tissue Source: Ovarian tumor Supplies: Pathology Packaging Kit (T554) Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

FOL
9198

Folate, Serum

Specimen Requirements: Patient preparation: 1. Patient should be fasting for 8 hours. 2. Do not order on patients who have recently received methotrexate or other folic acid antagonists. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume:0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82746

FSHB
70433

Follicle Stimulating Hormone, Beta Subunit (Beta FSH) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSH
602753

Follicle-Stimulating Hormone (FSH), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	24 hours	

CPT Code Information: 83001

FDP1
86207

Food Panel #2, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FFPG4
58090**Food Panel IgG4 (532)**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 8; ;

FFPII
57850**Food Panel II IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 X 19

FOOD6
81874**Food Panel, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FOOD2
81869

Food-Fruit Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FOOD4
81872

Food-Grain Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FOOD8
81876**Food-Nut Panel # 1, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FOOD1
81868**Food-Nut Panel # 2, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FOOD7
81875**Food-Seafood Panel, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FRMH
82869

Formaldehyde, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FORAC
75402

Formic Acid, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Draw blood in a red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 2 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	30 days
	Ambient	7 days
	Frozen	

CPT Code Information: 83921

BFOS
603419

FosB, Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

XL2T
616501

FOXL2 Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381 - Microdissection, manual; 81479;

FOXP1
70435

FOXP1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FOXP3
70436

FOXP3 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FMIL
82832

Foxtail Millet, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FXS
35428

Fragile X Syndrome, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If

applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report. Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: Direct testing of an uncultured specimen may be attempted for this test. Contact the laboratory at 800-533-1710 if direct testing is desired.). 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen Specimen Type: Prenatal cultured fibroblasts (eg, products of conception), amniocytes, or other confluent cultured cells. This does not include cultured chorionic villi. Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: Specimen can be tested from a direct extraction or culture: Contact the laboratory at 800-533-1710 if a direct testing is desired. 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81243; 88233 (if appropriate); 88240 (if appropriate); 88235 (if appropriate); 81265 (if appropriate); 81244 (if appropriate);

FUFXS
35427

Fragile X, Follow-up Analysis

Specimen Requirements: Only orderable as a reflex. For more information see FXS / Fragile X Syndrome, Molecular Analysis, Varies. No additional specimen is required. Lab will utilize specimen they already have in the lab for this test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81244

TULG
605952

Francisella tularensis Antibody, IgG, ELISA, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see TULAB / Francisella tularensis Antibody, IgM and IgG, ELISA, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86668

TULAB
605950

Francisella tularensis Antibody, IgM and IgG, ELISA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86668 x 2

TULI
605953

Francisella tularensis Antibody, IgM and IgG, Technical Interpretation, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see TULAB / Francisella tularensis Antibody, IgM and IgG, ELISA, Serum.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

TULM
605951

Francisella tularensis Antibody, IgM, ELISA, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see TULAB / Francisella tularensis Antibody, IgM and IgG, ELISA, Serum. Supplies: Sarstedt Aliquot Tube, 5mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86668

NEFA
606892

Free Fatty Acids, Total, Serum

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours). 2. Patient

must not consume any alcohol for 24 hours before the specimen is collected. 3. Patient should not be receiving therapeutic heparin. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge within 45 minutes of collection and aliquot 1 mL of serum into a plastic vial. 2. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	7 days

CPT Code Information: 82725

FRTUP
62583

Free Thyroxine Index (FTI), Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. If patient is receiving treatment with lipid-lowering agents containing dextrothyroxine (D-T4), discontinue for 4 to 6 weeks prior to specimen collection. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 84479-Thyroxine binding capacity; 84436-Thyroxine total;

FLARP
64718

Free-Living Amebae, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Spinal fluid Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Send vial number 2. Specimen Type: Tissue: Fresh Sources: Brain, skin, lung Container/Tube: Sterile container Specimen Volume: 5 to 10 mm Collection Instructions: Submit tissue in a sterile container with 1 mL of sterile saline or minimal essential media (MEM). Preferred: Paraffin-embedded tissue block: Supplies: Tissue

Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Brain, skin, lung Container/Tube: Tissue block Collection Instructions: Submit a FFPE tissue block to be cut and returned. Acceptable: Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Brain, skin, lung Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission.

Specimen Minimum Volume: Spinal Fluid: 0.3 mL; Tissue: 5 mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798 x 3; 87999 (if appropriate for government payers);

FFRWB
60477

Friedreich Ataxia, Frataxin, Quantitative, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Frozen (preferred)	70 days
	Ambient	70 days
	Refrigerated	70 days

CPT Code Information: 83520

FFRBS
60476

Friedreich Ataxia, Frataxin, Quantitative, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) Filter Paper and Whatman Protein Saver 903 Paper Specimen Volume: 2 blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper

at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentrations of DNA yielded from blood spots, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be needed to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	30 days	FILTER PAPER
	Frozen	30 days	FILTER PAPER
	Refrigerated	30 days	FILTER PAPER

CPT Code Information: 83520

AFXN
609751

Friedreich Ataxia, Repeat Expansion Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days /Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect a Dried Blood Spot Sample. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Multiple extractions will be required to obtain sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection

instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81284; 81265-Maternal Cell Contamination (if appropriate); 88233-Fibroblast Culture (if appropriate); 88235-Amniotic Fluid Culture (if appropriate); 88240-Cryopreservation (if appropriate);

PCIFS
113333

Frozen Section, 1st Block (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88331

PCAFS
113334

Frozen Section, Additional Blocks (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88332

FRUCT
81610

Fructosamine, Serum

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	60 days
	Ambient	72 hours

CPT Code Information: 82985

FROS2
92187

Fructose, Qualitative, Semen

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Semen	Frozen	

CPT Code Information: 82757

FFPG
57932

Fruit Panel IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x16

IHCFH
606334

Fumarate Hydratase Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FBL
50022

Fungal Culture, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium or lithium heparin)
Acceptable: SPS Specimen Volume: 4 mL Pediatric Volume: 3 mL Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. SPS tubes are acceptable, but not preferred. Note: SPS tubes must be clearly labeled as SPS. If label is obscured, sample may be cancelled, as ACD (also yellow top) is not an acceptable tube type.

Specimen Minimum Volume: Adults: 3 mL Pediatrics: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 87103-Blood; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150-Identification rapid PCR coccidioides (if appropriate); 87150 x 2- Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87150- Id, Candida auris Rapid PCR (if appropriate);

FDERM
87283

Fungal Culture, Dermal

Specimen Requirements: Note: -Aseptic techniques should be used when collecting specimens to minimize contamination. -For optimal recovery of organisms, sufficient clinical material should be collected. Specimen Type: Hair Container/Tube: Dry sterile container or specimen collection envelope Specimen Volume: 10 to 12 Collection Instructions: Using forceps collect affected hairs with base of the shaft intact. Specimen Type: Nails Container/Tube: Dry sterile container or specimen collection envelope Specimen Volume: Entire collection Collection Instructions: 1. Wipe the nail with 70% alcohol using gauze (not cotton). 2. Clip away a generous portion of the affected area. 3. Collect material or debris from under the nail. Specimen Type: Skin Container/Tube: Dry sterile container or specimen collection envelope Specimen Volume: Entire specimen Collection Instructions: 1. Cleanse the affected area with 70% alcohol. 2. Gently scrape the surface of the skin at the active margin of the lesion, being careful to not draw blood.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	7 days

CPT Code Information: 87101-Fungal culture, dermal; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150-Identification rapid PCR Coccidioides (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87150-Id, Candida auris Rapid PCR (if appropriate);

FGEN
84389

Fungal Culture, Routine

Specimen Requirements: Preferred Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: Entire collection Preferred Specimen Type: Fresh tissue Container/Tube: Sterile container Specimen Volume: Pea size Collection Instructions: Tissue should be placed in small amount of sterile saline or sterile water. Specimen Type: Bone marrow Container/Tube: Sterile container, SPS/Isolator system, or green top (lithium or sodium heparin) Specimen Volume: Entire collection Specimen Type: Respiratory specimen Container/Tube: Sterile container Specimen Volume: Entire collection Acceptable Specimen Type: Swab Sources: Dermal, ear, mouth, ocular, throat, or wound Container/Tube: Culture transport swab (non-charcoal) Culturette or ESwab Specimen Volume: Swab Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are requested or both a bacterial culture and fungal culture are requested, collect a second swab to maximize test sensitivity. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: Bone marrow or body fluid: 1 mL; Cerebrospinal fluid: 0.5 mL; Respiratory specimen: 1.5 mL; All other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87102-Fungal culture, routine; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87176-Tissue processing (if appropriate); 87150- Id, Candida auris Rapid PCR (if appropriate);

FVAG
5184**Fungal Culture, Vaginal**

Specimen Requirements: Specimen Type: Swab Source: Vaginal secretions Container/Tube: Culture transport swab (noncharcoal) Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge. 2. Obtain secretions from the mucosal membrane of the vaginal vault with a sterile swab. 3. If smear and culture are requested or both a bacterial culture and fungal culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87102-Fungal culture, vaginal; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150-Identification rapid PCR Coccidioides (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87150-Id, Candida auris Rapid PCR (if appropriate);

FUNA
45196**Fungal Ident Panel A (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87107

FUNB
45205**Fungal Ident Panel B (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87107

D2F
45079

Fungal Sequencing Identification (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87153

FS
84390

Fungal Smear, Varies

Specimen Requirements: Preferred Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: Entire collection Preferred Specimen Type: Fresh tissue Container/Tube: Sterile container Specimen Volume: Pea size Collection Instructions: Tissue should be placed in small amount of sterile saline or sterile water. Specimen Type: Bone marrow Container/Tube: Sterile container, SPS/Isolator system, or green top (lithium or sodium heparin) Specimen Volume: Entire collection Specimen Type: Respiratory specimen Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen. Acceptable Specimen Type: Swab Sources: Dermal, ear, mouth, ocular, throat, or wound Container/Tube: Culture transport swab (non-charcoal) Culturette or Eswab Specimen Volume: Swab Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are requested or both a bacterial culture and fungal culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: Bone marrow, body fluid, or respiratory specimen: 0.2 mL; Any other specimen type: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87206; 87176-Tissue processing (if appropriate);

FUNBL
57873

Fungitell, BAL

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Lavage	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	4 days

CPT Code Information: 87449

FUNBW
57872

Fungitell, bronch wash

Specimen Requirements: Collect 1-3 mL Bronchial Wash in a sterile screw top tube, ship frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bronchial Washing	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	4 days

CPT Code Information: 87449

FUNSF
57871

Fungitell, CSF

Specimen Requirements:

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	4 days

CPT Code Information: 87449

FFURO
91119

Furosemide (Lasix)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299; ;

FUSI
70434

FUS Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded tissue block

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FUSM
82750

Fusarium moniliforme, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCDX1
75841

Gabapentin Confirmation (Qualitative), Umbilical Cord Tissue

Specimen Requirements: Only orderable as a reflex test.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80171

GABA
80826

Gabapentin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Red top (serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80171

FCDUE
75840

Gabapentin, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

FGABA
51115

Gabapentin, Urine

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307

GDU
89301

Gadolinium, 24 Hour, Urine

Specimen Requirements:

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

GDS
89299

Gadolinium, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 0.3 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into Mayo metal-free, screw-capped vial, avoiding transfer of the cellular components of blood. Do not insert a pipette into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 83018

GDUCR
615338

Gadolinium/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic,

10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83018; 82570;

GDCU
615339

Gadolinium/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see GDUCR / Gadolinium/Creatinine Ratio, Random, Urine.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

GATOL
62440

Galactitol, Quantitative, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 82542

GALCR
606280

Galactocerebrosidase Reflex, Leukocytes

Specimen Requirements: Only orderable as a reflex. For more information see LSD6W / Lysosomal Storage Disorders, Six-Enzyme Panel, Leukocytes.

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82542

GALCW
606270

Galactocerebrosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

GALK
8628

Galactokinase, Blood

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. For a list of tests that can be ordered together see Galactosemia-Related Test List. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) or yellow top (ACD) Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	10 days
	Ambient	72 hours

CPT Code Information: 82759

KM55
621066

Galactose Deficient IgA1 (KM55) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

GALP
83638

Galactose, Quantitative, Plasma

Specimen Requirements: Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Heparin	Frozen (preferred)	365 days
	Ambient	20 days
	Refrigerated	20 days

CPT Code Information: 82760

GALU
8765

Galactose, Quantitative, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	365 days
	Ambient	20 days
	Refrigerated	20 days

CPT Code Information: 82760

GALTP
80341

Galactose-1-Phosphate Uridyltransferase Biochemical Phenotyping, Erythrocytes

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. For a list of tests that can be ordered together see Galactosemia-Related Test List. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	28 days
	Ambient	14 days

CPT Code Information: 82664; 82775;

GALT
8333

Galactose-1-Phosphate Uridyltransferase, Blood

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. For a list of tests that can be ordered together see Galactosemia-Related Test List. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin) or yellow top (ACD) Specimen Volume: 5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	28 days
	Ambient	14 days

CPT Code Information: 82775

GAL1P
80337

Galactose-1-Phosphate, Erythrocytes

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. For a list of tests that can be ordered together, see Galactosemia-Related Test List. Patient Preparation: Specimens collected following a meal can exhibit postprandial elevations. For infants, collect a specimen immediately prior to feeding to avoid this. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	72 hours

CPT Code Information: 84378

APGAL
609738

Galactose-Alpha-1,3-Galactose (Alpha-Gal) Mammalian Meat Allergy Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 4; 86008;

ALGAL
609737

Galactose-Alpha-1,3-Galactose (Alpha-Gal), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

GCT
84360

Galactosemia Reflex, Blood

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on one specimen. Prioritize order of testing when submitting specimens. For a list of tests that can be ordered together, see Galactosemia-Related Test List. Container/Tube: Preferred: Lavender top (EDTA)

Acceptable: Green top (sodium heparin) or yellow top (ACD) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	28 days
	Ambient	14 days

CPT Code Information: 82775; 81406 (if appropriate);

GALZ
608016

Galactosemia, GALT Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or Blood Spot Collection Card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen

per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

GALMP 606343

Galactosemia, GALT Gene, Variant Panel, Varies

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on one specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List for a list of tests that can be ordered together. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81401

GAL1 606832

GALAD Score, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	5 days

GALN3
70438**Galectin-3 Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GAL3
86202**Galectin-3, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	365 days
	Refrigerated	24 hours

CPT Code Information: 82777

GBACS
620232

Gamma-Amino Butyric Acid Type A (GABA-A) Receptor Antibody, Cell-Binding Assay, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

GBACC
620231

Gamma-Amino Butyric Acid Type A (GABA-A) Receptor Antibody, Cell-Binding Assay, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Collection vial number 1 Acceptable: Any collection vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

WGSEQ
62982

Gamma-Globin Full Gene Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in the original tube. Do not aliquot. Specimen Stability Information: Refrigerate 30

days(preferred)/Ambient 14 days Specimen Type: Extracted DNA from whole blood Container/Tube: 1.5 to 2 mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood and provide indication of volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL; Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479-Unlisted molecular

GGT
8677

Gamma-Glutamyltransferase (GGT), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 82977

FGHSP
58034

Gamma-Hydroxybutyric Acid (GHB), Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Specimen Type: Serum Container/Tube: red-top tube(s) Specimen Volume: 5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial. Min Vol: 1.2 mL Plasma Specimen Type: Plasma Container/Tube: green-top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL of sodium heparin plasma refrigerated in a plastic vial. Min Vol: 1.2 mL

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307

FGHSU
58036

Gamma-Hydroxybutyric Acid (GHB), Urine

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307

FGANP
75518

Ganciclovir, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	30 days
	Frozen	120 days
	Ambient	30 days

CPT Code Information: 80299

FGAGM
58017

Ganglioside (Asialo-GM1, GM1, GM2, GD1a, GD1b, and GQ1b) Antibodies

Specimen Requirements: Draw blood in a serum gel tube(s). Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Refrigerated (preferred)	14 days
	Frozen	365 days

CPT Code Information: 83516 x 6

GAES
621108

Ganglioside Antibodies Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended to occur prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83516 x5; 83520 x4 (if applicable);

FGGAG
57812

Ganglioside GD1a Antibody (IgG)

Specimen Requirements: Patient Preparation: Overnight fasting is preferred. Collection

Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collections Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 83520

GQ1ES
621107

Ganglioside GQ1b Antibody, IgG, ELISA, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended to occur prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83516

FGARG
57634

Garlic IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

GARL
82760

Garlic, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPEPA
57838

Gastric Pepsin A Assay

Specimen Requirements: Specimen Type: Tracheal or Bronch Fluid Sources: Tracheal or Bronch Fluid Container/Tube: Standard Transport Tube Specimen Volume: 1 mL Collection Instructions: 1 mL Tracheal or Bronch Fluid shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen	30 days

CPT Code Information: 83986, 84157, 82657

GASTN
70439**Gastrin Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

GAST
8512**Gastrin, Serum**

Specimen Requirements: Patient Preparation: 1. Fasting (8 hours) required 2. For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). 3. For 1 week before specimen collection, if medically feasible, patient should not take proton pump inhibitors (omeprazole, lansoprazole, dexlansoprazole, esomeprazole, pantoprazole, and rabeprazole). 4. For at least 2 weeks before specimen collection, patient should not take or receive drugs that interfere with gastrointestinal motility (eg, opioids). Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. If multiple specimens are collected, submit each vial under a separate order. 2. Label specimens with corresponding collection time. 3. Centrifuge at within 2 hours of collection. Refrigerated centrifugation is preferred but not required. Immediately aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	24 hours

CPT Code Information: 82941

GID2
92120**Gastrointestinal Dysmotility, Autoimmune/Paraneoplastic Evaluation, Serum**

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended before starting immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83519; 86255 x 7; 84182 AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182 AN2BS (if appropriate); 86255 APBCS (if appropriate); 86256 APBTS (if appropriate); 86256 CRMTS (if appropriate); 84182 CRMWS (if appropriate); 86255 DPPCS (if appropriate); 86256 DPPTS (if appropriate); 86256 PC2TS (if appropriate);

GIP
63169

Gastrointestinal Pathogen Panel, PCR, Feces

Specimen Requirements: Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Preferred: Specific modified Cary Blair transport system; see Additional Information for acceptable collection media Acceptable: Approved Cary Blair transport system (15 mL of non-nutritive transport medium containing phenol red as a pH indicator) Specimen Volume: Representative portion of feces Collection Instructions: 1. Collect fresh fecal specimen and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Submit preserved feces in original container. Do not aliquot. 4. If unpreserved specimens received, testing will be canceled. Additional Information: If collection media other than those listed is utilized, testing may be canceled. Media listed have been verified for use by Mayo Clinic Laboratories. Modified Cary Blair media: Preferred: Culture and Sensitivity Stool Transport Vial (T058) Acceptable: Meridian Para-Pak C and S, Cardinal Health Culture and Sensitivity Stool transport Vial Cary Blair media: Remel Cary Blair, Remel; Protocol Cary Blair

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87507

GATA3
70440

GATA Binding Protein 3 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

GATAS
619802

GATA-Binding Protein 2, GATA2, Full Gene Analysis, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

GATAB
603213

GATA-Binding Protein 3 Immunostain, Technical Component Only, Bone Marrow,

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GBAZ
35438

Gaucher Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein

Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479-Unlisted molecular pathology procedure code; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

GCDF
70441

GCDFP-15 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

FGPE
57919

Gelatin Porcine IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

GELA
86326

Gelatin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GBETH
607434

General Factor Bethesda Units, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: -ALBLD / Bleeding Diathesis Profile, Limited, Plasma -APROL / Prolonged Clot Time Profile, Plasma -2INHE / Factor II Inhibitor Evaluation, Plasma -7INHE / Factor VII Inhibitor Evaluation, Plasma -10INE / Factor X Inhibitor Evaluation, Plasma -11INE / Factor XI Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85335

GENPA Gentamicin, Peak, Serum 37042

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80170

GENRA Gentamicin, Random, Serum 37044

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80170

GENTA
37043

Gentamicin, Trough, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80170

GERB
82545

Gerbil Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GCTF
35270

Germ Cell Tumor (GCT), Isochromosome 12p, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue

block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

GCET
70442

Germinal Center B-cell Expressed Transcript 1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

FGHTP
75898

Ghrelin Total (Plasma)

Specimen Requirements: Patient Preparation: 1. Patient should be fasting 10 to 12 hours prior to collection of specimen. 2. Patient should not be on any medications or supplements that may influence Cholecystokinin (CCK), Glucose, Growth Hormone, Insulin and/or Somatostatin levels, if possible, for at least 48 hours prior to specimen collection. Supplies: Special ISI GI preservative plasma tube T125 Container/Tube: Collection: Special ISI GI preservative plasma tube (T125). Submission Container/Tube: Plastic vial Specimen Volume: 3 to 5 mL Collection Instructions: 1. Draw 10 mL of blood in special ISI

GI preservative plasma tube (T125). 2. Centrifuge specimen in refrigerated centrifuge as soon as possible. 3. Send 3 to 5 mL plasma frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
GI Plasma	Frozen	180 days

CPT Code Information: 83520

GRW
82685

Giant Ragweed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GIAR
80231

Giardia Antigen, Feces

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: -Formalin 10% Buffered Neutral 15 mL (T466) -Stool Collection Kit, Random (T635) Container/Tube: Preferred: Fecal container with 10% buffered formalin preservative Acceptable: SAF (sodium acetate formalin) Specimen Volume: 5 grams Specimen Stability Information: Ambient (preferred) 60 days Acceptable: Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: 5 grams Specimen Stability Information: Frozen 60 days

Specimen Minimum Volume: 2 grams

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies	

CPT Code Information: 87329

GING
82488

Ginger, IgE

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DGLDN
89031

Gliadin (Deamidated) Antibodies Evaluation, IgG and IgA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86258 x 2

DAGL
89029

Gliadin (Deamidated) Antibody, IgA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86258

DGGL
89030

Gliadin (Deamidated) Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86258

GFATS
605133

Glial Fibrillary Acidic Protein Alpha Subunit Antibody, Immunofluorescence Titer Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: ENS2 / Encephalopathy, Autoimmune Evaluation Serum DMS2 / Dementia, Autoimmune Evaluation, Serum EPS2 / Epilepsy, Autoimmune Evaluation, Serum MAS1 / Autoimmune Myelopathy Evaluation, Serum

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

GFATC
605134

Glial Fibrillary Acidic Protein Alpha Subunit Antibody, Immunofluorescence Titer Assay, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information, see: DMC2 / Dementia Autoimmune Evaluation, Spinal Fluid ENC2 / Encephalopathy Autoimmune Evaluation, Spinal Fluid EPC2 / Epilepsy Autoimmune Evaluation, Spinal Fluid MAC1 / Autoimmune Myelopathy Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

GFAP
70443

Glial Fibrillary Acidic Protein Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

FGLIP
91097

Glipizide (Glucotrol)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

LGBWB
602351

Globotriaosylsphingosine, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) and yellow top (ACD B) Specimen Volume: 1 mL Collection Instructions: Send whole blood in original vial. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	72 hours
	Ambient	48 hours

CPT Code Information: 82542

LGBBS
113521

Globotriaosylsphingosine, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection Card (Filter Paper) Acceptable: Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper, Postmortem Screening Card or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete, (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

LGB3S
65532

Globotriaosylsphingosine, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	48 hours

CPT Code Information: 82542

GBM
8106

Glomerular Basement Membrane Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

GLUCG
70445

Glucagon Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GLP
9358

Glucagon, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.45 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	90 days

CPT Code Information: 82943

GPSYW Glucopsychosine, Blood

113430

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) or yellow top (ACD B) Specimen Volume: 1 mL Collection Instructions: Send whole blood in original vial. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	72 hours
	Ambient	48 hours

CPT Code Information: 82542

GPSY Glucopsychosine, Blood Spot

62236

Specimen Requirements: Supplies: -Card-Blood Spot Collection Card (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Collection Container/Tube: Preferred: Blood Spot Collection (Filter Paper) Acceptable: Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper, Postmortem Screening card, or collected with sodium heparin, lithium heparin, ACD-B or EDTA containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete, (ie, unpunched) 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

GPSYP
65632

Glucopsychosine, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	65 days

CPT Code Information: 82542

G6PDC
608417

Glucose 6 Phosphate Dehydrogenase Enzyme Activity, Blood

Specimen Requirements: Only orderable as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82955

G6PD1
607460

Glucose 6-Phosphate Dehydrogenase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) or yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82955

GPIC
608419

Glucose Phosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 84087

GPI1
607463

Glucose Phosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 84087

GLBF
606609

Glucose, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Peritoneal dialysate (dialysis fluid) -Pericardial -Amniotic fluid+ -Synovial fluid - Pancreatic cyst Acceptable Source: Write in source name with source location (if appropriate)
Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 82945

GLURA
89115

Glucose, Random, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 82947

GLUR1
609796

Glucose, Random, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	72 hours
	Ambient	2 hours

CPT Code Information: 82945

GLSF
152

Glucose, Spinal Fluid

Specimen Requirements: Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge to remove any cellular material.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 82945

G6PDZ
610053

Glucose-6-Phosphate Dehydrogenase (G6PD) Full Gene Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days

Specimen Minimum Volume: Blood: 0.45 mL Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81249

HEX4
64174

Glucotetrasaccharides, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	87 days
	Refrigerated	28 days
	Ambient	14 days

CPT Code Information: 82542; 82570;

GLUT
70446

GLUT-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GD65S
81596**Glutamic Acid Decarboxylase (GAD65) Antibody Assay, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86341

GD65C
84221**Glutamic Acid Decarboxylase (GAD65) Antibody Assay, Spinal Fluid**

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1.5 mL Collection
Instructions: Submit specimen from collection vial 2.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86341

GLUTS
70450**Glutamine Synthetase Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GA2P
608029

Glutaric Aciduria Type II Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4days /Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

GSH
608409

Glutathione, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82978

FGLUT
57559

Gluten IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

GLT
82894

Gluten, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GLYCS
606972

Glycine Receptor Alpha1 IgG, Cell Binding Assay, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 0431U

GLYCC
606973

Glycine Receptor Alpha1 IgG, Cell Binding Assay, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 0431U

GSDGP
608012

Glycogen Storage Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

G161
605194

Glycogen Storage Disease Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443

FGLMA
91742

GlycoMark

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum ambient in a plastic vial. Plasma Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 1 mL of EDTA plasma ambient in a plastic vial.

Specimen Minimum Volume: 0.75 mL Note: This volume does not allow for repeat testing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	7 days
	Frozen	14 days
	Refrigerated	14 days

CPT Code Information: 84378

GLYCF
70448

Glycophorin A (CD235a) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GDOM 82847

Glycyphagus domesticus, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GLYP3 70447

Glypican-3 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GOAT
82783

Goat Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GMILK
82550

Goat's Milk, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GLDR
82717

Goldenrod, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FGAGA**
75564**Golimumab and Anti-Golimumab Antibody, DoseASSURE GOL**

Specimen Requirements: Specimen Type: Serum Container/Tube: SST or Red Specimen Volume: 3 mL Collection Instructions: Draw blood in a serum gel tube(s), plain red-top tube(s) is acceptable. Serum must be separated from cells within 45 minutes of venipuncture. Spin down and send 3 mL of serum frozen in a plastic vial. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested. NOTE: High serum biotin concentrations in patients taking biotin supplements may cause an interference in this assay. Patients may be advised to stop biotin consumption at least 72 hours prior to sample collection.

Specimen Minimum Volume: 1 mL (Note: This volume does not allow for repeat testing.)**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	7 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 80299; 82397;**FGNDR**
75915**Gonadotropin Releasing Hormone (Gn-RH, Luteinizing Hormone-Releasing Hormone LT-RH)**

Specimen Requirements: Patient Preparation: Patient should not be on any Steroids, ACTH, Gonadotropin, or Estrogen medications, if possible, for at 48 hours prior to collection of specimen. Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel or EDTA Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in plain red-top tube(s), serum gel tube(s) or EDTA is acceptable. 2. Centrifuge and aliquot 3 mL serum in a plastic vial. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	7 days

CPT Code Information: 83727

GOOS
82714

Goose Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GP210
620726

GP210 Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

LAGGT
8976

Granulocyte Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial. Additional Information: Only pretransfusion reaction specimen is acceptable.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	30 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86021

GMCSF
618775

Granulocyte Monocyte-Colony Stimulating Factor, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	21 days

CPT Code Information: 83520

GRANB
70449

Granzyme B Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

FGRPG 57653

Grape IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

GRAP 82800

Grape, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GRFR
82836

Grapefruit, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GRAS1
81706

Grass Panel # 1, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GRAS2
81707

Grass Panel # 2, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GRAS3
81708

Grass Panel # 3, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GAB1
70437

GRB2-Associated Binding Protein 1 (GAB1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GRFE
82365

Greek Fennel, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GPEA
82887

Green Pea, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GPEP
82623

Green Pepper, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GSTB
82610

Green String Bean, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ALDR
82671

Grey Alder, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GDF15
64637

Growth Differentiation Factor 15, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA)
Acceptable: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL
Collection Instructions: 1. Draw blood and centrifuge immediately. 2. Aliquot plasma into plastic vial.
3. Do not expose specimen to heat or direct sunlight.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Refrigerated (preferred)	90 days
	Frozen	90 days
	Ambient	28 days

CPT Code Information: 83520

GRH
70444

Growth Hormone Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693)
Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FGHRH
75910

Growth Hormone Releasing Hormone (GH-RH, also known as GHRF or GRF)

Specimen Requirements: Patient preparation: Patient should not be on any medications that may influence pituitary secretion. Specimen Type: Serum Collection Container/Tube: Preferred: Red top

Acceptable: SST Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. 2. Centrifuge and aliquot 3 mL of serum into a plastic vial. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	180 days

CPT Code Information: 83520

HGH
8688

Growth Hormone, Serum

Specimen Requirements: Patient Preparation: Patient should fast for at least 8 hours before specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial. 2. If multiple specimens are collected, submit each vial under a separate order. 3. Label specimens appropriately with the corresponding collection times.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 83003

GGUM
82479

Guar Gum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GUIN
82706

Guinea Pig Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GUM
82367

Gum Arabic, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FGUMX
57974

Gum Xanthan IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FHACK
57951

Hackberry (*Celtis occidentalis*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FHADE
57556

Haddock (*Melanogrammus aeglefinus*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

HIBSG
614598

Haemophilus influenzae Type B Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 86684

HAKE
82348

Hake, Fish, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FHALG
57637

Halibut IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

HALI
82633

Halibut, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HALO
80339

Haloperidol, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80173

HEPI
82780

Hamster Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FHVGM
75240

Hantavirus Antibody (IgG, IgM)

Specimen Requirements: Container/Tube: Preferred: Red top tube Acceptable: Serum gel tube Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.50 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86790 x 2**HAPT**
9168**Haptoglobin, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83010**FHZCP**
75565**Hazelnut Component Panel**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86008 x 4

FHCC1
75576

Hazelnut Component rCor a 1

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86008

NUTHX
618848

Hazelnut-Food Components, IgE, Serum

Specimen Requirements: Only orderable as a reflex. For more information see NUTHR / Hazelnut-Food, IgE with Reflex to Hazelnut-Food Components, IgE, Serum. Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003; 86008 x 3;

NUTHR
618847

Hazelnut-Food, IgE with Reflex to Hazelnut-Food Components, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

NUTH
82743

Hazelnut-Food, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HAZ
82670

Hazelnut-Tree, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HRTVS
620057

Heartland Virus, RNA, Molecular Detection, PCR, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection centrifuge and aliquot serum into a sterile container. 2. Serum specimens not aliquoted from the serum gel collection tube into a sterile container will be rejected.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	24 hours

CPT Code Information: 87798

HRTVC
620056

Heartland Virus, RNA, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: 1. Send specimen from collection vial 2. Do not centrifuge or heat inactivate.

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	24 hours

CPT Code Information: 87798

HMUOE
608889

Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Requirements: Patient Preparation: 1. For the 48-hour period prior to start of collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 82175; 82300; 83825; 83655; 82570;

HMUCR
608899

Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Requirements: 1. For the 48-hour period prior to start of collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 82175; 82300; 83825; 83655; 82570;

HMDB
39183

Heavy Metals Screen with Demographics, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original collection tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82175; 82300; 83655; 83825;

HMU24
48538

Heavy Metals Screen, with Reflex, 24 Hour, Urine

Specimen Requirements: 1. For the 48-hour period prior to the start of collection, as well as during the collection, patient should not eat seafood. 2. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic aliquot container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 6 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 82175; 82300; 83825; 83655;

HMHA
45479

Heavy Metals, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Head, beard, mustache, chest, pubic Specimen Volume: 0.2 g Collection Instructions: Prepare and transport specimen per the instructions in kit or see Collecting Hair and Nails for Metals Testing.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time
Hair	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 82175; 83655; 83825;

HMNA
31070

Heavy Metals, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Fingernails or toenails Specimen Volume: 0.2 g Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing. 2. Clippings should be taken from all 10 fingernails or toenails.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time
Nail	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 82175; 83655; 83825;

HEG1
615261

HEG1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

HPYL
70466

Helicobacter pylori (H pylori) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HPSAF
800272

Helicobacter pylori Antigen, Feces

Specimen Requirements: Collection Container/Tube: Stool container Submission Container/Tube: Plastic container Specimen Minimum Volume: 5 g Collection Instructions: Mix stool well.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	60 days
	Refrigerated	72 hours

CPT Code Information: 87338

UBT
81590

Helicobacter pylori Breath Test

Specimen Requirements: Patient Preparation: 1. Patient should be fasting for 1 hour. 2. Do not administer this test if this list of instructions is not followed, as test results may be inaccurate: a. Do not administer this test if patient is allergic to citric acid. Note: Product contains aspartame. b. Patients should not take proton-pump inhibitors (eg, Prilosec, Prevacid, Aciphex, Protonix, and Nexium) or bismuth compounds (eg, Pepto-Bismol) for 2 weeks prior to testing. c. Patients should not take antibiotics for 4 weeks prior to testing. d. Histamine 2-receptor antagonists (H2RA), such as Pepcid, Tagamet, Axid, or Zantac may impact the sensitivity of the test and, if possible, should be discontinued for 2 weeks prior to testing. 3. Carafate (sucralfate) does not interfere with the test. Use of antacids does not affect the accuracy of this assay. Supplies: H. Pylori Breath Kit - Meridian BreathID (T906; fees apply) Collection Instructions: 1. Do not collect if patient is younger than 3 years of age. 2. Follow instructions included with kit. 3. Mixing the (13)C-Urea Tablet a. Dissolve the Citrica and the (13)C-enriched urea tablet in 150 to 200 mL (5.1 to 6.8 oz.) of tap water in the provided drinking cup. b. Close the lid firmly using both hands. Place fingers over lid and shake thoroughly for a few minutes, until the Citrica Powder and the urea tablet are completely dissolved. Note: Tiny particles may remain visible after thorough mixing. However, if more substantial particulate matter is still present after five minutes of mixing, discard the solution and repeat the procedure with a new kit.

Specimen Minimum Volume: Bag of "breath" must be full

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Breath	Ambient	14 days	BREATH TEST BAG

CPT Code Information: 83013

HELIS
62769

Helicobacter pylori Culture with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Preferred: Specimen Type: Fresh tissue or biopsy Sources: Gastric Container/Tube: Sterile container Specimen Volume: 0.5 x 0.2 x 0.2-cm sized piece of tissue Collection Instructions: Acquire biopsied tissue; moisten with sterile saline Acceptable: Specimen Type: Fluid Sources: Gastric brushings, gastric aspirate Container/Tube: Sterile container Specimen Volume: Entire collection or 0.5 mL Specimen Type: Fresh tissue or biopsy Sources: Duodenum Container/Tube: Sterile container Specimen Volume: 0.5 x 0.2 x 0.2-cm sized piece of tissue Collection Instructions: Acquire biopsied tissue; moisten with sterile saline

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	48 hours

CPT Code Information: 87081-Helicobacter pylori culture; 87077-Bacteria identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87176-Tissue processing (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87186-Antimicrobial Susceptibility, Aerobic Bacteria, MIC-per organism for routine battery (if appropriate); 87150-H pylori + Clarithro Resistance PCR (if appropriate);

HPCR1
607597

Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87513

HPFRP
607594

Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Helicobacter pylori DNA is unlikely. Patient Preparation: 1. For 4 weeks prior to testing, patient should

not take antibiotics. 2. For 2 weeks prior to testing, patient should not take proton pump inhibitors or bismuth compounds. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Specimen Type: Preserved feces Submission Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag and send ambient or refrigerated. Specimens sent frozen will be rejected.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 87513

HPRP
607595

Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Tissue

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Helicobacter pylori DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Stomach (or duodenum) Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm (3) approximate size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue in a sterile container (without adding anything). 3. Refrigerate or freeze the specimen. Specimen Stability Information: Refrigerated (preferred) 7 days/Frozen 7 days Preferred: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue block Sources: Stomach (or duodenum) Container/Tube: Tissue block Collection Instructions: Submit FFPE tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue scroll Sources: Stomach (or duodenum) Container/Tube: Sterile container for each individual cut section (scroll) Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Fresh tissue or biopsy: 5 mm(3) Formalin-fixed paraffin-embedded tissue block: One block Formalin-fixed paraffin-embedded tissue scroll: Two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87513

HPCR
607596

Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant or other appropriate media Specimen Volume: Isolate Collection Instructions: 1. Perform isolation of Helicobacter pylori in culture. 2. H pylori isolate must be submitted in pure culture. Do not submit mixed cultures.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 87513

HELM
82749

Helminthosporium halodes, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FHSSE
57532

Helminthosporium sativum/Drechslera IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

HOLDC
35848

Hematologic Disorders, Chromosome Hold, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin), lavender top (EDTA) Specimen Volume: 1 to 2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin), lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: See Individual Components

EXHR
65114

Hematologic Disorders, DNA and RNA Extract and Hold, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL Bone Marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information:

EXHD
64779

Hematologic Disorders, DNA Extract and Hold, Varies

Specimen Requirements: Specimen must arrive within 7 days of collection. Collect and package specimen as close to shipping time as possible. Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information:

HOLDF
35847

Hematologic Disorders, Fluorescence In Situ Hybridization (FISH) Hold, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin), lavender top (EDTA) Specimen Volume: 1 to 2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin), lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Standard	

CPT Code Information: See individual reflex tests

HLLFH
34854

Hematologic Disorders, Leukemia/Lymphoma; Flow Hold, Varies

Specimen Requirements: Due to specimen stability, spinal fluid is not appropriate for this test. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or Green top (sodium heparin) Specimen Volume: 10 mL Slides: If possible, include 5- to 10-unstained blood smears, must be labeled with two unique identifiers. Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient < or =4 days/Refrigerated < or =4 days Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or green top (sodium heparin) Specimen Volume: 1 to 5 mL Slides: If possible, include 5- to 10-unstained bone marrow aspirate smears, which must be labeled with two unique identifiers Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient < or =4 days/Refrigerated < or =4 days Specimen Type: Fluid Sources: Serous effusions, pleural, pericardial, or abdominal (peritoneal fluid) Container/Tube: Body fluid container Specimen Volume: 20 mL Collection Instructions: 1. If possible, fluids should be anticoagulated with heparin (1 U/mL of fluid). 2. Label specimen with fluid type. Specimen Stability Information: Refrigerated/Ambient < or =4 days Additional Information: The volume of fluid necessary to phenotype the lymphocytes or blasts in serous effusions depends upon the cell count in the specimen. Usually, 20 mL of pleural or peritoneal fluid is sufficient. Smaller volumes can be used if there is a high cell count. Specimen Type: Tissue Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: 5 mm(3) or larger biopsy Collection Instructions: 1. Send intact specimen (do not mince) 2. Specimen cannot be fixed. Specimen Stability Information: Ambient < or =4 days/Refrigerated < or =4 days

Specimen Minimum Volume: Blood: 3 mL Bone Marrow: 0.5 mL Fluid: 5 mL Tissue: 1 mm(3) or larger biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

P53CA
62402

Hematologic Neoplasms, TP53 Somatic Mutation, DNA Sequencing Exons 4-9, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood (preferred) Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerate <10 days Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA), yellow top (ACD solution B), or green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient/Refrigerate <10 days Specimen Type: Tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Stabilize fresh tissue in tissue culture medium or freeze immediately after collection. Specimen Stability Information: Refrigerate 24 hours/ Frozen

Specimen Minimum Volume: Blood, bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	10 days

CPT Code Information: 81352-TP53 (tumor protein 53) (eg, tumor samples), full gene sequence or targeted sequence analysis of >5 exons

HEMMF
614265

Hematologic Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate

from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Whole Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88275, 88291-FISH Probe, Analysis, Interpretation; 1 probe set; 88271 x 2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

HFWET
616820

Hematopathology Consult, MCL

Specimen Requirements: Multiple specimens are required to perform testing. Submit each of the following: Specimen Type: Bone marrow core biopsy unprocessed Container/Tube: 10% formalin solution Collection Instructions: 1. If bone marrow units are sparse or absent or aspirate is a dry tap, make 3 biopsy touch prep slides. 2. Place biopsy core in 10% formalin immediately after collection. 3. Place Parafilm around the container to prevent leaking and exposure to formalin fumes during transport. Specimen Type: Bone marrow clot unprocessed Container/Tube: 10% formalin solution Collection Instructions: 1. Place 0.5 mL bone marrow aspirate in clot tube. 2. After clot has formed, place clot in 10% formalin. 3. Place Parafilm around the container to prevent leaking and exposure to formalin fumes during transport. Specimen Type: Whole blood Container/Tube: Transport in plastic slide holders. Collection Instructions: 1. Prepare 2 good quality smears of even thickness from whole blood EDTA within 8 hours of collection. 2. Submit unstained and unfixed slides. 3. Place slides in a plastic slide holder and place parafilm around the slide holder. Place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens during transport. If using slide carriers, make sure they have not previously been used to carry fixed slides. Specimen Type: 2 slides from bone marrow aspirate and 1 slide from roll preparation on bone marrow biopsy (or 3 slides from a roll preparation on bone marrow biopsy) Container/Tube: Transport in plastic slide holders. Collection Instructions: 1. Prepare fresh prep slides of good quality (push and squash) made at the time of sample collection of even thickness from aspirate and roll prep slides from bone biopsy. Select 1 push, 1 squash, 1 roll of best quality, and send slides unfixed and unstained. 2. If bone marrow units are sparse or absent or aspirate is a dry tap, make 3 bone biopsy roll prep slides and send all 3 slides unfixed and unstained. 3. Air dry slides. 4. Place slides in a plastic slide holder and place parafilm around the slide holder. Place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens during transport. If using slide carriers, make sure they have not previously been used to carry fixed slides. Specimen Type: Bone marrow aspirate in anticoagulant for possible ancillary testing Container/Tube: Lavender top (EDTA), yellow top (ACD), and green top (sodium heparin) Specimen Volume: 3 mL in EDTA 6 mL in ACD 6 mL in sodium heparin Collection Instructions: 1. Aspirate per standard bone marrow collection procedure. 2. Send bone marrow specimens in original tubes. Do not aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 85060 (if appropriate); 85097 (if appropriate); 88305 (if appropriate); 88311 (if appropriate); 88313 (if appropriate);

HPCUT 71743

Hematopathology Consultation, Client Embed

Specimen Requirements: All specimens are required to perform testing. Additional Information: All specimens and paperwork must be labeled with: -Two patient identifiers (patient name, date of birth, medical record number, case number, or pathology ID) -Specimen type Information on collecting, packaging, and shipping specimens, is available: -Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline -Assistance with Bone Marrow Collection Specimen Type: Bone marrow aspirate Slides: 5 Preferred: Freshly prepared slides made at the time of specimen collection Acceptable: Slides made from EDTA bone marrow specimen, within 2 hours of collection Submission Container/Tube: Plastic slide holder Collection Instructions: 1. Prepare slides of bone marrow aspirate. 2. If bone marrow units are sparse, or absent or aspirate is a dry tap, make biopsy touch prep slides. 3. Air dry slides. Do not place on hot plate to dry. 4. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport. Place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens. If using slide carriers, make sure they have not been used to carry fixed slides previously. Specimen Type: Bone marrow aspirate Container/Tube: Lavender top (EDTA) and yellow top (ACD solution A or B) Specimen Volume: 2 x 3 mL in EDTA and 2 x 6 mL in ACD solution A or B Collection Instructions: 1. Aspirate per standard bone marrow collection procedure. 2. Send bone marrow specimens in original tubes. Do not aliquot. Specimen Type: Bone marrow aspirate clot Container/Tube: Bone marrow clot embedded in paraffin block Collection Instructions: Process and embed clot in paraffin Specimen Type: Bone marrow core biopsy Container/Tube: Fixed biopsy core embedded in paraffin block Collection Instructions: Process and embed core in paraffin. Specimen Type: Blood Slides: 2 Preferred: 2 Freshly prepared fingerstick slides Acceptable: 2 Slides made from whole blood in EDTA, within 8 hours of collection Submission Container/Tube: Plastic slide holder Collection Instructions: 1. Prepare 2 smears of even thickness. 2. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport. Place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens. If using slide carriers, make sure they have not been used to carry fixed slides previously.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 88321 (if appropriate); 88323 (if appropriate); 88325 (if appropriate);

Hematopathology Consultation, MCL Embed

Specimen Requirements: All specimens are required to perform testing. Supplies: Bone Marrow Collection Kit (T793) Additional Information: All specimens and paperwork must be labeled with:
-Two patient identifiers (patient name, date of birth, medical record number, case number, or pathology ID) -Specimen type Information on collecting, packaging, and shipping specimens is available: -Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline -Assistance with Bone Marrow Collection Specimen Type: Bone marrow aspirate Slides: 5 Preferred: Freshly prepared slides made at the time of specimen collection Acceptable: Slides made from EDTA bone marrow specimen, within 2 hours of collection Submission Container/Tube: Plastic slide holder Specimen Volume: 5 Total slides: 2 direct smears and 3 unit prep slides; unfixed and unstained, per unilateral collection Collection Instructions: 1. Prepare slides of bone marrow aspirate. 2. If bone marrow units are sparse or absent or aspirate is a dry tap, make biopsy touch prep slides. 3. Air dry slides. Do not place on hot plate to dry. 4. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport. Place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens. If using slide carriers, make sure they have not been used to carry fixed slides previously. Specimen Type: Bone marrow aspirate Container/Tube: Lavender top (EDTA) and yellow top (ACD solution A or B) Specimen Volume: 2 x 3 mL in EDTA and 2 x 6 mL in ACD solution A or B Collection Instructions: 1. Aspirate per standard bone marrow collection procedure. 2. Send bone marrow specimens in original tubes. Do not aliquot. Specimen Type: Bone marrow aspirate clot Container/Tube: Bone marrow aspirate clot in 10% formalin Specimen Volume: 0.5 mL Collection Instructions: 1. Place 0.5 mL bone marrow aspirate in clot tube. 2. After clot has formed, place clot in 10% formalin. 3. Place Parafilm around the container to prevent exposure. Specimen Type: Bone marrow core biopsy Container/Tube: Fixed biopsy core in 10% formalin Collection Instructions: 1. If bone marrow units are sparse or absent, or aspirate is a dry tap, make biopsy touch prep slides. 2. Place biopsy core in 10% formalin immediately after collection. 3. Fix in 10% formalin for 1 to 2 hours. 4. Place Parafilm around the 10% formalin container to prevent exposure. Specimen Type: Blood Slides: 2 Preferred: 2 Freshly prepared fingerstick slides Acceptable: 2 Slides made from whole blood in EDTA, within 8 hours of collection Submission Container/Tube: Plastic slide holder Specimen Volume: 2 Unstained and unfixed slides Collection Instructions: 1. Prepare 2 smears of even thickness. 2. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport. Place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens. If using slide carriers, make sure they have not been used to carry fixed slides previously.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 85007 (if appropriate); 85060 (if appropriate); 85097 (if appropriate); 88305 (if appropriate); 88311 (if appropriate);

Hemiplegic Migraine With or Without Epilepsy Gene Panel, Varies

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81185; 81405; 81406 x 2; 81407; 81408; 81479 (if appropriate for government payers); 88233-Tissue culture, skin, solid tissue biopsy (if appropriate)
88240-Cryopreservation (if appropriate)

HEMB
70454

Hemoglobin (Hb) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

A1CJ
800277

Hemoglobin A1c, Blood

Specimen Requirements: Container/Tube: Lavender-top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	24 hours

CPT Code Information: 83036

HBA1C 82080

Hemoglobin A1c, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	24 hours

CPT Code Information: 83036

HBEL1 608083

Hemoglobin Electrophoresis Evaluation, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B) Specimen Volume: 10 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL (this volume will limit reflex testing possibilities); 3 mL if multiplex ligation-dependent probe amplification is needed

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 83020; 83021; 82664 (if appropriate); 83068 (if appropriate); 83789 (if appropriate); 88184 (if appropriate); 83020-26 (if appropriate);

HBELI 608088

Hemoglobin Electrophoresis Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information:

HBEL0
608091

Hemoglobin Electrophoresis Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	

CPT Code Information: 83020-26

HPFH
8270

Hemoglobin F Distribution, Blood

Specimen Requirements: Only orderable as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE2 / Erythrocytosis Evaluation, Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	14 days

CPT Code Information: 88184

UNHB
9095

Hemoglobin Stability, Blood

Specimen Requirements: Only orderable as part of a profile or as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum -REVE2 / Erythrocytosis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 83068

HGBCE Hemoglobin Variant, A2 and F Quantitation, Blood

65039

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Submit fresh specimen. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	10 days

CPT Code Information: 83020

HGB Hemoglobin, Blood

801417

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	48 hours
	Ambient	24 hours

CPT Code Information: 85018

THEVI Hemoglobinopathy Interpretation

608425

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 83020-26**HAEV1**
607494**Hemolytic Anemia Evaluation, Blood**

Specimen Requirements: The following specimens are required for testing: 2 Whole blood EDTA specimens 2 Whole blood ACD specimens 1 EDTA control specimen 2 Well-made peripheral blood smears (Wright stained or fixed in absolute methanol) Patient: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) and yellow top (ACD) Specimen Volume: EDTA: Two 4 mL tubes ACD: Two 6 mL tubes Collection Instructions: 1. Immediately refrigerate specimens after collection. 2. Send whole blood specimens in original tubes. Do not aliquot. 3. Rubber band patient specimen and control vial together. Specimen Type: Slides Container/Tube: Blood smears Specimen Volume: 2 Peripheral blood smears 1. Prepare 2 peripheral blood smears from 1 of the EDTA tubes collected from the patient 2. Either stain the smear with Wright stain or fix the smear with absolute methanol prior to shipping. Normal Shipping Control: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Collect a control specimen from a normal (healthy), unrelated, nonsmoking person at the same time as the patient. 2. Clearly hand write normal control on the outermost label. 3. Immediately refrigerate specimen after collection. 4. Send specimen in original tube. Do not aliquot. 5. Rubber band patient specimen and control vial together.

Specimen Minimum Volume: EDTA Whole blood: 3 mL; ACD Whole blood: 5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Control	Refrigerated	72 hours	PURPLE OR PINK TOP/EDTA
Whole Blood ACD-B	Refrigerated	72 hours	
Whole Blood EDTA	Refrigerated	72 hours	
Whole Blood Slide	Refrigerated	CARTRIDGE	

CPT Code Information: 83020-26-Hemolytic Anemia Interpretation; 82657-Hexokinase, B; 82955-G6PD Enzyme Activity, B; 83020-Hemoglobin electrophoresis; 83021-High-Performance Liquid Chromatography (HPLC); 83068-Hemoglobin Stability; 84087-Glucose phosphate isomerase, B; 84220-Pyruvate Kinase Enzyme Activity, B; 82657-Adenylate Kinase, B; 82657-Phosphofructokinase, B; 82657-Phosphoglycerate Kinase, B; 82657-Triseposphate Isomerase, B; 85060-26 -Morphology review; 85557-Osmotic fragility; 88184-Band 3 Fluorescence Staining, RBC; 83915-Pyrimidine 5' Nucleotidase; 82978-Glutathione, B; 83789 (if appropriate); 82664 (if appropriate); 88184 (if appropriate);

HAEVI
608427

Hemolytic Anemia Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	72 hours

CPT Code Information: 83020-26

HAEVO
608090

Hemolytic Anemia Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	

F8INP
66206

Hemophilia A F8 Gene, Intron 1 and 22 Inversion Mutation Analysis, Prenatal

Specimen Requirements: Results will be reported and telephoned or faxed if requested. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5-10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 mL to 30 mL will be needed for the combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: 1. Place the tubes in a Styrofoam container. 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 6. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 7. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from

another laboratory Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated
Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen;
order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Amniotic fluid: See Specimen Required Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81403

F8INV
66205

Hemophilia A F8 Gene, Intron 1 and 22 Inversion Mutation Analysis, Whole Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (3.2% sodium citrate) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Frozen	7 days
	Refrigerated	7 days

CPT Code Information: 81403

F81P
88806

Hemophilia A F8 Gene, Intron 1 Inversion Known Mutation Analysis, Prenatal

Specimen Requirements: Results will be reported and telephoned or faxed, if requested. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5-10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 to 30 mL will be needed for the

combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated
 Additional Information: 1. Place the tubes in a Styrofoam container. 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 6. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 7. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.
 Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.
 Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Amniotic fluid: See Specimen Required Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403

F81B
60555

Hemophilia A F8 Gene, Intron 1 Inversion Known Mutation, Whole Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (3.2% sodium citrate) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Frozen	7 days
	Refrigerated	7 days

CPT Code Information: 81403

F822B
60554

Hemophilia A F8 Gene, Intron 22 Inversion Known Mutation, Whole Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (3.2% sodium citrate) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Frozen	7 days
	Refrigerated	7 days

CPT Code Information: 81403

F822P
89454

Hemophilia A F8 Gene, Intron 22 Inversion Mutation Analysis, Prenatal

Specimen Requirements: Results will be reported and telephoned or faxed if requested. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5 to 10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 to 30 mL will be needed for the combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: 1. Place the tubes in a Styrofoam container. 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 6. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 7.

All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 to 30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Amniotic fluid: See Specimen Required Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81403

GNHMA
619103

Hemophilia A, F8 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient

(preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81407; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

GNHMB
619117

Hemophilia B, F9 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81238; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

GNF11
619131

Hemophilia C (Factor XI Deficiency), F11 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Whole blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate);

HQ
607706

HemoQuant, Feces

Specimen Requirements: Patient Preparation: Patient should refrain from ingesting red meat and aspirin-containing products (eg, Excedrin, Aspirin) for 3 days prior to specimen collection. Collection Container/Tube: Hemoquant Specimen Collection (T134) Submission Container/Tube: Screw-capped tube Specimen Volume: 1 g Collection Instructions: Collect random specimen from a single defecation.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	

CPT Code Information: 84126

UHSD2
620554

Hemosiderin, Random, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 13 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 12 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	2 hours

CPT Code Information: 83070

FWWE
57956

Hemp Western Water (*Acnida tamariscina*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003**HEPTP**
40938**Heparin Anti-Xa, Plasma**

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions see Coagulation Guidelines for Specimen Handling and Processing. 2. Centrifuge, aliquot plasma, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen (preferred)	14 days
	Ambient	2 hours

CPT Code Information: 85520**FHEP2**
75683**Heparin Cofactor II**

Specimen Requirements: Patient Preparation: Do not draw from an arm with a heparin lock or heparinized catheter. Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 2 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL (Note: This volume does not allow for repeat testing.)**Transport Temperature:**

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	180 days

CPT Code Information: 85130

HITIG
86533

Heparin-PF4 IgG Antibody, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred but not required Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial. Specimen Stability Information: Frozen (preferred) 2 years/Refrigerate 7 days

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	
	Refrigerated	7 days

CPT Code Information: 86022

HAIGM
48064

Hepatitis A Virus IgM Antibody, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86709

HAVTA
620407

Hepatitis A Virus Total Antibodies, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg. hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86708

HEPBC
70451

Hepatitis B Core (HBc) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

HEPBS
70453

Hepatitis B Surface (HBs) Antigen Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per

test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HBGCD
83626

Hepatitis B Surface Antigen for Cadaveric or Hemolyzed Specimens, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 87340; 87341 (if appropriate);

HBVQN
65555

Hepatitis B Virus (HBV) DNA Detection and Quantification by Real-Time PCR, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87517

HBIM
9015

Hepatitis B Virus Core IgM Antibody, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic tube.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days

CPT Code Information: 86705

HBCPR
610462

Hepatitis B Virus Core Total Antibodies Prenatal, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86704

HBCSN
610471

Hepatitis B Virus Core Total Antibodies Screen, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86704; G0499 (if appropriate);

HBC
8347

Hepatitis B Virus Core Total Antibodies, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86704

CORAB
32111

Hepatitis B Virus Core Total Antibodies, with Reflex to Hepatitis B Virus Core IgM Antibody, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days

CPT Code Information: 86704; 86705 (if appropriate);

HBCRQ
621765

Hepatitis B Virus Core-Related Antigen, Quantitative, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 82397

HEAB
80973

Hepatitis B Virus e Antibody, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86707

HEAG
8311

Hepatitis B Virus e Antigen and Hepatitis B Virus e Antibody, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 86707; 87350;

EAG
80510

Hepatitis B Virus e Antigen, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 87350

FHBG
57618

Hepatitis B Virus Genotyping

Specimen Requirements: Draw blood in lavender (EDTA) tube(s). Spin down and send 2 mL plasma frozen in a plastic vial. Required: 1. Viral Load 2. Viral Load Date Note: Red-top serum and serum gel tube(s) are acceptable. Note: This test may be unsuccessful if the HBV Viral load is less than log 3.0 or 1,000 IU/mL of plasma.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	42 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 87912

HBPE5 615271

Hepatitis B Virus Past Exposure Panel, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	7 hours

CPT Code Information: 86706; 86704; 87340; 87341 (if appropriate); G0499 (if appropriate);

HBABY 63137

Hepatitis B Virus Perinatal Exposure Follow-up Panel, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements containing biotin (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	7 hours

CPT Code Information: 86706; 86704; 87340; 87341 (if appropriate);

HBABT
87893

Hepatitis B Virus Surface Antibody Monitor, Post-Transplant, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	7 hours

CPT Code Information: 86317

HBABP
610465

Hepatitis B Virus Surface Antibody Prenatal, Qualitative/Quantitative, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	7 hours

CPT Code Information: 86706**HBBSN**
610474**Hepatitis B Virus Surface Antibody Screen, Qualitative/Quantitative, Serum**

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	7 hours

CPT Code Information: 86706; G0499 (if appropriate);**HBAB**
8254**Hepatitis B Virus Surface Antibody, Qualitative/Quantitative, Serum**

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	7 hours

CPT Code Information: 86706**HBNTP**
35936**Hepatitis B Virus Surface Antigen Confirmation, Prenatal, Serum**

Specimen Requirements: Only orderable as a reflex. For more information see HBAGP / Hepatitis B Virus Surface Antigen Prenatal, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 87341**HBAGP**
86185**Hepatitis B Virus Surface Antigen Prenatal, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.9 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	90 days	
	Refrigerated	6 days	
	Ambient	72 hours	

CPT Code Information: 87340; 87341 (if appropriate);

HBGSN
610468

Hepatitis B Virus Surface Antigen Screen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.9 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 87340; G0499 (if appropriate); 87341 (if appropriate);

HBAGQ
621764

Hepatitis B Virus Surface Antigen, Quantitative, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 87467

HBAG 9013

Hepatitis B Virus Surface Antigen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.9 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Refrigerated	6 days
	Ambient	72 hours

CPT Code Information: 87340; 87341 (if appropriate);

HCVSP 609748

Hepatitis C Virus (HCV) Antibody Screen Prenatal, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.3 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 86803 ; G0472 (if appropriate for government payers); 87522 Hepatitis C, quantification (if appropriate);

HCSRN
113122

Hepatitis C Virus (HCV) Antibody Screen with Reflex to HCV RNA, PCR, Asymptomatic, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.3 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 86803 ; G0472 (if appropriate for government payers); 87522 Hepatitis C, quantification (if appropriate);

HCVDX
113121

Hepatitis C Virus (HCV) Antibody with Reflex to HCV RNA, PCR, Symptomatic, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.3 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 86803; 87522 (if appropriate);

HCVQN
97291

Hepatitis C Virus (HCV) RNA Detection and Quantification by Real-Time Reverse Transcription-PCR, Serum

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87522

HCVRP
609749

Hepatitis C Virus (HCV) RNA Detection and Quantification, Real-Time Reverse Transcription-PCR, Prenatal, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87522

HCVQG
603602

Hepatitis C Virus (HCV) RNA Quantification with Reflex to HCV Genotype, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	42 days
	Refrigerated	72 hours

CPT Code Information: 87522; 87902 (if appropriate); 87902 (if appropriate);

HCVL
63063

Hepatitis C Virus Antibody Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.4 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 86804

HCCAD
87858

Hepatitis C Virus Antibody Screen, Cadaveric or Hemolyzed Specimens, Asymptomatic, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection

Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86803 ; G0472 (if appropriate for government payers); 86804 (if appropriate);

HCCDD
58127

Hepatitis C Virus Antibody, Cadaveric or Hemolyzed Specimens, Symptomatic, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86803; 86804 (if appropriate);

HCVG
81618

Hepatitis C Virus Genotype, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial

Specimen Volume: 5 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Additional Information: 1. This test requires a minimum hepatitis C virus viral load of 500 IU/mL within the 30 days preceding collection. 2. Serum specimens previously submitted to other laboratories for non-microbiology tests are not acceptable for add-on test requests due to possible sample-to-sample carryover from automation used for those tests.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	42 days	ALIUOT TUBE
	Refrigerated	72 hours	ALIUOT TUBE

CPT Code Information: 87902

HCVDR
604410

Hepatitis C Virus Genotypic Antiviral Drug Resistance, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	60 days	ALIUOT TUBE
	Refrigerated	7 days	ALIUOT TUBE

CPT Code Information: 87900; 87902; 87999 (if appropriate for government payers);

AHDV
9209

Hepatitis D Virus Total Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	30 days

CPT Code Information: 86692**HEVG**
86211**Hepatitis E Virus IgG Antibody, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	
	Refrigerated	24 hours

CPT Code Information: 86790**HEVML**
61903**Hepatitis E Virus IgM Antibody Confirmation, Serum**

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	
	Refrigerated	7 days

CPT Code Information: 86790

HEVM
86212

Hepatitis E Virus IgM Antibody Screen with Reflex to Confirmation, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	
	Refrigerated	24 hours

CPT Code Information: 86790

HEVQU
62929

Hepatitis E Virus RNA Detection and Quantification, Real-Time RT-PCR, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	35 days	ALIQUOT TUBE
	Refrigerated	5 days	ALIQUOT TUBE

CPT Code Information: 87799

HCCGS
606585

Hepatocellular Carcinoma Risk Panel with GALAD Score, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	5 days

CPT Code Information: 82107; 83951;

HEPAT
70456

Hepatocyte Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HNF1B
70461**Hepatocyte Nuclear Factor 1Beta Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HSMWB
65695**Hepatosplenomegaly Panel, Blood**

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	72 hours
	Ambient	48 hours

CPT Code Information: 82542

HSMBS
601519**Hepatosplenomegaly Panel, Blood Spot**

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection card (Filter Paper) Acceptable: Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper, Postmortem Screening Card, or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood completely dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. At least 1 spot should be complete (ie,

unpunched). 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry
Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

HSMP
65694

Hepatosplenomegaly Panel, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	65 days

CPT Code Information: 82542

JHERF
615003

HER2 Amplification Associated with Breast Cancer, FISH, Breast Primary, Tissue

Specimen Requirements:

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 1 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377

H2BR
65879

HER2 Amplification Associated with Breast Cancer, FISH, Tissue

Specimen Requirements: Note: In accordance with College of American Pathologists guidelines, place specimens for HER2 (ERBB2) testing in fixative within one hour of biopsy or resection (cold ischemia time). Specimens should remain in 10% neutral buffered formalin for a minimum of 6 hours to a maximum of 72 hours (formalin fixation time). Do not use decalcification solutions with strong acids.(CAP Accreditation Program. CYG.48932 Fixation - HER2 (ERBB2) Breast Predictive Marker Testing. Cytogenetics Checklist. College of American Pathologists. 08/2023) Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive, unstained, positively charged, unbaked slides with 5-micron-thick sections of the tumor tissue. Slides cut from blocks prepared with alternative fixation methods may be acceptable; provide fixation method used.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377

H2GE
65880

HER2 Amplification Associated with Gastroesophageal Cancer, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive, unstained, positively charged, unbaked slides with 5-micron-thick sections of the tumor tissue. Slides cut from

blocks prepared with alternative fixation methods may be acceptable; provide fixation method used.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin-stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377

H2MT
65881

HER2 Amplification, Miscellaneous Tumor, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive, unstained, positively charged, unbaked slides with 5-micron-thick sections of the tumor tissue. Slides cut from blocks prepared with alternative fixation methods may be acceptable; provide fixation method used.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377

HER2I
70457

HER2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

HERMB
620800

HER2, Breast, Semi-Quantitative Immunohistochemistry, Manual with HER2 FISH Reflex

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: A paraffin-embedded tissue block containing breast cancer tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours. Acceptable: 5 Unstained sections containing breast carcinoma on charged slides cut at 4 microns less than 1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours. Container/Tube: Pathology Packaging Kit Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue. Additional Information: 1. According to the American Society of Clinical Oncology (ASCO)/College of American Pathologists (CAP) guidelines, HER2 protein immunohistochemical test results are only valid for nondecalcified, paraffin-embedded specimens fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total time of 6 to 72 hours. Delay to fixation, or under- or over-fixation may affect these results.(1) 2. HER2 immunohistochemistry testing on intracystic papillary carcinoma and solid papillary carcinoma, without clearly stating invasive carcinoma, is not appropriate and will be reported as indeterminate. 3. Paraffin blocks will be returned with final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

HERGM
70911

HER2, Gastric/Esophageal, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Only formalin-fixed, paraffin-embedded (FFPE) gastric or esophageal adenocarcinoma specimens will be accepted. Fixation in 10% neutral-buffered formalin is preferred. The performance and quality of immunohistochemical stains in 10% neutral-buffered FFPE tissue depends on proper fixation. It is recommended (not required) for surgical specimens to be fixed between 18 and 24 hours and biopsy specimens between 6 and 8 hours. If being ordered for prognostic purposes: Specimen Type: Gastric or esophageal adenocarcinoma Supplies: Pathology Packaging Kit (T554) Preferred: Paraffin-embedded tissue block containing invasive gastric or esophageal adenocarcinoma tissue

Additional Information: Paraffin blocks will be returned with final report. Acceptable: Slides Specimen Volume: 5 Collection Instructions: 5 Unstained sections, containing gastric or esophageal adenocarcinoma, on charged slides cut at 4 microns less than 1 month ago.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

HERGN
70914

HER2, Gastric/Esophageal, Semi-Quantitative Immunohistochemistry, Manual, No Reflex

Specimen Requirements: Only formalin-fixed, paraffin-embedded (FFPE) gastric or esophageal adenocarcinoma specimens will be accepted. Fixation in 10% neutral-buffered formalin is preferred. The performance and quality of immunohistochemical stains in 10% neutral-buffered FFPE tissue depends on proper fixation. It is recommended (not required) for surgical specimens to be fixed between 18 and 24 hours and biopsy specimens between 6 and 8 hours. If being ordered for prognostic purposes: Specimen Type: Gastric or esophageal adenocarcinoma Supplies: Pathology Packaging Kit (T554) Preferred: Paraffin-embedded tissue block containing invasive gastric or esophageal adenocarcinoma tissue Additional Information: Paraffin blocks will be returned with final report. Acceptable: Slides Specimen Volume: 5 Collection Instructions: 5 Unstained sections, containing gastric or esophageal adenocarcinoma, on charged slides cut at 4 microns less than 1 month ago.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

GNANG
619215

Hereditary Angioedema Focused Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do

not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

BRGYP
614320

Hereditary Breast/Gynecologic Cancer Panel, Varies

Specimen Requirements:

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81432

COMCP
614319

Hereditary Common Cancer Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report.

Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81201; 81408 x2; 81162; 81406 x4; 81404; 81403; 81405 x2; 81292; 81295; 81298; 81307; 81317; 81321; 81351; 81479; 81479 (if appropriate for government payers);

CDHZ
614582

Hereditary Diffuse Gastric Cancer Syndrome, CDH1, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406

Hereditary Endocrine Cancer Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81437

Hereditary Erythrocytosis Focused Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with whole blood testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture

charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404; 81479; 81479 (if appropriate for government payers);

NHEP
619019

Hereditary Erythrocytosis Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with whole blood testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404; 81405; 81479; 81479 (if appropriate for government payers);

HEMP
61337

Hereditary Erythrocytosis Mutations, Whole Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	30 days
	Ambient	14 days

CPT Code Information: 81479

XCP
614318

Hereditary Expanded Cancer Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole Blood 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403; 81292; 81295; 81298; 81162; 81201; 81307; 81317; 81321; 81351;

81404 x 4; 81405 x 6; 81406 x 7; 81407; 81408 x 2; 81479; 81479 (if appropriate for government payers);

CRCGP
614571

Hereditary Gastrointestinal Cancer Panel, Varies

Specimen Requirements:

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81435

HFET
614573

Hereditary Hemochromatosis, HFE Variant Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send cord blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional

specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81256-HFE (hemochromatosis) (eg, hereditary hemochromatosis) gene analysis, common variants (C282Y and H63D)

NHHA
619033

Hereditary Hemolytic Anemia Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

HHTGG
617295

Hereditary Hemorrhagic Telangiectasia and Vascular

Malformations Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Type: Tissue biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5 to 3 cm(3) or larger Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Multiple extractions will be required to obtain sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2.

Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406 x3; 81479; 81479 (if appropriate for government payers);

LRCCZ
614583

Hereditary Leiomyomatosis and Renal Cell Cancer Syndrome, FH, Full Gene Analysis, Varies

Specimen Requirements:

Specimen Minimum Volume: Whole Blood 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405

PANCP
614574

Hereditary Pancreatic Cancer Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the

preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81432

HPANP
619844

Hereditary Pancreatitis Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81223; 81404 x2; 81405; 81479 (if appropriate for government payers); 88223- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

HPGLP Hereditary Paraganglioma/Pheochromocytoma Panel, Varies 614579

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81437

PRS8P Hereditary Prostate Cancer Panel, Varies 614576

Specimen Requirements:

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81432

RENCP
614575

Hereditary Renal Cancer Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405 x 3; 81321; 81406 x 2; 81404 x 2; 81351; 81407; 81479; 81479 (if appropriate for government payers);

GNHTC
619341

Hereditary Thrombocytopenia Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD)

Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Cultured fibroblasts/skin biopsy: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

GNADM
619229

Hereditary Thrombotic Thrombocytopenic Purpura, ADAMTS13 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

Hereditary Thyroid Cancer Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81437

Hereditary Wilms Tumor Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to

complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81351; 81405; 81479; 81479 (if appropriate for government payers);

LHSVZ
800315

**Herpes Simplex Virus (HSV) and Varicella-Zoster Virus (VZV),
Molecular Detection, PCR, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Sources: Genital, dermal, eye, or throat Container/Tube: Multimicrobe media (M4-RT) Specimen Volume: Swab Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5). Additional Information: Source information should include the main anatomical source of collection. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Specimen Type: Fluid Sources: Pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Specimen Type: Tissue Supplies: M4-RT (T605) Sources: Brain, colon, kidney, liver, lung, etc Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in multimicrobe media (M4-RT) or a sterile container with 1 to 2 mL sterile saline.

Specimen Minimum Volume: Body Fluid or Ocular Fluid: 0.3 mL; Respiratory: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87529 x2 HSV-1 and HSV-2 87798-VZV 87999 (if appropriate for government payers)

HSVG
84429

**Herpes Simplex Virus (HSV) Type 1- and Type 2-Specific
Antibodies, IgG, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86695; 86696;

LHSV B
802067

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87529 x 2; 87529 (if appropriate for government payers);

HSV PB
618308

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87529 x 2; 87529 (if appropriate for government payers);

HSVC
63434

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 0.2 mL Collection Instructions: 1. Submit from second spinal fluid collection vial. 2. Transfer into aliquot vial using sterile technique. 3. Do not centrifuge or heat inactivate. Additional Information: 1. The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by herpes simplex virus DNA is not likely. 2. Specimens that are received with less than the minimum volume required for all testing requested will be canceled.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87529 x 2; 87529 (if appropriate for government payers);

LHSV
800143

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Swab Sources: Genital, dermal, ocular, nasal, throat, or oral Supplies: M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT) Specimen Volume: Entire collection Collection Instructions: Place swab back into multimicrobe media (M4-RT) Additional Information: Source information should include main anatomical site of collection. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Supplies: M4-RT (T605) Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue. Additional Information: Source information should include main anatomical site of collection. Specimen Type: Urine (<1-month old infant) Container/Tube: Sterile container Specimen

Volume: 0.5 mL

Specimen Minimum Volume: Body or Ocular Fluid: 0.4 mL Respiratory Specimen: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87529 x 2; 87529 (if appropriate for government payers);

HSVPV
618307

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Swab Sources: Genital, dermal, ocular, nasal, throat, or oral Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -M4-RT (T605), Container/Tube: Multimicrobe media (M4-RT, M4, M5, Bartels, or Jiangsu) and E-Swab or Culturette Specimen Volume: Entire collection Collection Instructions: Place swab back into multimicrobe media. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Specimen Type: Fresh tissue Supplies: M4-RT (T605) Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, M5, Bartels, or Jiangsu) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue. Fixed tissue is not acceptable. Specimen Type: Urine (<1-month old infant) Container/Tube: Sterile container Specimen Volume: 0.5 mL

Specimen Minimum Volume: Amniotic or ocular fluid: 0.4 mL; Sterile body fluid (Pleural, peritoneal, ascites, pericardial): 0.5 mL; Respiratory Specimen: 1 mL; Swab, tissue, or urine: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87529 x 2; 87529 (if appropriate for government payers);

HRPSV
70467

Herpes Simplex Virus, I and II (HSV I and II) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FHHV6
91311

Herpes Virus 6 (HHV-6) DNA, Qualitative Real-Time PCR

Specimen Requirements: Container/Tube: Lavender-top (EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in lavender-top (EDTA) tube(s) and send 1 mL of whole blood refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	48 hours

CPT Code Information: 87532

FHV7P
75755

Herpesvirus 7 (HHV-7) DNA, Quantitative Real-Time PCR

Specimen Requirements: Submit only 1 of the following specimens: Source is required Whole Blood Specimen Type: Whole Blood Container/Tube: Lavender-top (EDTA) Specimen Volume: 1 mL Collection Information: Draw blood in a lavender-top (EDTA) tube(s) and send 1 mL whole blood refrigerated (DO NOT FREEZE). Stability: Ambient 48 hours; Refrigerated 7 days Serum Specimen Type: Serum Container/Tube: Red-top Submission Container/Tube: 12x75 mm screw-capped vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s). Spin down and send 1 mL serum in a plastic, screw-capped vial. Send specimen refrigerated. Stability: Ambient 48 hours; Refrigerated 7 days; Frozen 30 days Plasma Collection Container/Tube: Lavender-top (EDTA) Submission Container/Tube: 12x75 mm screw-capped vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tube(s). Spin down and transfer 1 mL EDTA plasma

into a plastic screw-capped vial. Send specimen refrigerated. Stability: Ambient 48 hours; Refrigerated 7 days; Frozen 30 days

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	48 hours

CPT Code Information: 87799

FH7GM
57487

Herpesvirus 7 IgG and IgM Antibody Panel, IFA

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red or SST Submission Container/Tube: Plastic vial Specimen Volume: 1mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and send 1 mL serum in a screw-capped vial, shipped refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86790 x 2

FHV8P
75756

Herpesvirus 8 (HHV-8) DNA, Quantitative Real-Time PCR

Specimen Requirements: Submit only 1 of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Lavender-top (EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tube and send 1 mL EDTA whole blood refrigerated. Stability: Ambient 48 hours; Refrigerated 7 days: Frozen Unacceptable Serum Specimen Type: Serum Collection Container/Tube: Red-top Submission Container/Tube: 12x75 mm screw-capped vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s). Spin down and send 1 mL serum in a plastic, screw-capped vial. Send specimen refrigerated. Stability: Ambient 48 hours; Refrigerated 7 days, Frozen 30 days Plasma Collection Container/Tube: lavender-top (EDTA), or PPT (white-top) tube Submission Container/Tube: 12x57 mm screw-capped vial

Specimen Volume: 1 mL Collection Instructions: Draw blood in lavender-top (EDTA) tube(s). Spin down and transfer 1 mL EDTA plasma into a plastic, screw-capped vial. Send specimen refrigerated. Stability: Ambient 48 hours; Refrigerated 7 days; Frozen 30 days

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	48 hours

CPT Code Information: 87799

HERR
82823

Herring, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HEXLA
617974

Hexagonal Lupus Anticoagulant, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ACBL / Bleeding Diathesis Profile, Comprehensive, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	60 days

CPT Code Information: 85598

FHEXA
91442

Hexagonal Phospholipid Neutralization

Specimen Requirements: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 1 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	30 days

CPT Code Information: 85598

HKC
608420

Hexokinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657

HK1
607461

Hexokinase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657

NAGW
8775

Hexosaminidase A and Total Hexosaminidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 83080 x 2

NAGS
8774

Hexosaminidase A and Total Hexosaminidase, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 83080 x 2

NAGR
82943

Hexosaminidase A and Total, Leukocytes/Molecular Reflex, Whole Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 83080 x2; 81406 (if appropriate); 81479 (if appropriate);

MUGS
80350

Hexosaminidase A, Serum

Specimen Requirements: Patient Preparation: Patient should be fasting for 4 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	5 days

CPT Code Information: 83080

FSHAG
57950

Hickory Shagbark (*Carya ovata*) IgE

Specimen Requirements: Collection Container/Tube: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum

refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

HMGA
70460

High Mobility Group A2 (HMGA2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HPLC
65615

High-Performance Liquid Chromatography (HPLC) Hemoglobin Variant, Blood

Specimen Requirements: Only orderable as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE2 / Erythrocytosis Evaluation, Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	10 days

CPT Code Information: 83021

H1083 618598

HIK1083 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

HIPA 9756

Hippuric Acid, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 3 mL Collection Instructions: Collect 3 mL random urine specimen at end of shift. Send specimen refrigerated in a plastic, preservative-free urine container.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	5 days

CPT Code Information: 82570 ; 83921; 81002 (if appropriate);

FHSPL
57533

Histamine Plasma

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	28 days

CPT Code Information: 83088

FHI24
75835

Histamine, 24-Hour Urine

Specimen Requirements: Patient Preparation: Avoid direct sunlight. Patient should refrain from taking allergy causing drugs, antihistamines, oral corticosteroids, and substances which block H2 receptors for at least 24 hours prior to specimen collection. Specimen Type: Urine Submission Container/Tube: Plastic, 10-mL tube (T068) Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours, with 10 mL 6N HCL preservative. 2. Avoid direct sunlight during the 24-hour collection. 3. Send specimen refrigerated in the plastic, 10-mL urine tube (T068). 4. Collection volume and duration are required.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	48 hours

CPT Code Information: 83088

FHSTW
57368

Histamine, Whole Blood

Specimen Requirements: Specimen Type: Whole Blood Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a green-top tube (sodium or lithium heparin). 2. Aliquot 1 mL well mixed whole blood into a plastic vial. 3. Freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
WB Heparin	Frozen	180 days

CPT Code Information: 83088**HG34W**
604697**Histone 3.3 G34W (H3F3A G34W) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;**HISGT**
619586**Histone Genes Mutation Analysis, Next-Generation Sequencing, Tumor**

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirements for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81445;

HK27M
604989

Histone H3 K27M Mutant (H3 K27M) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HK36M
604699

Histone H3 K36M Mutant (H3F3 K36M) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HISME
72127

Histone H3 Trimethyl K27 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HIBAG
618715

Histoplasma and Blastomyces Antigen, Enzyme Immunoassay, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 87449

UHBAG
621248

Histoplasma and Blastomyces Antigen, Enzyme Immunoassay, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen, with no preservative. 2. Do not centrifuge to remove particulates.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 87449

HISER
621213

Histoplasma Antibody Complement Fixation and Immunodiffusion, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86698 x2

HICSF
621216

Histoplasma Antibody Complement Fixation and Immunodiffusion, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Submit specimen from collection vial 1.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86698 x2

HBRP
60213

Histoplasma capsulatum/Blastomyces species, Molecular Detection, PCR, Varies

Specimen Requirements:

Specimen Minimum Volume: Body fluid or respiratory specimen: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 87798 x 2

HIBC
621305

Histoplasma/Blastomyces Panel, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1.5 mL Collection Instructions: Submit specimen from collection vial 1.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86698 x2; 86612;

HIVSP 48393

HIV Antigen and Antibody Prenatal Routine Screen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87389; G0475 (if appropriate);

HVPRS 617827

HIV Antigen and Antibody Prenatal Routine Screen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87389; G0475 (if appropriate); 86701 (if appropriate); 86702 (if appropriate); 87535 (if appropriate); 87538 (if appropriate);

HV1CD
83628**HIV-1 and HIV-2 Antibodies for Cadaveric or Hemolyzed Specimens, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86703; 86701; 86702;

HVPPS
617828**HIV-1 and HIV-2 Antibody Confirmation and Differentiation Prenatal, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 86701; 86702; 87535 (if appropriate); 87538 (if appropriate);

HVDIP
601758**HIV-1 and HIV-2 Antibody Confirmation and Differentiation,**

Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 86701; 86702; 87535 (if appropriate); 87538 (if appropriate); 87536 (if appropriate);

HVDSP
601759

HIV-1 and HIV-2 Antibody Confirmation and Differentiation, Prenatal, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 86701; 86702; 87535 (if appropriate); 87538 (if appropriate); 87536 (if appropriate);

HIVDI
62421

HIV-1 and HIV-2 Antibody Confirmation and Differentiation, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 86701; 86702; 87535 (if appropriate); 87538 (if appropriate);

HV1CM
60357

HIV-1 and HIV-2 Antibody Screen for Hemolyzed Specimens, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86703; G0432; 86701 (if appropriate); 86702 (if appropriate);

HIVDX
48392

HIV-1 and HIV-2 Antigen and Antibody Diagnostic Evaluation, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg,

centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87389; 86701 (if appropriate); 86702 (if appropriate); 87536 (if appropriate);

HIVDS 617825

HIV-1 and HIV-2 Antigen and Antibody Diagnostic Evaluation, Serum

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87389; 86701 (if appropriate); 86702 (if appropriate); 87535 (if appropriate); 87538 (if appropriate);

HVCOP 48341

HIV-1 and HIV-2 Antigen and Antibody Routine Screen, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87389; G0475; 86701 (if appropriate); 86702 (if appropriate); 87536 (if appropriate);

HIVSS 617826

HIV-1 and HIV-2 Antigen and Antibody Routine Screen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	30 days
	Refrigerated	6 days

CPT Code Information: 87389; G0475 (if appropriate); 86701 (if appropriate); 86702 (if appropriate); 87535 (if appropriate); 87538 (if appropriate);

HIVDR 616052

HIV-1 Genotypic Drug Resistance to Reverse Transcriptase, Protease, and Integrase Inhibitors, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2.2 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment. Additional Information: Specimens submitted for HIV-1 genotyping must contain 1000 copies/mL or more of HIV-1 RNA.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	60 days
	Refrigerated	7 days

CPT Code Information: 0219U

HIVQN
113581

HIV-1 RNA Detection and Quantification, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into a plastic vial per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87536

HIQNP
65567

HIV-1 RNA Detection and Quantification, Prenatal, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into a plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87536

PSHIV
65819

HIV-1 RNA Patient Source, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87536

HIQDR
616917

HIV-1 RNA Quantification with Reflex to Genotypic Drug Resistance to Reverse Transcriptase, Protease, and Integrase Inhibitors, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3.6 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	55 days
	Refrigerated	5 days

CPT Code Information: 87536 ; 0219U (if appropriate);

HPP12 615817

HIV-1/HIV-2 RNA Detection Prenatal, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	40 days
	Refrigerated	6 days

CPT Code Information: 87535; 87538;

HPS12 615818

HIV-1/HIV-2 RNA Detection Prenatal, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	40 days
	Refrigerated	6 days

CPT Code Information: 87535; 87538;

HIP12 615815

HIV-1/HIV-2 RNA Detection, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	40 days
	Refrigerated	6 days

CPT Code Information: 87535; 87538;

HIS12
615816

HIV-1/HIV-2 RNA Detection, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial 2. Freeze aliquoted serum for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	40 days
	Refrigerated	6 days

CPT Code Information: 87535; 87538;

FHV2Q
91490

HIV-2 DNA/RNA Qualitative Real-Time PCR

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 87538

FHLAA
91498

HLA A High Resolution

Specimen Requirements: Histocompatibility Lab Transplant Testing Requisition is required. Draw blood in a lavender-top (EDTA) tube(s). Send 14 mL of EDTA whole blood at ambient temperature.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient	14 days

CPT Code Information: 81380

FHLAB
91499

HLA B High Resolution

Specimen Requirements: Histocompatibility Lab Transplant Testing Requisition is required. Draw blood in a lavender-top (EDTA) tube(s). Send 14 mL of EDTA whole blood at ambient temperature.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient	14 days

CPT Code Information: 81380

FHLAC
91500

HLA C High Resolution

Specimen Requirements: Histocompatibility Lab Transplant Testing Requisition is required. Draw blood in a lavender-top (EDTA) tube(s). Send 14 mL of EDTA whole blood at ambient temperature.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient	14 days

CPT Code Information: 81380

HL57R
610054

HLA-B*57:01 Genotype, Pharmacogenomics, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Supplies: Saliva Swab Collection Kit (T786) Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81381

HL58R
610055

HLA-B*5801 Genotype, Allopurinol Hypersensitivity, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Supplies: Saliva Swab Collection Kit (T786) Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2-mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Provide concentration of DNA and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.35 mL Saliva, extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81381

LY27B
9648

HLA-B27, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 6 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient	4 days

CPT Code Information: 86812

HMB45
70459

HMB45 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

Homocysteine (Total), Methylmalonic Acid, and Methylcitric Acid, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
Container/Tube: Preferred: Blood Spot Collection Card (Filter Paper) Acceptable: Local newborn screening card, Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktel filter paper
Specimen Volume: 2 Blood spots
Collection Instructions: 1. Do not use device or capillary tube containing EDTA or ACD to collect specimen. Sodium heparin is acceptable but must be spotted on card the same day as collected. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle) using blood from a heel or finger stick. 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry.
Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	FILTER PAPER	
	Frozen	FILTER PAPER	
	Refrigerated	FILTER PAPER	

CPT Code Information: 83090; 83918;

Homocysteine, Total, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin)
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL
Collection Instructions: 1. Immediately place specimen on wet ice. 2. Within 4 hours of collection, centrifuge and aliquot plasma into a plastic vial. 3. If blood cannot be placed on wet ice immediately, then within 1 hour of collection, centrifuge and aliquot plasma into a plastic vial. 4. A refrigerated centrifuge is not required if the above time restrictions are met.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	28 days
	Frozen	309 days
	Ambient	28 days

CPT Code Information: 83090

HCYSS
35836

Homocysteine, Total, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 4 hours of collection, centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	309 days
	Ambient	28 days

CPT Code Information: 83090

HVA
9253

Homovanillic Acid, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase homovanillic acid results. For 24 hours prior to and during specimen collection, the patient should not take L-dopa. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children younger than 5 years. If specimen is refrigerated during collection, preservative may be added up to 12 hours after collection. This preservative is intended to achieve a pH of between approximately 1 and 5. 2. Collect a 24-hour urine specimen. 3. If necessary, adjust urine pH to a level between 1 and 5 by adding 50% acetic acid or hydrochloric acid dropwise and checking the pH. Additional Information: 1. The sensitivity of this test is greater on a 24-hour specimen than on a random specimen. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	180 days

CPT Code Information: 83150**HVAR**
60275**Homovanillic Acid, Random, Urine**

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase homovanillic acid results. For 24 hours prior to specimen collection, the patient should not take L-dopa. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Adjust the urine pH to a level between 1 and 5 by adding 50% acetic acid or hydrochloric acid dropwise and checking the pH.

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	180 days

CPT Code Information: 83150**HBV**
82551**Honeybee Venom, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HBEA
82484

Hornbeam, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HRSPF
616095

Horse Dander, IgE with Reflex to Horse Dander Component, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HORS
82874

Horse Dander, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HFSF
82608

Horsefly/Stablefly, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FHORS
57934

Horseradish (*Armoracia rusticana/A.lapathifolia*)IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen
Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is
acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

DF
82905

House Dust Mites/Dermatophagoides farinae, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For one allergen: 0.3 mL For more than one allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DP
82904

House Dust Mites/Dermatophagoides pteronyssinus, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HD1
81877

House Dust Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HDG
82906

House Dust/Greer Lab, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HDHS
82903

House Dust/H-S Lab, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FHTL
91491

HTLV I/II DNA, Qualitative Real-Time PCR

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	48 hours

CPT Code Information: 87798 x 2

FHAM
57856

Human Anti-mouse Antibody (HAMA)

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable.
Spin down and send 2 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	90 days

CPT Code Information: 83520**HCG**
70455**Human Chorionic Gonadotropin (hCG) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**THCG**
80678**Human Chorionic Gonadotropin (hCG), Quantitative, Pregnancy, Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	72 hours	
	Frozen	365 days	

CPT Code Information: 84702

HE4
62137

Human Epididymis Protein 4, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	84 days
	Refrigerated	7 days

CPT Code Information: 86305

HRPV8
70458

Human Herpes Virus, Type 8 (HHV-8) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

QHV6P
619925

Human Herpesvirus-6 A and B DNA Detection and Quantification, PCR, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Preferred: Plastic vial Acceptable: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	24 hours

CPT Code Information: 87533

QHV6C
619924

Human Herpesvirus-6 A and B DNA Detection and Quantification, PCR, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Aliquot tube Specimen Volume: 0.5 mL Collection Instructions: 1. Collect specimen from collection vial 2. Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	24 hours

CPT Code Information: 87533

1DIS
609354

Human Leukocyte Antigens (HLA) A-B-C Disease Association Typing Low Resolution, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution A or B) Specimen Volume: 6 mL Collection Instructions: Send whole blood in original tube. Do not aliquot. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81372

DIS
618568

Human Leukocyte Antigens (HLA) Class I and II Disease Association Typing, Low Resolution, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution A or B) Specimen Volume: 6 mL Collection Instructions: Send whole blood in original tube. Do not aliquot. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81370; 81376 x3;

2DIS
609356

Human Leukocyte Antigens (HLA)-DR-DQ Disease Association Typing Low Resolution, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution A or B) Specimen Volume: 6 mL Collection Instructions: Send whole blood in original tube. Do not aliquot. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81375 ; 81376 x3;

SCHPV
621927

Human Papillomavirus (HPV) Detection and High-Risk Genotyping, Self-Collect, PCR, Vaginal

Specimen Requirements: Patient Preparation: For 24 hours prior to specimen self-collection, patients should avoid using feminine hygiene products. Supplies: Evalyn Brush (T990) Specimen Type: Vaginal Collection Container/Tube: Evalyn Brush Submission Container/Tube: ThinPrep/PreservCyt solution vial Specimen Volume: 3 mL of solution in ThinPrep/PreservCyt vial Specimen Stability Information: Evalyn Brush: Ambient 72 hours ThinPrep/PreservCyt Vial: Ambient (preferred) 42 days/Refrigerated 42 days Collection Instructions: 1. Specimen must be collected by the patient in a healthcare setting. 2. Provide patient with a labeled Evalyn brush and the accompanying self-collection instruction pamphlet. 3. Following patient self-collection, ensure that the Evalyn brush is tightly capped and appropriately labeled. 4. Place labeled Evalyn brush in a biosafety bag and send to the laboratory. 5. Perform the following steps prior to shipment to Mayo Clinic Laboratories: a. Label PreservCyt (ThinPrep) vial with appropriate patient information. b. Uncap PreservCyt vial. Remove pink cap from Evalyn brush. c. Depress the pink plunger on the Evalyn brush to expose the brush (white bristles). d. Vigorously plunge the brush, smashing the white brush against the bottom and interior wall of the vial 10 times to maximize sample release. Be careful not to splash. e. Discard Evalyn brush f. Tightly recap the PreservCyt vial. g. Submit the PreservCyt vial for testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87626

HPVP
62995

Human Papillomavirus (HPV) DNA Detection with Genotyping, High Risk Types by PCR with Papanicolaou Smear Reflex,

ThinPrep, Varies

Specimen Requirements: Original ThinPrep/PreservCyt collection vial is required for testing. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap Test, regardless of the volume of the aliquot (maximum aliquot volume=3 mL). For optimal interpretation, Pap smears should be collected near the middle of the menstrual cycle. Avoid douching, lubricant use, and sexual intercourse for 24 hours prior to specimen collection. Specimen source is required. Submit only 1 of the following specimens: Broom Collection Device: Specimen Type: Cervical (endocervical or ectocervical) Supplies: Thin Prep Media with Broom Kit (T056) Container/Tube: ThinPrep/PreservCyt vial Specimen Volume: 20 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the broom collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Endocervical Brush/Spatula Collection Device: Specimen Type: Ectocervix and endocervix Supplies: Thin Prep Media with Spatula and Brush Kit (T434) Container/Tube: ThinPrep/PreservCyt vial Specimen Volume: 20 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatula as quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate 1/4 or 1/2 turn in one direction. Do not over-rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial.

Specimen Minimum Volume: 17 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	
	Refrigerated	42 days	

CPT Code Information: 87626; G0476 (if appropriate); 88142 (if appropriate);

SHPV
62599

Human Papillomavirus (HPV) DNA Detection with Genotyping, High-Risk Types by PCR, SurePath, Varies

Specimen Requirements: Supplies: Cobas PCR Media Tube w/Cap (T945) Specimen Type: Cervical (endocervical or ectocervical) or vaginal Specimen Volume: 3.0 mL Collection Instructions: 1. Aliquot 3 mL SurePath specimen into Cobas PCR Media Tube w/Cap tube. 2. Bag specimens individually as they have a tendency to leak during transport. 3. Place labels on the vial and on the bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	
	Refrigerated	42 days	

CPT Code Information: 87626; G0476 (if appropriate);

HPV 62598

Human Papillomavirus (HPV) DNA Detection with Genotyping, High-Risk Types by PCR, ThinPrep, Varies

Specimen Requirements: Specimen Type: Cervical (endocervical or ectocervical) Container/Tube: ThinPrep/PreservCyt solution vial Specimen Volume: 3 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 2. Place labels on the vial and on the bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	
	Refrigerated	42 days	

CPT Code Information: 87626; G0476 (if appropriate);

HPVE6 71405

Human Papillomavirus (HPV) High-Risk E6/E7, RNA In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 5 unstained glass, "positively charged" slides with 4-microns, formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-Primary; 88364-If additional ISH;

HPVHL
70464

Human Papillomavirus (HPV) High/Low Risk, In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block Specimen Volume: Entire block Specimen Type: Slides Slides: 6 Unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-Primary; 88364-If additional ISH;

HPVLR
70465

Human Papillomavirus (HPV) Low Risk, In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 5 unstained glass, "positively charged" slides with 4-microns, formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-Primary; 88364-If additional in situ hybridization;

VHPV
619401

Human Papillomavirus (HPV) Vaginal Detection with Genotyping for High-Risk Types by PCR

Specimen Requirements: Patient Preparation: For 24 hours prior to specimen self-collection, patients should not use carbomer-containing feminine hygiene products (eg, KY Jelly [Physician Formula], Vagisil creme regular strength). Specimen Type: Vaginal Container/Tube: ThinPrep/PreservCyt solution vial Specimen Volume: 3 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 2. Place labels on the vial and on the bag. Additional Information: For additional information about carbomer-containing feminine hygiene products, including additional examples, see Cautions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Vaginal	Ambient (preferred)	42 days
	Refrigerated	42 days

CPT Code Information: 87626; G0476 (if appropriate);

FHPL
91178

Human Placental Lactogen (HPL)

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Specimen Type: Serum Container/Tube: Red top Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge at 3000 rpm for 10 minutes 2. Aliquot 1 mL of serum into a plastic vial and freeze immediately. 3. Send serum frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	90 days

CPT Code Information: 83632

HPL
70462

Human Placental Lactogen Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,

paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HBZ
618481

Human T-cell Lymphotropic Virus Type 1 (HTLV-1) bZIP Factor (HBZ), In Situ Hybridization, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 4 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-TC, Primary; 88364-TC, if additional ISH;

HTLLC
604935

Human T-Cell Lymphotropic Virus Types 1 and 2 (HTLV-1/-2) Antibody Confirmation, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	30 days
	Refrigerated	14 days

CPT Code Information: 86689

HTLVC
604934

Human T-Cell Lymphotropic Virus Types 1 and 2 (HTLV-1/-2) Antibody Screen with Confirmation, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 1 mL
Collection Instructions: Submit spinal fluid specimen from collection vial 1.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	30 days
	Refrigerated	14 days

CPT Code Information:

HTLVL
83277

Human T-Cell Lymphotropic Virus Types I and II (HTLV-I/-II) Antibody Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	
	Refrigerated	7 days

CPT Code Information: 86689

HTLVI
9539

Human T-Cell Lymphotropic Virus Types I and II Antibody Screen with Confirmation, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Refrigerated	7 days

CPT Code Information: 86790; 86689 (if appropriate);

FHTGF
75825

Human Transforming Growth Factor beta 1 (TGF-b1)

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 83520

MPS2Z
35463

Hunter Syndrome, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood.

2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405-IDS (iduronate 2-sulfatase) (eg, mucopolysacchridosis, type II), full gene sequence; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

HAD
35452

Huntington Disease, Molecular Analysis, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81271-HTT (huntingtin) (eg, Huntington disease) gene analysis; evaluation to detect abnormal (eg, expanded) alleles

MPS1Z 35465

Hurler Syndrome, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood spots: 5, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406 IDUA (iduronidase, alpha-L-) (eg, mucopolysaccharidosis type I), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FHMTB
58081

Hydrocodone and metabolites

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80361

HYDCU
62614

Hydrocodone with Metabolite Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80361; G0480 (if appropriate);

HYDMU
62615

Hydromorphone Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80361; G0480 (if appropriate);

HCQ
64947

Hydroxychloroquine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (gel tubes/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge, and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 80220

HGEM
62230

Hydroxyglutaric Acids, Glutaric Acid, Ethylmalonic Acid, and Methylsuccinic Acid, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) from heel or finger stick
 Acceptable: PerkinElmer (formerly Ahlstrom 226) filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, available newborn screening card, blood collected in tubes containing sodium heparin or EDTA and dried on filter paper
 Specimen Volume: 2 Blood spots
 Collection Instructions: 1. Do not use device or capillary tube containing ACD to collect specimen. Sodium heparin or EDTA are acceptable but must be spotted on card the same day as collected. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not stack wet specimens. 5. Do not expose specimen to heat or direct sunlight. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	123 days	FILTER PAPER
	Frozen	123 days	FILTER PAPER
	Refrigerated	123 days	FILTER PAPER

CPT Code Information: 83918

HGEMP
62300

Hydroxyglutaric Acids, Glutaric Acid, Ethylmalonic Acid, and Methylsuccinic Acid, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
 Collection Container/Tube: Preferred: Green top (sodium heparin)
 Acceptable: Lavender top (EDTA), green top (lithium heparin)
 Submission Container/Tube: Plastic vial
 Specimen Volume: 0.1 mL

Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.02 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Refrigerated (preferred)	90 days
	Frozen	90 days
	Ambient	12 days

CPT Code Information: 83918

HGEMS
62231

Hydroxyglutaric Acids, Glutaric Acid, Ethylmalonic Acid, and Methylsuccinic Acid, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection
Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.02 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	90 days
	Frozen	90 days
	Ambient	4 days

CPT Code Information: 83918

FVIST
90121

Hydroxyzine (Vistaril, Atarax), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

HIESG
619816

Hyper-IgE Syndrome Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

HCHLG
617267

Hypercholesterolemia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an

allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406 x2; 81407; 81479; 81479 (if appropriate for government payers);

HYOX
86213

Hyperoxaluria Panel, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Immediately freeze specimen.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	90 days
	Refrigerated	14 days

CPT Code Information: 82542

FAVI
91509

Hypersensitivity Pneumonitis Avian Panel

Specimen Requirements: Collection Container/Tube: Red Top or SST Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a Red-top tube(s). Serum-gel tube(s) is also acceptable. 2. Centrifuge and send 3 mL of serum refrigerated.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	365 days

CPT Code Information: 86331x5

FHSPP
75769

Hypersensitivity Pneumonitis Panel

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Collection Instructions: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.6 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 86001 x 8

HYPTG
617323

Hypertriglyceridemia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

HCMGG Hypertrophic Cardiomyopathy Gene Panel, Varies 617281

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81439

HYPBG Hypobetalipoproteinemia Gene Panel, Varies 617309

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406; 81407; 81479; 81479 (if appropriate for government payers);

88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

HYPOG
82439

Hypoglycemic Agent Screen, Serum

Specimen Requirements: Patient Preparation: Specimen must be collected during an episode of hypoglycemia. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	28 days
	Refrigerated	28 days
	Ambient	7 days

CPT Code Information: 80377; G0480-(if appropriate);

HIF2A
61681

Hypoxia-Inducible Factor Alpha (EPAS1/HIF2A) Gene, Exons 9 and 12 Sequencing, Whole Blood

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations, Whole Blood. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	30 days
	Ambient	14 days

CPT Code Information: 81479-Unlisted molecular pathology procedure

FIBUP
57703

Ibuprofen (Motrin, Advil, Nuprin), serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80329; ;

ICOSI
113518

ICOS (CD278), Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

RMALM
60778

Id MALDI-TOF Mass Spec AFB (Bill Only)

Specimen Requirements: **For billing purposes only

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87118

RMALA
62258

Id MALDI-TOF Mass Spec Anaerobe (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87076

LCHB
60214

Id, Histoplasma/Blastomyces PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87150 x 2

RMALD
60029

Ident by MALDI-TOF Mass Spec (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87077

LCCI
45463

Ident Rapid PCR Coccidioides (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87150

PCRID
64706

Identification by PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87150

RTBSP
60768

Identification Mycobacterium tuberculosis Complex Speciation, PCR (Bill Only)

Specimen Requirements: **For billing purposes only

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87150

STAP
45362

Identification Staphylococcus (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87077

STRP
45371

Identification Streptococcus (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87077

LCCA
610319

Identification, Candida auris, Rapid PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

COMM
45070

Identification, Commercial Kit (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87077

ISNGS
609732

Identification, Next-Generation Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87798

IDHQ
615859

IDH1 (R132) and IDH2 (R140 and R172) Quantitative Detection, Droplet Digital PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens
 Specimen Type: Whole blood
 Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD-B) or green top (heparin)
 Specimen Volume: 4mL
 Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood.
 Specimen Type: Bone marrow aspirate
 Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD-B) or green top (heparin)
 Specimen Volume: 2mL
 Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.
 Specimen Type: Extracted DNA from blood or bone marrow
 Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of DNA
 Specimen Volume: Entire specimen
 Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and

concentration of DNA on label. The required volume of DNA is at least 50 mcL at a concentration of 50 ng/mcL Specimen Stability: Frozen (preferred)/Refrigerated

Specimen Minimum Volume: Whole blood: 4mL; Bone marrow: 2mL; Extracted DNA: 50 mcL at 50 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Ambient	7 days

CPT Code Information: 81120; 81121;

IDHT
616498

IDH1 and IDH2 Mutation Analyses, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirements for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479;

IDH1
70468

IDH1 Mutation (R132H) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IDTRT
619649

IDH1, IDH2, and TERT Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 0481U;

I2SB
618290

Iduronate-2-Sulfatase, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on the filter paper at room temperature in a horizontal position for 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657; 83864 (if appropriate);

I2SWB
618291

Iduronate-2-Sulfatase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

IFPCA
113304

IF Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88350

IFA26
603534

IF Additional, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88350-26

IFTOA
603532

IF Additional, Technical Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88350-TC

IFPCI
113303

IF Initial (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88346

IF126
603533

IF Initial, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88346-26

IFTOI
603531

IF Initial, Technical Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88346-TC

IGAI
70470

IgA Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IGAS
87938

IgA Subclasses, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 82784; 82787 x 2;

IGDI
70471

IgD Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FIERA
75754

IgE Receptor Antibody

Specimen Requirements: Container/Tube: Preferred: Red top tube Acceptable: Serum gel tube Specimen Volume: 1.0 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Separate serum from cells immediately by centrifugation and aliquot in a polypropylene or similar plastic tube. Send 1 mL of serum frozen in plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 88184; 88185 x 2;

FFIG2
75924

IGF-2

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a serum gel tube or plain red-top tube. 2. Within 1 hour of collection, centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Freeze immediately after separation and send frozen.

Specimen Minimum Volume: 0.3 mL NOTE: Minimum volume does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Ambient	14 days
	Refrigerated	14 days

CPT Code Information: 83520**IGGI**
70473**IgG Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**IGGS**
9259**IgG Subclasses, Serum**

Specimen Requirements: Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 82784; 82787 x 4;

SFIGS
610784

IgG, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see SFIG / Cerebrospinal Fluid IgG Index Profile, Serum and Spinal Fluid. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82784

CASF
8271

IgG/Albumin Ratio, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82042; 82784;

FG4FI
57851

IgG4 Food Panel I

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 X 10

FGFP2
57904

IgG4 Food Panel II

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 9; ;

FG4FP
57591

IgG4 Food Panel VIII

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 6

IGG4I
70472

IgG4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IGGS4
84250

IgG4, Immunoglobulin Subclasses, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 82787

BCLL
89008

IGH Somatic Hypermutation Analysis, B-Cell Chronic Lymphocytic Leukemia (B-CLL), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability: Refrigerated/Ambient Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability: Refrigerated/Ambient Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL screw-top tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and indicate specimen source (blood or bone marrow). 2. The required volume of DNA is 50 mcL at a concentration of 20 ng/mcL. 3. Include volume and concentration on tube. Specimen Stability: Frozen (preferred)/Refrigerated

Specimen Minimum Volume: Blood/Bone marrow: 1 mL Extracted DNA: see Specimen Required

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81263-IGH (immunoglobulin heavy chain locus) (eg, leukemia and lymphoma, B-cell), variable region somatic mutation analysis

IGMI
70474

IgM Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IHPCA
113298

IHC Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88341

IHA26
113300

IHC Additional, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88341-26

IHPCI
113297

IHC Initial (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342

IHC26
113299

IHC Initial, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-26

IHMPC
113301

IHC Multiplex (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344

IHM26
113302

IHC Multiplex, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-26

IHMTO
113211

IHC Multiplex, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

IDH2
616903

IHD2, R172K Mutation, Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IMIPR
63508

Imipramine and Desipramine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299

IFXED
606458

Immunofixation Heavy Chain Type Delta and Epsilon, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 86334

IMFXO
800316

Immunofixation Only, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 86334; 86334-Immunofixation Delta and Epsilon (if appropriate);

FIFLC
75678

Immunofixation with Free Light Chains, Quantitative, Urine

Specimen Requirements: Specimen Type: Urine Submission Container/Tube: Two 4-mL plastic aliquot tube(s) Specimen Volume: 8 mL (Two 4-mL plastic aliquot tube(s)) Collection Instructions: 1.

Collect urine for 24 hours (NO preservative). 2. Refrigerate specimen during the 24-hour collection. 3. Send specimen refrigerate in Two 4-mL plastic aliquot tube(s) 4. Collection volume and duration are required

Specimen Minimum Volume: 4 mL (2 vials 2 mL each)

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	21 days
	Frozen	180 days

CPT Code Information: 84156; 86335; 83521 x 2;

FIXCF
75749

Immunofixation, CSF

Specimen Requirements: Specimen Type: CSF Container/Tube: sterile screw cap container
Specimen Volume: 6 mL Collection Instructions: Collect 6 mL of spinal fluid (CSF) in a sterile screw cap container. Ship frozen.

Specimen Minimum Volume: 4.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	30 days
	Refrigerated	10 days
	Ambient	6 days

CPT Code Information: 86335

IMFX
800306

Immunofixation, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see MPSS / Monoclonal Protein Study, Serum. Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 86334

FHLCA
75550

Immunoglobulin A (IgA) Heavy and Light Chain (HLC) Pairs, Kappa and Lambda with Ratio

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 83883 x 2

IGA
8157

Immunoglobulin A (IgA), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82784

IGD
9272

Immunoglobulin D (IgD), Serum

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 82784

IGE
8159

Immunoglobulin E (IgE), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For total IgE: 0.3 mL For total IgE and more than 1 allergen: 0.05 mL x number of allergen-specific tests + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785

FLCS
608250

Immunoglobulin Free Light Chains, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83521 x 2

FHLCG
75551

Immunoglobulin G (IgG) Heavy and Light Chain (HLC) Pairs, Kappa and Lambda with Ratio

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 83883 x 2

SUBIF
70620

Immunoglobulin G (IgG) Subtypes Immunofluorescence, Tissue

Specimen Type	Temperature	Time
Special	Frozen	

CPT Code Information: 88346-Primary IF; 88350-If additional IF;

IGG
8160

Immunoglobulin G (IgG), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection

Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82784

BCGR
83123

Immunoglobulin Gene Rearrangement, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas B-cell), gene rearrangement analysis to detect abnormal clonal populations; amplified methodology (eg. polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-cell) gene rearrangement analysis, evaluation to detect abnormal clonal populations;

BCGBM
31141

Immunoglobulin Gene Rearrangement, PCR, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas B-cell), gene rearrangement analysis to detect abnormal clonal populations; amplified methodology (eg. polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-cell) gene rearrangement analysis, evaluation to detect abnormal clonal populations;

BCGRV
31142

Immunoglobulin Gene Rearrangement, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: At least 5 mL Collection Instructions: 1. If the volume is large, pellet cells prior to sending. 2. Send less volume at ambient temperature or as a frozen cell pellet. Specimen Stability Information: Body fluid: Ambient 4 days/Refrigerated/Frozen Cell pellet: Frozen Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection. Specimen Stability Information: Frozen Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 Slides Specimen Stability Information: Ambient Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 5 to 10 mL Specimen Stability Information: Ambient 4 days/Refrigerated Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label Specimen Stability Information: Refrigerated/Ambient

Specimen Minimum Volume: Body and spinal fluid: 1 mL Tissue: 50 mg Extracted DNA: 50 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas B-cell), gene rearrangement analysis to detect abnormal clonal populations; amplified methodology (eg. polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-cell) gene rearrangement analysis, evaluation to detect abnormal clonal populations;

BCGET
802123

Immunoglobulin Gene Rearrangement, Tissue

Specimen Requirements: Specimen Type: Paraffin-embedded bone marrow aspirate clot or paraffin-embedded tissue Container/Tube: Paraffin block Specimen Volume: Minimum of 4 slides, 10 um preferred

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas B-cell), gene rearrangement analysis to detect abnormal clonal populations; amplified methodology (eg. polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-cell) gene rearrangement analysis, evaluation to detect abnormal clonal populations;

KCSFP
607839

Immunoglobulin Kappa Free Light Chain, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	28 days
	Refrigerated	72 hours
	Ambient	24 hours

CPT Code Information: 83521

KCSF
65572

Immunoglobulin Kappa Free Light Chain, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	28 days
	Refrigerated	72 hours
	Ambient	24 hours

CPT Code Information: 83521

IGM
8158

Immunoglobulin M (IgM), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82784

TLCU
87934

Immunoglobulin Total Light Chains, Urine

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	20 days
	Ambient	72 hours

CPT Code Information: 83883 x 2

IMMG
8156

Immunoglobulins (IgG, IgA, and IgM), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82784 x 3

FIMMC
57370

Immunoglobulins, CSF Quantitative

Specimen Requirements: Specimen Type: Spinal Fluid Source: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Submit 1 mL of spinal fluid (CSF), centrifuge and separate to remove cellular material. Send refrigerate in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	30 days
	Frozen	180 days

CPT Code Information: 82784-Immunoglobulin IgA; 82784-Immunoglobulin IgG; 82784-Immunoglobulin IgM;

IMMAU
619858

Inborn Errors of Immunity with Immune Dysregulation and Autoimmunity Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MONOS
9081

Infectious Mononucleosis, Rapid Test, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86308

IBDP2
610004

Inflammatory Bowel Disease Serology Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86671 x 2; 86036;

IMTF
35277

Inflammatory Myofibroblastic Tumors (IMT), 2p23 (ALK) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

INFXP
620151

Infliximab Quantitation with Antibodies to Infliximab, Serum

Specimen Requirements: Patient Preparation: 1. Draw blood immediately before next scheduled dose (trough specimen). For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: INFX - 80230; INXAB - 82397;

INFXR
63437

Infliximab Quantitation with Reflex to Antibodies to Infliximab, Serum

Specimen Requirements: Patient Preparation: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80230; 82397-(if appropriate);

HPFLU
610411

Influenza Virus Type A and Type B and Respiratory Syncytial Virus (RSV) RNA, Molecular Detection, PCR, Varies

Specimen Requirements: Preferred: Specimen Type: Nasopharyngeal swab Container/Tube: Sterile container with viral transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed into viral transport media (eg, M4-RT, M4 or M5), saline, or phosphate buffered saline (PBS). Media should not contain guanidine thiocyanate (GTC). Specimen Type: Bronchoalveolar lavage fluid Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media. Acceptable: Specimen Type: Oropharyngeal (throat) swab, nasal mid-turbinate, or nares/nasal swab Supplies: -Culturette (BBL Culture Swab) (T092) -Mid Turbinate (MT) Swab (FLOQSwab/COPAN) (T864) -Swab, Sterile Polyester (T507) Container/Tube: Sterile container with transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Preferred: BBL Culture Swab, COPAN Mid-turbinate Swab Acceptable: Dacron-tipped swab with plastic handle Collection Instructions: Swab must be placed into viral transport media (eg, M4-RT, M4, or M5), saline, or PBS. Media should not contain guanidine thiocyanate (GTC). Specimen Type: Bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media.

Specimen Minimum Volume: Upper respiratory tract swab: See Specimen Required; Lower respiratory specimens: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: 87631

FLUNP
802208

Influenza Virus Type A and Type B, and Respiratory Syncytial Virus (RSV), Molecular Detection, PCR, Nasopharyngeal Swab

Specimen Requirements: Specimen Type: Nasopharyngeal swab Container/Tube: Sterile container with viral transport media Collection Instructions: 1. Collect specimen by swabbing back and

forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed in viral transport media (for example, M4-RT, M4, or M4 media).

Specimen Minimum Volume: Nasopharyngeal swab submitted in minimum volume of 0.3 mL of viral transport media (eg, M4-RT)

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87631

ATAXP
617506

Inherited Ataxia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

CMSP
617519

Inherited Congenital Myasthenic Syndrome Gene Panel, Varies

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

EDMDP
617558

Inherited Emery-Dreifuss Gene Panel, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81404; 81406 x 2; 81479; 81479 (if appropriate for government payers);

AFTDP
617493

Inherited Frontotemporal Dementia and Amyotrophic Lateral Sclerosis Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if

DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403; 81406 x 9; 81404 x 3; 81405 x 2; 81407; 81479; 81479 (if appropriate for government payers);

LGCMF
617623

Inherited Limb-Girdle Muscular Dystrophy and Congenital Myasthenic Syndrome Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be

noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

IMSNP
617584

Inherited Motor and Sensory Neuropathy Gene Panel, Varies

Specimen Requirements: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send cord blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 2 Swabs Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower

quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81448

MNDP
617649

Inherited Motor Neuron Disease Gene Panel, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

IMNP
617571

Inherited Motor Neuropathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole

blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mL at a concentration of 75 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404 x 2; 81405; 81406 x 2; 81479; 81479 (if appropriate for government payers);

MDYSP
617636

Inherited Muscular Dystrophy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions.

Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

PARDP
617675

Inherited Parkinson Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be

extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403; 81404 x 3; 81405 x 4; 81406 x 9; 81407; 81408; 81479; 81479 (if appropriate for government payers);

RABMP
617701

Inherited Rhabdomyolysis and Metabolic Myopathy Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

ISNP
617597

Inherited Sensory Neuropathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81448

SMCP
617727

Inherited Skeletal Muscle Channelopathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403; 81406 x 3; 81479; 81479 (if appropriate for government payers);

Inherited Spastic Paraplegia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 µL at a concentration of 75 ng/µL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81448

Inhibin A and B, Tumor Marker, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 83520-Inhibin B; 86336-Inhibin A;

INHA
81049

Inhibin A, Tumor Marker, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 86336

INHB
88722

Inhibin B, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 83520

INHIB
70476

Inhibin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

INHU
82789

Insulin (Human), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

INAB
8666

Insulin Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86337

INSUL
70478

Insulin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

INSFT
62990

Insulin, Free and Total, Serum

Specimen Requirements: Patient Preparation: 1. Fasting (8 hours) 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2.45 mL Collection Instructions: 1. Avoid hemolysis 2. Label specimens with corresponding collection times. 3. Serum-gel tubes should be centrifuged within 2 hours of collection. 4. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. 5. Send specimen refrigerated Additional Information: If multiple specimens are collected, send separate order for each

specimen.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	24 hours

CPT Code Information: 83527-Free Insulin; 83525-Total Insulin;

INS
8664

Insulin, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Fasting (8 hours) Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Avoid hemolysis 2. Label specimens with corresponding collection times. 3. Within 2 hours of collection centrifuge and aliquot serum into a plastic vial. Additional Information: If multiple specimens are drawn, send separate order for each specimen.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	7 days

CPT Code Information: 83525

IGFGP
36365

Insulin-Like Growth Factor 1 and Insulin-Like Growth Factor-Binding Protein 3 Growth Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: 2 Plastic vials Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge within 1 hour of collection. 2. Aliquot into 2 plastic vials in equal portions.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 83520; 84305;

IGFMS
62750

Insulin-Like Growth Factor-1, Mass Spectrometry, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code Information: 84305

IGFB3
83300

Insulin-Like Growth Factor-Binding Protein 3, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Centrifuge promptly and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code Information: 83520

FGBP1 75670

Insulin-like Growth Factor-binding Protein-1 (IGFBP-1)

Specimen Requirements: Collection container/tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down within one hour and send 0.5 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.1 mL Note: This volume does not permit repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	
	Refrigerated	48 hours

CPT Code Information: 83520

INSM1 602573

Insulinoma-Associated Protein 1 (INSM1), Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IFG23
607216

Intact Fibroblast Growth Factor 23, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 83520

INI1
70477

Integrase Interactor 1 (INI1/BAF47) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IEHCG
606587

Interference Evaluation Heterophile, Beta-Human Chorionic Gonadotropin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Sarstedt Aliquot Tube 5 mL (T914)

Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 84702 x 2

IETG
610069

Interference Evaluation Heterophile, Thyroglobulin Tumor Marker, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: None (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 84432; 86800; 84432;

IRF8
620064

Interferon Regulatory Factor 8 (IRF8) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FIFNY
57586

Interferon-gamma (IFN-γ) Serum**Specimen Requirements:**

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	365 days

CPT Code Information: 83520

FIN1A
75908

Interleukin 1-Alpha

Specimen Requirements: Patient preparation: Patient should NOT be on any corticosteroids, anti-inflammatory medications, or pain killers, if possible, for at least 48 hours prior to specimen collection. Specimen Type: Serum Collection Container/Tube: Preferred: Red top Acceptable: SST Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. 2. Centrifuge and aliquot 3 mL of serum into a plastic vial. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	30 days

CPT Code Information: 83520

FIL2M
57826

Interleukin 2

Specimen Requirements: Serum Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial. Separate specimens must be submitted when multiple tests are ordered. Note: Cytokine levels may demonstrate diurnal variation. For longitudinal comparison, it is recommended that cytokine levels be determined at the same time of day.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen	365 days

CPT Code Information: 83520

IL28Q
610056

Interleukin 28B (IL28B) Variant (rs12979860), Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Specimen Volume: 100 mcL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year /Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81283

IL5P
36519

Interleukin 5, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	21 days
	Refrigerated	24 hours

CPT Code Information: 83520

IL1B
622327

Interleukin-1 Beta, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	21 days

CPT Code Information: 83520

SIL2R
622328

Interleukin-2 Receptor Alpha Soluble, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	21 days

CPT Code Information: 83520

FIL4S
57585

Interleukin-4 (IL-4) Serum

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red or SST Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 83520

IL6DX
618776

Interleukin-6, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	24 hours

CPT Code Information: 83529

FIL8S
57563

Interleukin-8 (IL-8) Serum

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red or SST Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 83520

IFBA
9335

Intrinsic Factor Blocking Antibody, Serum

Specimen Requirements: Patient Preparation: 1. Patient should be fasting for 8 hours. 2. This test should not be performed on patients who have received a vitamin B12 injection or radiolabeled vitamin B12 injection within the previous 2 weeks. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86340

UIOD
9549

Iodine, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. 2. If this test is used in conjunction with the (131)I uptake test, then specimen collection should begin immediately after the dose of (131)I is given (ie, the patient should void and discard urine just prior to the (131)I dose, and all subsequent urine should be collected for the next 24 hours). The last void should be included in the collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic aliquot container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	146 days
	Ambient	146 days
	Frozen	146 days

CPT Code Information: 83789

IOD
81574

Iodine, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Ambient	21 days
	Frozen	21 days

CPT Code Information: 83789

IODCU
610708

Iodine/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine may interfere with inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 83789 ; 82570;

HEXP
606984

Iohexol, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Green top (heparin) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Heparin	Refrigerated (preferred)	7 days
	Frozen	35 days
	Ambient	7 days

CPT Code Information: 82542

HEXU
606985

Iohexol, Timed Collection, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: Collect a timed urine specimen. Timing may be variable and patient dependent.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	35 days
	Ambient	7 days

CPT Code Information: 82542

SFEC
621385

Iron and Total Iron-Binding Capacity, Serum

Specimen Requirements: Patient Preparation: 1. Fasting (12 hours) 2. For 24 hours before collection, patient should not take iron-containing supplements. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood before noon (preferred). 2. Within 2 hours of collection, serum gel tubes should be centrifuged. 3. Within 2 hours of collection, red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days

CPT Code Information: 83540-Iron; 83550-Iron-binding capacity;

FET
8350

Iron, Liver Tissue

Specimen Requirements:

Specimen Minimum Volume: Needle biopsy: See Specimen Required; 2 mm x 2 mm (punch): 0.3 mg by dry weight

Transport Temperature:

Specimen Type	Temperature	Time
Liver Tissue	Refrigerated (preferred)	
	Ambient	
	Frozen	

CPT Code Information: 83540**IRON**
2502**Iron, Serum**

Specimen Requirements: Only orderable as part of profile. For more information see SFEC / Iron and Total Iron-Binding Capacity, Serum Patient Preparation: 1. Fasting (12 hours) 2. For 24 hours before collection, patient should not take iron-containing supplements. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood before noon (preferred). 2. Within 2 hours of collection, serum gel tubes should be centrifuged. 3. Within 2 hours of collection, red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	365 days

CPT Code Information: 83540-Iron**FIVCZ**
75575**Isavuconazole (CRESEMBA) LC-MS/MS**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Allow to clot for 30 to 60 minutes, spin down and send 1 mL of serum Frozen in a sterile, screw top tube.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Ambient	14 days
	Refrigerated	14 days

CPT Code Information: 80299

FISST

75887

Isavuconazole Susceptibility Testing

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen volume: Organism in pure culture Complete and submit with specimen: 1.Fungus Testing Lab request form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in a large infectious container (T146) and label as etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999-Unlisted Microbiology Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen organism.); 87188 x 4 for mould MIC microdilution or agar dilution (if appropriate); 87186 x 4 for yeast MIC microdilution or agar dilution (if appropriate);

ISPCA

113306

ISH Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88364

ISA26

113308

ISH Additional, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88364-26

ISTOA
113217

ISH Additional, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88364-TC

ISPCI
113305

ISH Initial (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365

ISH26
113307

ISH Initial, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-26

ISTOI
113216

ISH Initial, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-TC

ISLET
70479

Islet 1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IA2
89588

Islet Antigen 2 (IA-2) Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial
Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86341

ATR
113383

Isoagglutinin Titer, Anti-A, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5mL (T914) Collection
Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Pediatric
Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Ambient (preferred)	4 days
	Frozen	10 days
	Refrigerated	10 days

CPT Code Information: 86886

BTR
113384

Isoagglutinin Titer, Anti-B, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Pediatric
Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Ambient (preferred)	4 days
	Frozen	10 days
	Refrigerated	10 days

CPT Code Information: 86886

IHDI
82773

Isocyanate HDI, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

IMDI
82774

Isocyanate MDI, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ITDT
82775

Isocyanate TDI, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FISON
91349

Isoniazid (INH)

Specimen Requirements: Specimen Type: Serum Container/Tube: Red-top Specimen Volume:
2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable.
Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

ISPG
82768

Ispaghula, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FITZS
75882

Itraconazole Susceptibility Testing

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Testing Lab request form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in a large infectious container (T146) and label as etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999-Unlisted Microbiology Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen organism.); 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate);

ITCON
81247

Itraconazole, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top (serum gel/SST are not acceptable) Acceptable: None Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.18 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	29 days
	Ambient	29 days
	Frozen	29 days

CPT Code Information: 80189

JCHAI
7048

J-Chain Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

JMACK
82819

Jack Mackerel, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

JAK2P
606821**JAK2 (9p24.1) Rearrangement, Hematologic Disorders, FISH, Tissue**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5- micron- thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274-w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

JAKXB
89189**JAK2 Exon 12 and Other Non-V617F Mutation Detection, Blood**

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	5 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 0027U-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder), exon 12 sequence and exon 13 sequence, if performed

JAKXM
60025

JAK2 Exon 12 and Other Non-V617F Mutation Detection, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: EDTA (lavender top) Acceptable: ACD (yellow top) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	5 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 0027U-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder), exon 12 sequence and exon 13 sequence, if performed

JAKXR
44178

JAK2 Exon 12-15 Sequencing, Polycythemia Vera Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information, see PVJAK / Polycythemia Vera, JAK2 V617F with Reflex to JAK2 Exon 12-15, Sequencing for Erythrocytosis, Varies.

Specimen Minimum Volume: Blood: 8 mL Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	5 days
	Ambient	5 days

CPT Code Information: 0027U-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder), exon 12 sequence and exon 13 sequence, if performed

JAK2B
88715

JAK2 V617F Mutation Detection, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2.

Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant

JAK2M
31155

JAK2 V617F Mutation Detection, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant

JAKFM
618647

JAK2 V617F Mutation Detection, Bone Marrow

Specimen Requirements: Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81270**JAK2V**
31156**JAK2 V617F Mutation Detection, Varies**

Specimen Requirements: Specimen Type: Extracted DNA from blood or bone marrow
 Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen
 Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and indicate volume and concentration of the DNA. Specimen Stability Information: Refrigerated/Ambient

Specimen Minimum Volume: 50 microliter at a concentration of 20 ng/microliter**Transport Temperature:**

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant**FJPE**
57921**Jalapeno/Chipotle (Capsicum annuum) IgE**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

JCEDR
82865

Japanese Cedar, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FJCQP
75758

JC Polyoma Virus DNA, Quantitative Real-Time PCR, Plasma

Specimen Requirements: Specimen Type: Plasma (Preferred) Collection Container/Tube: Lavender-top (EDTA) tube or, yellow-top (ACD-A) or white top (PPT) tube(s). Specimen Volume: 0.7 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Draw blood in a lavender-top (EDTA), yellow-top (ACD-A) or white top (PPT) tube(s). 2. Centrifuge and transfer 0.7 mL EDTA, or ACD-A or PPT plasma to a screw-cap plastic vial. Submit frozen.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 87799

JCV
70475

JC Virus Detection by In Situ Hybridization

Specimen Requirements: Specimen Type: Formalin-fixed, paraffin-embedded tissue block
Supplies: Pathology Packaging Kit (T554) Specimen Volume: Entire block Specimen Type: Slides
Slides: 4 Unstained glass, positively-charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-Primary; 88364-If additional ISH;

LCJC
800170

JC Virus, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5mL (T914) Container/Tube:
Preferred: Aliquot tube Acceptable: Sterile screw cap vial Specimen Volume: 0.5 mL Collection
Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

JCPCR
618305

JC Virus, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Preferred: Vial number 2 Acceptable: Any
vial number Submission Container/Tube: Sterile screw cap vial Specimen Volume: 0.5 mL Collection
Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

JO1
80179

Jo 1 Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235

JOHN
82900

Johnson Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

JIP
621699

Joint Infection Panel, PCR, Synovial Fluid

Specimen Requirements: Specimen Type: Synovial fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: 1. Do not process or treat sample in any way. 2. Label specimen as synovial fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Synovial Fluid	Refrigerated (preferred)	7 days
	Ambient	4 hours

CPT Code Information: 87999

JUNE
82893

June Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FWJR
57953

Juniper Western (Juniperus occidentalis) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

KLISH
70615

Kappa and Lambda Light Chain mRNA, In Situ Hybridization (ISH) Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -5 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-TC, primary; 88364-TC, if additional ISH;

KAIHC
70482

Kappa Light Chain Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KAIPC
113330

KappaLambda IHC (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342

K11CS
610581

Kelch-Like Protein 11 Antibody, Cell Binding Assay, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 0432U

K11CC
610580

Kelch-Like Protein 11 Antibody, Cell Binding Assay, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 0432U

KRT34 70492

Keratin (34BE12) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRTAE 70493

Keratin (AE1/AE3) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRTOS 70495

Keratin (OSCAR) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT19 70490

Keratin 19 (KRT19) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT20 70491

Keratin 20 (KRT20) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT5 606999

Keratin 5 (KRT5) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT7 70488

Keratin 7 (KRT7) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

K818 622524

Keratin 8 and 18 (KRT8/18), Technical Component only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FKEMS
75730

Ketamine and Metabolite Screen, Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Plasma Collection Container/Tube: Lavender-top or pink top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in an EDTA (lavender top or pink top) tube(s). Plasma gel tube is not acceptable. 2. Centrifuge and send 3 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	14 days
	Frozen	270 days
	Ambient	14 days

CPT Code Information: 80307-Screen; 80357-Confirmation, if appropriate;

KETGP
608024

Ketone Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The

solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch
 Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

SKETC
606546

Ketones, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated	72 hours

CPT Code Information: 81003

KI67
70481

Ki-67 (MIB-1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-Primary; 88341-If additional IHC;

KI67B
70588

Ki-67(MIB-1), Breast, Quantitative Immunohistochemistry, Automated

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing invasive or metastatic breast carcinoma Acceptable: 2 Unstained sections, containing invasive or metastatic breast carcinoma, on charged slides cut at 4 microns less than 1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Also send one hematoxylin and eosin-stained slide if possible. Submission Container/Tube: Pathology Packaging Kit Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88361

Ki-67(MIB-1), Breast, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains. Supplies: Pathology Packaging Kit (T554)
Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing invasive or metastatic breast carcinoma Acceptable: 2 unstained sections, containing invasive or metastatic breast carcinoma, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit (T554)
Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue.
Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

Ki-67(MIB-1), Gastrointestinal/Pancreatic Neuroendocrine Tumors, Quantitative Immunohistochemistry, Automated

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing neuroendocrine tumor of the pancreas or gastrointestinal (GI) tract including metastases. Acceptable: 2 unstained sections, containing neuroendocrine tumor of the pancreas or GI tract including metastases, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit Collection Instructions: Submit formalin-fixed, paraffin-embedded tissue block. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88361

Ki-67(MIB-1), Gastrointestinal/Pancreatic Neuroendocrine Tumors, Quantitative Immunohistochemistry, Manual

Specimen Requirements: This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains. Supplies: Pathology Packaging Kit (T554)
 Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing neuroendocrine tumor of the pancreas or gastrointestinal (GI) tract including metastases. Acceptable: 2 unstained sections, containing neuroendocrine tumor of the pancreas or GI tract including metastases, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit Collection Instructions: Submit formalin-fixed, paraffin-embedded tissue block Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

KI67P
72130

Ki-67(MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing carcinoid/atypical carcinoid tumor of the lung including metastases. Acceptable: 2 Unstained sections containing carcinoid/atypical carcinoid tumor of the lung including metastases on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Container/Tube: Pathology Packaging Kit Collection Instructions: Submit formalin-fixed, paraffin-embedded tissue block. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88361

KIPM
72131

Ki-67(MIB-1), Pulmonary, Quantitative Immunohistochemistry, Manual

Specimen Requirements: Only orderable as a reflex. For more information see KI67P / Ki-67 (MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated. Supplies: Pathology Packaging

Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing carcinoid/atypical carcinoid of the lung including metastases. Acceptable: 2 Unstained sections on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Container/Tube: Pathology Packaging Kit Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block. 2. Attach the green pathology address label included in the kit to the outside of the transport container. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

KIMEL
70483

Ki67 + Melan A Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

KIDBN
82619

Kidney Bean (Red), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

KIDST
605761

Kidney Stone Analysis

Specimen Requirements: Supplies: Stone Analysis Collection Kit (T550) Sources: Bladder, kidney, prostatic, renal, or urinary Specimen Volume: Entire dried calculi specimen Collection Instructions: 1. Have patient collect specimen using the Patient Collection Instructions for Kidney Stones. 2. For detailed instructions on kidney stone preparation and packaging, see Kidney Stone Packaging Instructions. 3. Prepare stone by cleaning any blood or foreign material from the stone with deionized water. 4. Place stone on a clean filter or paper towel and let dry at ambient temperature for a minimum of 24 hours. 5. Do not place stone directly in a bag. If specimen is received in a bag, either transfer stone into a screw-capped, plastic container or place bag containing stone in a screw-capped, plastic container. 6. Indicate source of specimen on the outside of the container (eg, left kidney, bladder, right ureter). 7. Repeat steps 2 through 5 for each stone received. Specimen Stability Information: Ambient (preferred) 2 years/Refrigerated 1 year/Frozen 1 year

Specimen Minimum Volume: Entire stone

Transport Temperature:

Specimen Type	Temperature	Time
Stone	Ambient (preferred)	
	Frozen	365 days
	Refrigerated	365 days

CPT Code Information: 82365

KKBRP
65202

Kingella kingae, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Kingella kingae DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

KKRP
65201

Kingella kingae, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Kingella kingae* DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Synovial fluid Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days Specimen Type: Fresh tissue or biopsy Sources: Bone, joint, synovium, heart valve, aorta, or endocardium Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3)- approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days/ Frozen <7 days Preferred Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Bone, joint, synovium, heart valve, aorta, or endocardium Supplies: Tissue Block Container (T553) Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Bone, joint, synovium, heart valve, aorta, or endocardium Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Fluid/fresh tissue or biopsy: See Specimen Required Paraffin-embedded tissue block: Two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87798

KIT
70485

KIT Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only

Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KITQ
620901

KIT p.Asp816Val Variant Analysis, Quantitative, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA 2. Provide indication of volume of DNA. Specimen Stability Information: Frozen (preferred)/ Refrigerate/Ambient Additional Information: We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed, and a charge will be applied. Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue (FFPE) Container/Tube: Paraffin block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Specimen Stability Information: Ambient Additional Information: Decalcified core biopsies are not accepted.

Specimen Minimum Volume: Blood, bone marrow: 1 mL; Extracted DNA: 50 mcL at 10 ng/mcL concentration; Paraffin block: 1 block

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81273

KIWI
82761

Kiwi Fruit, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

XYMF
35307

Known 45,X, Mosaicism Reflex Analysis, FISH, Whole Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 4 mL Collection Instructions 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Other anticoagulants are not recommended and are harmful to the viability of the cells. 4. Cord blood is acceptable Additional Information: 1. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 2. Specimen cannot be frozen.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate);

KRABZ
35433

Krabbe Disease, Full Gene Analysis and Large (30 kb) Deletion, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406 GALC (galactosylceramidase) (eg, Krabbe disease), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

KRASW
616452

KRAS Somatic Mutation Analysis, Peritoneal Fluid

Specimen Requirements: Container/Tube: 50-mL Falcon tube Preferred: Fresh, peritoneal washing; no fixatives added to wash Specimen Volume: Two 50-mL Falcon tubes Collection Instructions: Containers must be labeled with two unique patient identifiers.

Specimen Minimum Volume: 100 mL of peritoneal washing

Transport Temperature:

Specimen Type	Temperature	Time
Peritoneal	Refrigerated (preferred)	10 days
	Ambient	5 days

CPT Code Information: 81275-KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene) (eg, carcinoma) gene analysis, variants in codons 12 and 13; 81276-KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene) (eg, carcinoma) gene analysis, additional variants;

KRAS 610679

KRAS Somatic Mutation Analysis, Tumor

Specimen Requirements: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue slide Slides: 1 Hematoxylin and eosin stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81275-KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene) (eg, carcinoma) gene analysis, variants in codons 12 and 13; 81276-KRAS additional variant(s); 88381-Microdissection, manual;

LBCS 620895

Labile Bound Copper, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free Specimen Vial (T173) -Metal Free B-D Tube (No Additive), 6 mL (T184) Collection Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 0.75 mL Collection Instructions: 1. For complete instructions, see Metals Analysis Specimen Collection and Transport. 2. Allow the specimen to clot for 30 minutes; then

centrifuge the specimen to separate serum from the cellular fraction. 3. Remove the stopper. Carefully pour specimen into metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 4. Freeze sample on dry ice immediately after pouring off the serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	28 days	METAL FREE

CPT Code Information: 82525

LACO
62905

Lacosamide, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. For sustained-release formulations ONLY, collect specimen a minimum of 12 hours after last dose. 3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80235

LDBF
606612

Lactate Dehydrogenase (LDH), Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, Jackson Pratt [JP] drain) -Pericardial -Synovial -Cerebral spinal fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and

source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Ambient (preferred)	7 days
	Refrigerated	48 hours

CPT Code Information: 83615

LD
8344

Lactate Dehydrogenase (LDH), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Ambient (preferred)	7 days
	Frozen	30 days
	Refrigerated	48 hours

CPT Code Information: 83615

LAPYP
616609

Lactate Pyruvate Panel, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (Sodium heparin)
Acceptable: Green top (Lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL
Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 83605; 84210;

LACS1
601685

Lactate, Plasma

Specimen Requirements: Collection Container/Tube: Gray top (potassium oxalate/sodium fluoride) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collection must be at least 1 mL in a 2-mL collection tube or at least 2 mL in a 4-mL collection tube. 2. Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma NaFl-KOx	Refrigerated (preferred)	14 days
	Ambient	8 hours

CPT Code Information: 83605

LASF1
601821

Lactic Acid, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge to remove any cellular material.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	60 days
	Refrigerated	24 hours
	Ambient	3 hours

CPT Code Information: 83605

FLACF
57827

Lactoferrin, Fecal by ELISA

Specimen Requirements: Preferred Specimen Type: Unpreserved stool Supplies: Sterile stool container Container/Tube: Sterile stool container Specimen Volume: 5 g Specimen Stability Information: Refrigerated Collection Instructions: 5 grams fresh, unpreserved stool or stool preserved in Cary-Blair transport media (Agar Swab is not acceptable), shipped refrigerate in a plastic leak-proof container.

Specimen Minimum Volume: 1 gm

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 83630

FLACQ
75813

Lactoferrin, Quantitative, Stool

Specimen Requirements: Preferred Specimen Type: Unpreserved stool Supplies: Sterile stool container Container/Tube: Sterile stool container Specimen Volume: 1 g Specimen Stability Information: Refrigerated Collection Instructions: 1 gram fresh, unpreserved stool, ship refrigerated

Specimen Minimum Volume: 0.3 gram

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Refrigerated (preferred)	14 days
	Frozen	21 days

CPT Code Information: 83631

LACTO
70625

Lactotransferrin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per

test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FLBAE
57572

Ladybeetle Multicolored Asian (Harmonia axyridis) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

LAMQ
82682

Lamb's Quarter, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LAMB
82699

Lamb, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LAIHC
70499

Lambda Light Chain Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LAMO
80999

Lamotrigine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect blood immediately before next scheduled dose. 2. Only for sustained-release formulations, collect blood a minimum of 12 hours after last dose. 3. Within 2 hours of collection, centrifuge. 4. For red-top tubes, immediately aliquot serum into a plastic vial. 5. For serum gel tubes, the serum must be aliquoted into a plastic vial within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80175

LANGR
70496

Langerin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LANG
82349

Langust (Lobster), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LATX
82787

Latex, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FLDL
75160

LDL Cholesterol, Direct

Specimen Requirements: Container/Tube: Preferred: Serum gel tube Acceptable: Red top tube Specimen Volume: 1.0 mL Collection Instructions: Draw blood in a serum gel tube(s), plain red-top tube is also acceptable. Spin down and send 1 mL of serum refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days

CPT Code Information: 83721

PBOU
608894

Lead Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -PBUOE / Lead Occupational Exposure, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83655

PBUOE
608898

Lead Occupational Exposure, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic vial or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83655; 82570;

PBPF
619722

Lead Profile Occupational Exposure, Blood

Specimen Requirements: Both EDTA whole blood and heparin whole blood specimens are required. Patient Preparation: 1. High concentrations of gadolinium and iodine are known to potentially interfere with most inductively couple plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. 2. Patient should abstain from alcohol for 24 hours prior to specimen collection. Specimen Type: EDTA Whole blood Supplies: -Metal Free B-D Tube (EDTA), 6 mL (T183) -Metal Free EDTA 3 mL Tube (T989) -Microtainer (EDTA) Tube, 0.5 mL (T174) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 36777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) or BD Microtainer with EDTA (0.5 mL) (T174) Specimen Volume: 2 mL Collection Instructions: 1. See Metal Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Refrigerate specimen as soon as possible after collection. Specimen Type: Heparin Whole blood Container/Tube: Preferred: Green top (Sodium heparin) Acceptable: Dark blue top (metal free heparin), green top (lithium heparin), or lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: Refrigerate specimen as soon as possible after collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated	7 days

CPT Code Information: 83655; 82542;

PBU
8600

Lead, 24 Hour, Urine

Specimen Requirements:

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83655

PBDC
113400

Lead, Capillary, with Demographics, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal testing. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Microtainer (EDTA) Tube, 0.5 mL (T174) Collection Container/Tube: BD Microtainer MAP (microtube for automated process) with EDTA Specimen Volume: 0.4 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83655

PBHA
8495

Lead, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Head, beard, mustache, chest, pubic Specimen Volume: 0.2 g Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time
Hair	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 83655

PBNA
89857

Lead, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Fingernails or toenails Specimen Volume: 0.2 g Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing. 2. Clippings should be taken from all 10 fingernails or toenails.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time
Nail	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 83655

PBDV
113401

Lead, Venous, with Demographics, Blood

Specimen Requirements:

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83655

PBU CR
608908

Lead/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83655; 82570;

PBCU
608904

Lead/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -PBU CR / Lead/Creatinine Ratio, Random, Urine -HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83655

LEFLU
60292

Leflunomide Metabolite (Teriflunomide), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood no sooner than 12 hours (trough value) after last dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Ambient (preferred)	28 days
	Frozen	28 days
	Refrigerated	28 days

CPT Code Information: 80193

LAGU
81268

Legionella Antigen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 0.5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Excessively bloody or very turbid specimens containing protein, cells, or particulates will be canceled. They can inhibit the function of the test. 4. Centrifuging to remove particulates is not approved. 5. Specimens with any dyes or unnatural color are not acceptable and will be canceled.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	24 hours

CPT Code Information: 87899

LEGI
8204

Legionella Culture, Varies

Specimen Requirements: Specimen Type: Lower respiratory Sources: Bronchoalveolar lavage, bronchial aspirate/brushing/lavage/washing, tracheal/endotracheal secretions/aspirate, sputum

Container/Tube: Sterile container Specimen Volume: Entire collection Specimen type: Fresh tissue or biopsy Sources: Lung, pleura, heart valve, pericardium Container/Tube: Sterile container Specimen Volume: 5 mm(3) Collection Instructions: Aseptically collect a 1 to 2 cm(3) piece of tissue whenever possible Specimen type: Fluid Sources: Pericardial, pleural, chest, chest tube drainage, thoracentesis, empyema Container/Tube: Sterile container Specimen Volume: 2 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	48 hours

CPT Code Information: 87081-Legionella culture; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87176-Tissue processing (if appropriate);

SLEG
8122

Legionella pneumophila (Legionnaires Disease), Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86713

LEGRP
89564

Legionella species, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Legionella DNA is unlikely. Specimen Type: Lower respiratory Sources: Bronchoalveolar lavage, bronchial aspirate/brushing/lavage/washing, tracheal/endotracheal secretions/aspirate, sputum Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Fresh tissue or biopsy Sources: Lung, pleura, heart valve, pericardium Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions:

Aseptically collect a 1 to 2 cm(3) piece of tissue whenever possible Specimen type: Fluid Sources: Pericardial, pleural, chest, chest tube drainage, thoracentesis, empyema Container/Tube: Sterile container Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87801

LEIS
86219

Leishmaniasis (Visceral) Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86717

FLEMG
57643

Lemon IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), a serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum in a plastic vial. 3 Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

LEM
82678

Lemon, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FLENG
57685

Lentil IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

LEN
82885

Lentil, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LEPD
82849

Lepidoglyphus destructor, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FLEP
91339

Leptin

Specimen Requirements: Patient Preparation: Fasting 8-12 hours is recommended. Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Separate from cells within 45 minutes of

venipuncture and send 1 mL of serum frozen in a plastic vial. Note: EDTA (lavender-top) plasma is an acceptable alternate.

Specimen Minimum Volume: 0.5 mL NOTE: Minimum volume does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	
	Refrigerated	14 days
	Ambient	8 days

CPT Code Information: 83520

LEPDT
65183

Leptospira, IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Additional Information: If acute and convalescent specimens are being obtained to determine seroconversion, they should be collected 2 or more weeks apart.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86720

FLETG
57639

Lettuce IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

LETT
82805

Lettuce, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LLTOT
621505

Leukemia and Lymphoma Immunophenotyping, Technical Only, Tissue

Specimen Requirements: Submit 1 of the following specimens: Preferred Specimen Type: Tissue
Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: 5 mm(3) or larger biopsy
Collection Instructions: 1. Place tissue into a sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent). 2. Send intact specimen (do not mince). 3. Specimen cannot be fixed. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days Acceptable
Specimen Type: Fine needle aspirate (FNA) Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent)
Specimen Volume: Entire collection Collection Instructions: 1. Collect FNA and transfer entire collection into a sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent). 2. Send intact specimen (do not mince). 3. Specimen cannot be fixed. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days

Specimen Minimum Volume: Tissue: 1 mm(3); Fine needle aspirate: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); Additional CPTs may be added if consultative help is needed with the case, or algorithm dictates Mayo consultant involvement.; 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

LLTOF
34488

Leukemia and Lymphoma Phenotyping, Technical Only, Varies

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); Additional CPTs may be added if consultative help is needed with the case, or algorithm dictates Mayo consultant involvement.; 88187-Flow cytometry interpretation, 2 to 8 markers (if appropriate); 88188-Flow cytometry interpretation, 9 to 15 markers (if appropriate); 88189-Flow cytometry interpretation, 16 or more markers (if appropriate);

LLPB
800433

Leukemia/Lymphoma Immunophenotyping, Flow Cytometry, Blood

Specimen Requirements: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Slides: If possible, include 5 to 10 unstained blood smears labeled with two unique identifiers Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

LLPT
19499

Leukemia/Lymphoma Immunophenotyping, Flow Cytometry, Tissue

Specimen Requirements: Submit 1 of the following specimens: Preferred Specimen Type: Tissue Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: 5 mm(3) or larger biopsy Collection Instructions: 1. Place tissue into a sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent). 2. Send intact specimen (do not mince) 3. Specimen cannot be fixed. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days Acceptable Specimen Type: Fine needle aspirate (FNA) Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: Entire collection Collection Instructions: 1. Collect FNA and transfer entire collection into a sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent). 2. Send intact specimen (do not mince) 3. Specimen cannot be fixed. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days

Specimen Minimum Volume: 1 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

LCMS
3287

Leukemia/Lymphoma Immunophenotyping, Flow Cytometry, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or green top (sodium heparin) Specimen Volume: 6 mL Slides: If possible, include 5 to 10 unstained blood smears labeled with two unique identifiers Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or green top (sodium heparin) Specimen Volume: 1 to 5 mL Slides: If possible, include 5 to 10 unstained bone marrow aspirate smears, which must be labeled with two unique identifiers. Collection Instructions: 1. Submission of bilateral specimens is not required.

2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days Note: A fresh (less than 4 days post-collection), unfixed, non-embedded bone marrow core biopsy, bone or bone lesion is acceptable as an equivalent source for bone marrow aspirate for this test only in the event of a dry tap during the bone marrow harvesting procedure. Indicate "dry tap" in performing lab notes or paperwork when submitting this specimen type. Specimen Type: Fluid Sources: Serous effusions, pleural fluid, pericardial fluid, abdominal (peritoneal) fluid Container/Tube: Body fluid container Specimen Volume: 20 mL Collection Instructions: 1. If possible, fluids other than spinal fluid should be anticoagulated with heparin (1 U/mL of fluid). 2. Label specimen with fluid type. Specimen Stability Information: Refrigerated 4 days/Ambient 4 days Additional Information: The volume of fluid necessary to phenotype the lymphocytes or blasts in serous effusions depends upon the cell count in the specimen. Usually, 20 mL of pleural or peritoneal fluid is sufficient. Smaller volumes can be used if there is a high cell count. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. An original cytopsin preparation (preferably unstained) should be included with the spinal fluid specimen so correlative morphologic evaluation can occur. 2. Label specimen as spinal fluid. Specimen Stability Information: Refrigerated 4 days/Ambient 4 days Additional Information: The volume of fluid necessary to phenotype the lymphocytes or blasts in spinal fluid depends upon the cell count in the specimen. A cell count should be determined and submitted with the specimen. Usually 1 to 1.5 mL of spinal fluid is sufficient. Smaller volumes can be used if there is a high cell count. If cell count is less than 10 cells/mcL, a larger volume of spinal fluid may be required. When cell counts drop below 5 cells/mcL, the immunophenotypic analysis may not be successful.

Specimen Minimum Volume: Blood: 3 mL Bone marrow: 0.5mL Spinal fluid: 1 mL Fluid from serous effusions: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

LAD1
81155

Leukocyte Adhesion Deficiency Type 1, CD11a/CD18 and CD11b/CD18 Complex Immunophenotyping, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 3

LECT2 70497

Leukocyte Cell-Derived Chemotaxin 2 (LECT2), Immunostains Without Interpretation

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TLTE4 606355

Leukotriene E4, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Start collection within a few hours of symptom onset and collect urine for 24 hours 2. No preservative preferred 3. Aliquot urine into a plastic vial and send frozen. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collection.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	28 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 82542

RLTE4
606354

Leukotriene E4, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Within a few hours of symptom onset, collect a random urine specimen. 2. No preservative 3. Aliquot urine into a plastic vial and send frozen.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	28 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 82542; 82570;

FLEVA
75401

Levamisole, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Collection Container: Plastic, preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine without preservative. Send specimen refrigerated in a preservative- free plastic urine container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 80375

LEV1P
113309

Level 1 Gross only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88300

LEV2P
113310

Level 2 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88302

LEV3P
113311

Level 3 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88304

LEV4P
113312

Level 4 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88305

LV4RP
113313

Level 4 Gross and Microscopic, RB (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88305

LEV5P
113314

Level 5 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88307

LEV6P
113315

Level 6 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88309

LEVE
83140

Levetiracetam, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. For sustained-release formulations only, draw blood a minimum of 12 hours after last dose. 3. Within 2 hours of collection, centrifuge, and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80177

LID
8382

Lidocaine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80176

LMO2
70501

LIM Domain Only 2 (LMO2) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LIME
82360

Lime, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ALBLI
603181

Limited Bleeding Diathesis Profile Interpretation

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26 Special Coagulation Interpretation

LDPU
615289

Limited Drug Profile, 3 Drug Classes, Immunoassay, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see CSMHU / Controlled Substance Monitoring Hybrid Drug Profile, 20 Drug Classes, High-Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 10 mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 10 plastic tube. 3. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

LIND
82862

Linden, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LINS
86311

Linseed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LPSBF
606615

Lipase, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Sources: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, Jackson Pratt [JP] drain) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 83690

FLIPR
90347

Lipase, Random Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 2 mL
Collection Instructions: Collect random urine without preservative. Ship 2 mL urine in a sterile screw capped plastic container ship ambient.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Ambient (preferred)	5 days
	Frozen	21 days
	Refrigerated	5 days

CPT Code Information: 83690

LPS
8328

Lipase, Serum

Specimen Requirements: Patient Preparation: Patients should be fasting before the specimen is collected. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of collection. 2. Red-top tube must be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 83690

BFLA1
614164

Lipid Analysis, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Sources: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial Acceptable Source: Collection Container/Tube: Sterile container, no additive Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 82664-Electrophoretic technique, not elsewhere specified (Chylomicrons and lipoproteins); 84311-Spectrophotometry, analyte not specified (Cholesterol); 84478-Triglycerides;

LPSC1
616696

Lipid Panel, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred but not required unless directed by the ordering provider. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of collection. 2. Red-top tube must be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 80061-Lipid panel (if all 3 performed); 82465-Cholesterol, total (if all 3 are not performed); 84478-Triglycerides (if all 3 are not performed); 83718-Cholesterol, HDL (if all 3 are not performed);

LIPOG
617337

Lipodystrophy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406 x2; 81408; 81479;

LRBA
608113

Lipopolysaccharide-Responsive Beige-Like Anchor Protein (LRBA) Deficiency, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 2

LPALD
610738

Lipoprotein (a) and Low-Density Lipoprotein Cholesterol, Serum

Specimen Requirements: Patient Preparation: 1. Fasting (8 hours) required 2. Patient must abstain from alcohol for 24 hours before collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial. 2. Send refrigerated.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	60 days

CPT Code Information: 83700; 83701;

LMPP
83673

Lipoprotein Metabolism Profile, Serum

Specimen Requirements: Patient Preparation: 1. Patient should fast overnight (12-14 hours) before specimen collection. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	60 days

CPT Code Information: 80061-Lipid panel (includes: HDL [CPT Code 83718], total cholesterol [CPT Code 82465], and triglycerides [CPT Code 84478] if all performed); 82172-Apolipoprotein B; 83700-Lp(a) cholesterol electrophoresis;

LIPA1
615007

Lipoprotein(a), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 83695

LUCHM
622811

LiquidHALLMARK ctDNA and ctRNA

Specimen Requirements: Specimen Type: Whole blood Supplies: Streck Tan Top Tube Kit (T715) Container/Tube: Two 10-mL Streck cell-free DNA (cfDNA) blood collection tubes Specimen Volume: 20 mL; 10 mL in two Streck tubes Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not centrifuge or aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Streck	Ambient	4 days	Streck Black/Tan top

CPT Code Information: 81479

FLISD
75638

Lisdexamfetamine as Metabolite, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine specimen without preservative. Send specimen refrigerated in a plastic urine container.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	180 days
	Frozen	180 days
	Ambient	7 days

CPT Code Information: 80324**LITH**
37046**Lithium, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood 8 to 12 hours after last dose (trough specimen). 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection. Additional Information: Peak serum concentrations do not correlate with symptoms.

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80178**LFABP**
70429**Liver Fatty Acid-Binding Protein (L-FABP) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LIVPR
113633

Liver Profile, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	7 days

CPT Code Information: 82247; 82248; 84450; 84460; 84075; 82040; 84155; 80076 (if appropriate if all analytes performed);

LKM
80387

Liver/Kidney Microsome Type 1 Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86376

LOB
82744

Lobster, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

LQTSG
617351

Long QT Syndrome Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403; 81406 x2; 81407; 81479; 81479 (if appropriate for government payers);

LORAZ
80459

Lorazepam (Ativan), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma: Specimen Type: Plasma Collection Container/Tube: Green top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Centrifuge and send 2 mL of plasma refrigerated in a plastic vial. Serum: Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial

Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Centrifuge and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate);

LDLD
606898

Low-Density Lipoprotein (LDL) Cholesterol, Beta-Quantification, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	10 days
	Frozen	60 days

CPT Code Information: 83701

FUSF
35304

Low-Grade Fibromyxoid Sarcoma (LGFMS), 16p11.2 (FUS or TLS) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on

positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

LOX
80462

Loxapine (Loxitane) and 8-Hydroxyloxapine

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342; ;

FLSDA
75680

LSD Trace Analysis, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine without preservative. Send specimen refrigerated in a plastic, preservative-free urine container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 80323

LCAF
35282

Lung Cancer, ALK (2p23) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

RETF
35846

Lung Cancer, RET (10q11) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by fluorescence in situ hybridization testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

ROS1F
35845

Lung Cancer, ROS1 (6q22) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

LUPN
82613

Lupin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FLUPV 91714

Lupus Anticoagulant Evaluation with Reflex

Specimen Requirements: Collection Container/Tube: Light-blue top (3.2% sodium citrate)
 Submission Container/Tube: Plastic vial Specimen Volume: 3 mL platelet-poor plasma, in plastic vial
 Collection Instructions: Draw blood into a 3.2% sodium citrate (light blue-top) tube. Centrifuge light blue-top tube 15 minutes at approx. 1500 g within 60 minutes of collection. Using a plastic pipette, remove plasma, taking care to avoid the WBC/platelet buffy layer and place into a plastic vial. Centrifuge a second time and transfer platelet-poor plasma into a new plastic vial. Plasma must be free of platelets (<10,000/mcl). Freeze immediately and ship on dry ice.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	30 days

CPT Code Information: 85613/ Russell viper venom time (includes venom); diluted; 85730/ Thromboplastin time, partial (PTT); plasma; 85598/ Platelet neutralization (Hexagonal Phase Confirm)-(if appropriate); 85597/ Platelet neutralization (dRVVT Confirm)-(if appropriate); 85613/dRVVT 1:1 Dilution (if appropriate); 85670/Thrombin Clotting Time (if appropriate); ;

ALUPO 603465

Lupus Anticoagulant Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26 Special Coagulation Interpretation

ALUPP
603463

Lupus Anticoagulant Profile, Plasma

Specimen Requirements:

Specimen Minimum Volume: 3 mL in 3 plastic vials each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85610; 85730; 85613; 85390; 85130 (if appropriate); 85130 (if appropriate); 85210 (if appropriate); 85220 (if appropriate); 85230 (if appropriate); 85240 (if appropriate); 85245 (if appropriate); 85246 (if appropriate); 85247 (if appropriate); 85250 (if appropriate); 85260 (if appropriate); 85270 (if appropriate); 85280 (if appropriate); 85335 (if appropriate); 85335 (if appropriate); 85335 (if appropriate); 85366 (if appropriate); 85379 (if appropriate); 85384 (if appropriate); 85385 (if appropriate); 85390-26 (if appropriate); 85397 (if appropriate); 85597 (if appropriate); 85598 (if appropriate); 85611 (if appropriate); 85613 (if appropriate); 85613 (if appropriate); 85635 (if appropriate); 85670 (if appropriate); 85732 (if appropriate);

ALUPI
603464

Lupus Anticoagulant Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see ALUPP / Lupus Anticoagulant Profile, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

LUTHI
70498

Luteinizing Hormone (LH) Beta Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LHPED
62999

Luteinizing Hormone (LH), Pediatrics, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.25 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge the specimen. 2. For red top tubes, aliquot serum into a plastic vial immediately. 3. For serum gel tubes, serum may sit on gel refrigerated but must be aliquoted into a plastic vial within 4 hours.

Specimen Minimum Volume: 0.13 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 83002

LH
602752

Luteinizing Hormone (LH), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	24 hours

CPT Code Information: 83002

SLYME
602732

Lyme Antibody Modified 2-Tier with Reflex, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	10 days
	Frozen	30 days

CPT Code Information: 86618; 86617 x2 (if appropriate);

LNBAB
63502

Lyme Central Nervous System Infection IgG with Antibody Index Reflex, Serum and Spinal Fluid

Specimen Requirements: Both spinal fluid (CSF) and serum are required for this test. CSF and serum must be collected within 24 hours (maximum) of each other. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1.2 mL Collection Instructions: 1. A CSF sample of 1.2 mL needs to be collected within 24 hours of the serum specimen, preferably at the same time. 2. Label vial as spinal fluid or CSF. 3. CSF aliquot should be from the second, third, or fourth CSF vial collected during the lumbar puncture. Do not submit CSF from the first vial due to the possibility of blood contamination, which will cause specimen rejection. 4. Band specimens together. Specimen Type: Serum Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. A serum sample of 1.2 mL needs to be collected within 24 hours of the spinal fluid specimen, preferably at the same time. 2. Centrifuge and aliquot serum into a plastic vial. 3. Label as serum. 4. Band specimens together.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	11 days
	Frozen	35 days
Serum	Refrigerated (preferred)	11 days
	Frozen	35 days

CPT Code Information: 86618; 86618 x2 - if applicable; 82040 - if applicable; 82042- if applicable; 82784 x2 - if applicable;

LNBAI
63249

Lyme Central Nervous System Infection IgG, Antibody Index, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see LNBAI / Lyme Central Nervous System Infection IgG with Antibody Index Reflex, Serum and Spinal Fluid. Both cerebrospinal fluid (CSF) and serum are required for this test. CSF and serum must be collected within 24 hours maximum of each other. CSF specimens with blood contamination will be rejected. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1.2 mL Collection Instructions: 1. A spinal fluid (CSF) sample of 1.2 mL needs to be collected within 24 hours of the serum specimen, preferably at the same time. 2. Label vial as spinal fluid or CSF. 3. CSF aliquot should be from the second, third, or fourth CSF vial collected during the lumbar puncture. Do not submit CSF from the first vial due to the possibility of blood contamination, which will cause specimen rejection. 4. Band specimens together. Specimen Type: Serum Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. A serum sample of 1.2 mL needs to be collected within 24 hours of the spinal fluid specimen, preferably at the same time. 2. Centrifuge and aliquot serum into a plastic vial. 3. Label as serum. 4. Band specimens together.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	11 days
	Frozen	35 days

CPT Code Information: 86618 x 2; 82040; 82042; 82784 x 2;

LYWB
9535

Lyme Disease Antibody, Immunoblot, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume:0.75 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 86617 x 2

LYME 9129

Lyme Disease Serology, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	10 days
	Frozen	30 days

CPT Code Information: 86618; 86617 x 2-Lyme disease confirmation (if appropriate);

PBORB 87973

Lyme Disease, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87476; 87798 x 2; 87999 (if appropriate for government payers);

LYMPV
618310

Lyme Disease, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid. Specimen Type: Synovial fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as synovial fluid. Specimen Type: Tissue (fresh only) Sources: Skin or synovial biopsy Container/Tube: Sterile container with normal saline Specimen Volume: Approximately 4 mm(3) Collection Instructions: 1. Submit only fresh tissue. 2. Skin biopsies: a. Wash biopsy site with an antiseptic soap. Thoroughly rinse area with sterile water. Do not use alcohol or iodine preparations. A local anesthetic may be used. b. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. 3. Label specimen with source of tissue.

Specimen Minimum Volume: Spinal fluid: 0.3 mL; Synovial fluid: 0.5 mL; Tissue: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87476; 87798 x 2; 87999 (if appropriate for government payers);

TLYME
608104

Lyme IgM and IgG, Whole Cell Sonicate, ELISA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	10 days
	Frozen	30 days

CPT Code Information: 86617 x 2

PM3CX
606164

Lymph3Cx Assay, Primary Mediastinal Large B-cell Lymphoma and Diffuse Large B-cell Lymphoma, mRNA Gene Expression, NanoString, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue slides Slides: 1 stained and 7 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 7 consecutive, unstained, 5-micron thick sections placed on positively charged slides. Additional Information: Paraffin embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). Acceptable: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block.

Specimen Minimum Volume: Minimum 60% tumor with or without macrodissection. Minimum required unstained tissue section input: 0.12 mm(3) Slides: If the tumor surface area is less than or equal to 4 mm(2), submit a minimum of 3 slides; if the tumor surface area is 5 to 11 mm(2), submit a minimum of 2 slides; if the tumor surface area is greater than 11 mm(2), submit a minimum of 1 slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 0120U; 88381;

LPA3P
62205

Lymphocyte Proliferation to Anti-CD3/Anti-CD28 and Anti-CD3/Interleukin-2 (IL-2), Flow Cytometry, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Green top (sodium heparin) Specimen Volume: 20 mL See table for information on recommended volume based on absolute lymphocyte count Pediatric Volume: <3 months: 1 mL 3-24 months: 3 mL 25 months-18 years: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day. Table. Blood Volume Recommendations Based on Absolute Lymphocyte Count (ALC) ALC Blood volume for minimum aCD28 only Blood volume for minimum of aCD3, aCD28, and IL-2 Blood volume for full assay <0.5 >15 mL >28 mL >50 mL 0.5-1.0 15 mL 28 mL 50 mL 1.1-1.5 6.5 mL 12 mL 24 mL 1.6-2.0 4.5 mL 8.5 mL 16 mL 2.1-3.0

3.5 mL 6.5 mL 12 mL 3.1-4.0 2.5 mL 4.5 mL 8 mL 4.1-5.0 1.8 mL 3.5 mL 6 mL >5.0 1.5 mL 2.5 mL 5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86353 x 2; 86353 (as appropriate); ;

LPAGF 60592

Lymphocyte Proliferation to Antigens, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668)
Container/Tube: Green top (sodium heparin) Specimen Volume: 20 mL See tables for information on recommended volume based on absolute lymphocyte count Pediatric Volume: <3 months: 1 mL 3-24 months: 3 mL 25 months-18 years: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day. Table. Blood Volume Recommendations Based on Absolute Lymphocyte Count (ALC) Antigen only ALC x 10(9)/L Blood volume for minimum Candida albicans (CA) and tetanus toxoid (TT) Only Blood volume for full assay <0.5 >18.5 mL >40 mL 0.5-1.0 18.5 mL 40 mL 1.1-1.5 8.5 mL 20 mL 1.6-2.0 6.0 mL 12 mL 2.1-3.0 4.5 mL 10 mL 3.1-4.0 3.0 mL 6 mL 4.1-5.0 2.5 mL 5 mL >5.0 2.0 mL 4 mL Mitogen and antigen ALC x 10(9)/L Blood volume for minimum of each assay Blood volume for full assay <0.5 >28 mL >60 mL 0.5-1.0 28 mL 60 mL 1.1-1.5 12 mL 30 mL 1.6-2.0 8.5 mL 20 mL 2.1-3.0 6.5 mL 15 mL 3.1-4.0 4.5 mL 10 mL 4.1-5.0 3.5 mL 8 mL >5.0 2.5 mL 6 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86353; 86353 (if appropriate); ;

LPMGF 60591

Lymphocyte Proliferation to Mitogens, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668)
Container/Tube: Green top (sodium heparin) Specimen Volume: 20 mL See tables for information on recommended volume based on absolute lymphocyte count Pediatric Volume: <3 months: 1 mL 3-24 months: 3 mL 25 months-18 years: 5 mL Collection Instructions: Send whole blood specimen in original

tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day. Table. Blood Volume Recommendations Based on Absolute Lymphocyte Count (ALC) Mitogen only ALC x 10(9)/L Blood volume for minimum phytohemagglutinin (PHA) only Blood volume for minimum PHA and pokeweed mitogen (PWM) Blood volume for full assay <0.5 >6.5 mL >8.5 mL >22 mL 0.5-1.0 6.5 mL 8.5 mL 22 mL 1.1-1.5 3.0 mL 4.0 mL 10 mL 1.6-2.0 2.0 mL 2.5 mL 7 mL 2.1-3.0 1.5 mL 2.0 mL 6 mL >3.1 1.0 mL 1.5 mL 4 mL 4.1-5.0 1.0 mL 1.0 mL 3 mL >5.0 1.0 mL 1.0 mL 2 mL Mitogen and antigen ALC x 10(9)/L Blood volume for minimum of each assay Blood volume for full assay <0.5 >28 mL >60 mL 0.5-1.0 28 mL 60 mL 1.1-1.5 12 mL 30 mL 1.6-2.0 8.5 mL 20 mL 2.1-3.0 6.5 mL 15 mL 3.1-4.0 4.5 mL 10 mL 4.1-5.0 3.5 mL 8 mL >5.0 2.5 mL 6 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86353; 86353 (if appropriate); ;

LEF1
71356

Lymphoid Enhancer-Binding Factor 1(LEF1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LPLFX
61114

Lymphoplasmacytic Lymphoma/Waldenstrom Macroglobulinemia, MYD88 L265P with Reflex to CXCR4, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD)

Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 to 20 slides Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, acute myelocytic leukemia), not solid tumors. Specimen Stability Information: Ambient Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA and list the specimen source. Include indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Whole blood, Bone marrow: 1 mL Extracted DNA: 50 mcL with a concentration of at least 20 nanograms per mcL Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	10 days

CPT Code Information: 81305

LYNCP
614572

Lynch Syndrome Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81435**LPCBS**
61766**Lysophosphatidylcholines, LC MS/MS, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 filter paper, Munktell filter paper, Whatman Protein Saver 903 Paper, local newborn screening card, or blood collected in tubes containing ACD or EDTA, and then spotted and dried on filter paper
 Specimen Volume: 2 Blood spots
 Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800. Forms 1. Biochemical Genetics Patient Information (T602) 2. If not ordering electronically, complete, print, and send a Biochemical Genetics Test Request (T798) with the specimen.

Specimen Minimum Volume: 1 Blood spot**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	28 days	FILTER PAPER

CPT Code Information: 82542**LALB**
62954**Lysosomal Acid Lipase, Blood**

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium heparin) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 82657**LALBS**
62955**Lysosomal Acid Lipase, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 filter paper, Munktel TFN, and Whatman Protein Saver 903 Paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 2. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	7 days	FILTER PAPER

CPT Code Information: 82657**LDALD**
64907**Lysosomal and Peroxisomal Disorders Newborn Screen, Blood Spot**

Specimen Requirements: Patient must be older than 24 hours and younger than 1 week of age. Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 filter paper, Munktel filter paper, Whatman Protein Saver 903 Paper, local newborn screening card, or blood collected in tubes containing ACD, or EDTA and then spotted and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 2. Let blood

dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	28 days	FILTER PAPER

CPT Code Information: 83789

PLSD
89678

Lysosomal and Peroxisomal Disorders Screen, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, local newborn screening card, or blood collected in tubes containing ACD or EDTA and dried on acceptable filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	28 days	FILTER PAPER

CPT Code Information: 83789

Lysosomal Disorders Screen, Random, Urine

Specimen Requirements: Patient Preparation: 1. Do not administer low-molecular weight heparin before specimen collection. 2. Baby wipes or wipes containing soaps or lotions should not be used before specimen collection because these may interfere with results. Supplies: Urine Container, 60 mL (T313) Container/Tube: Clean, plastic urine container with no metal cap or glued insert Specimen Volume: 12 mL Pediatric Volume: 3.5 mL Collection Instructions: Collect a random urine specimen (early morning preferred).

Specimen Minimum Volume: 3.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	15 days
	Frozen	90 days

CPT Code Information: 83789; 83864; 84377; 84275;

Lysosomal Storage Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (e.g., minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection

Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

G158
605191

Lysosomal Storage Disease Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443

LSD6W
606171

Lysosomal Storage Disorders, Six-Enzyme Panel, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657; 82963; 83789 (if appropriate for government payers); 82542 (if appropriate);

MURA
607462

Lysozyme (Muramidase), Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge and aliquot plasma into a plastic vial within 2 hours of collection. 2. Freeze immediately after transferring.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	21 days

CPT Code Information: 85549

LYSOZ
70503

Lysozyme Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LYSO
82398

Lysozyme, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

MA2ES
605970

Ma2 Antibody by ELISA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83516

MA2EC
605971

Ma2 Antibody, ELISA, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83516

MACNT
65405

Macadamia Nut, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MACE
82492

Mace, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MACK
82342

Mackerel, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

GNMTC
619313

Macro/Microthrombocytopenia Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Cultured fibroblasts/skin biopsy: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FMACR
57817**Macroamylase**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 82150; ;

MCRPL
34643**Macroprolactin, Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	24 hours

CPT Code Information: 84146 x 2

MAGU
610768**Magnesium, 24 Hour, Urine**

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic urine container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 83735

MG F
606756

Magnesium, Feces

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 83735

MGS
8448

Magnesium, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. Additional Information: If other metal tests are also desired when drawing for a serum magnesium level; the specimen must be drawn in a plain, royal blue-top Vacutainer plastic trace element blood collection tube.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	365 days

CPT Code Information: 83735

MAGRU Magnesium/Creatinine Ratio, Random, Urine 621396

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 83735; 82570;

FMME Mahi Mahi IgE 57924

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

MOBRD
28339

Mail Out Research, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Varies		

MALI
601988

MAL Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MALP
618475

Malabsorption Evaluation Panel, Feces

Specimen Requirements: Supplies: Malabsorption Panel (T920) Container/Tube: Malabsorption kit or 2 small stool containers Specimen Volume: 18 g split between 2 containers, each containing half of the specimen Collection Instructions: 1. Collect a fresh, random fecal specimen, no preservative. 2. Split specimen between 2 small containers, each containing half of the specimen. 3. Label one small container with the A1AF and UREDF sample collection labels. Label the other small container with the CALPR, ELASF sample collection label. 4. Freeze immediately Additional Information: 1. Specimen must be split prior to transport. 2. Testing cannot be added to a previously collected specimen. 3. Specimen cannot be collected from a diaper.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen	7 days

CPT Code Information: 0430U

LMALP **Malaria PCR with Parasitemia Reflex, Varies**
37115

Specimen Requirements:

Specimen Minimum Volume: Blood: 1 mL Slides: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87798; 87207 (if applicable);

LCMAL **Malaria, Molecular Detection, PCR, Varies**
87860

Specimen Requirements: Both blood specimens and slides are required. Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Type: Blood films Container/Tube: Clean, grease-free slides in plastic slide container Specimen Volume: 2 thin blood films and 2 thick blood films Collection Instructions: 1. Ideally, blood films should be made directly from uncoagulated blood acquired via fingerstick. However, EDTA anticoagulated blood is also acceptable. 2. Prepare thin blood films as follows: a. Prepare a thin film with a "feathered edge" that is no more than a single cell thick. b. Allow the film to thoroughly air dry and then fix by briefly immersing in either absolute or 95% methyl alcohol. c. Allow to air dry after fixation. 3. Prepare thick blood films as follows: a. Place a large drop of blood (approximately the size of a dime and preferably from a fingerstick) on a slide. b. Using a corner of a second slide, spread the drop in a circular motion while applying firm pressure to literally scratch the blood onto the carrier slide. This technique allows the blood to dry quickly and adhere well to the slide. Use approximately 20 circular sweeps with the second slide. The drop of blood should be about the size of a quarter when finished. c. Do not fix. Air dry thoroughly (approximately 45 minutes) before placing in transport container.

Specimen Minimum Volume: Blood: 1 mL Slides: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87798

MCMF
113355

Malignant Cells Cyto/Heme (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88108

MALT
82834

Malt, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MAMLF
58105

MAML2 (11q21) Rearrangement, Mucoepidermoid Carcinoma

(MEC), FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by fluorescence in situ hybridization testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. ?? Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

MGB
70507

Mammaglobin (MGB) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MAND
82352

Mandarin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MNU
8080

Manganese, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 0.3 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 83785

MNB
89120

Manganese, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D

Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 0.3 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83785

FMNRB
57196

Manganese, RBC and Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL each plasma and RBCs

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Metal Free EDTA Plasma	Refrigerated (preferred)	5 days	METAL FREE
	Ambient	72 hours	METAL FREE
RBCS	Refrigerated (preferred)	5 days	METAL FREE
	Ambient	72 hours	METAL FREE

CPT Code Information: 83785

MNS
8413

Manganese, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metal tests. If gadolinium-, iodine, or barium-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 0.3 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes, and

then centrifuge to separate serum from the cellular fraction. Serum must be removed from cellular fraction within 4 hours of collection. Avoid hemolysis. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, while avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 83785

MNRCU
614993

Manganese/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 82570; 83785;

MNCU
614994

Manganese/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see MNRCU / Manganese/Creatinine Ratio, Random, Urine. Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10 mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 83785

MANGO Mango, IgE, Serum
82811

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MBLF Mannan Binding Lectin Complement Pathway, Functional, Serum
614985

Specimen Requirements:

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	14 days

CPT Code Information: 86161**FMPRE**
57535**Maple Red (Acer rubrum) IgE****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003**MSUDP**
608031**Maple Syrup Urine Disease Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies:

Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81406 x 3; 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 81479 (if appropriate for government payers);

MARE
82141

Mare's Milk, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MFRGG
617379

Marfan, Loeys-Dietz, and Aortopathy Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81410

MARJ
82605

Marjoram, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MSPTC
113288

Mass Spectrometry (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 82542-Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

MSMNT
621774

Mass Spectrometry, Membranous Nephropathy, Technical Component (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 82542

MCM24
608378

Mast Cell Mediators, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Patient must not be taking monoamine oxidase inhibitors (MAOI) or aminoguanidine, as these medications increase N-methylhistamine (NMH) levels. 2. Patients taking aspirin or nonsteroidal anti-inflammatory drugs (NSAID) may have decreased concentrations of prostaglandin F2 alpha (23BP). If possible, the patient should discontinue use for 2 weeks or 72 hours, respectively, before specimen collection. Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Aliquot urine into plastic tube and send to lab. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	28 days

CPT Code Information: 82542; 84150;

MCMRU Mast Cell Mediators, Random, Urine 608379

Specimen Requirements: Patient Preparation: 1. Patient must not be taking monoamine oxidase inhibitors (MAOI) or aminoguanidine, as these medications increase N-methylhistamine (NMH) levels. 2. Patients taking aspirin or nonsteroidal anti-inflammatory drugs (NSAID) may have decreased concentrations of prostaglandin F2 alpha (23BP). If possible, the patient should discontinue use for 2 weeks or 72 hours, respectively, before specimen collection. Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen within a few hours of symptom onset. 2. No preservative.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	28 days

CPT Code Information: 82570; 84150; 82542;

MATCC Maternal Cell Contamination, Molecular Analysis, Varies 35479

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Maternal blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens: Submit only 1 of the following specimens: Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Additional Information: A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Cultured amniocytes Container/Tube: T-25 flask Specimen Volume: 2 full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast

Culture for Genetic Testing, Tissue. Specimen Stability Information: Refrigerated Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Amniotic Fluid: 10 mL Blood, Cord Blood: 0.5 mL Chorionic Villus: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81265; ; Fibroblast Culture for Genetic Test; 88233-(if appropriate); 88240-(if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-(if appropriate); 88240-(if appropriate); ; Each additional specimen; 81266;

FFMSS
75692

Maternal Serum Screening, Integrated, Specimen #1, PAPP-A, NT

Specimen Requirements: Specimen #1 collection must occur between 10 weeks, 0 days and 13 weeks, 6 days gestation. (If gestational age is based on Crown-Rump length (CRL), the specimen must be collected when the CRL is between 32.4 - 83.9 mm) Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL serum refrigerated in a plastic vial. Separate from cells ASAP or within 2 hours of collection. Note: Submit with order: Patient's date of birth, current weight, number of fetuses present, patient's race, if the patient was diabetic at the time of conception, if there is a known family history of neural tube defects, if the patient has had a previous pregnancy with a trisomy, if the patient is currently smoking, if the patient is taking valproic acid or carbamazepine (Tegretol), if this is a repeat sample, and the age of the egg donor if in vitro fertilization. In addition to the above: If a NT measurement is performed: the date of ultrasound, the CRL measurement, the nuchal translucency (NT) measurement and the name and certification number of the sonographer is required. NT must be measured when the CRL is between 38-83.9mm. Or If no NT measurement is performed: a due date or CRL measurement with the date of ultrasound is required. The NT measurement must also be performed by an ultrasonographer that is certified by one of the following agencies: Fetal Medicine Foundation (FMF) or Nuchal Translucency Quality Review (NTQR).

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	72 hours

CPT Code Information: 84163

FMSS2
75351

Maternal Serum Screening, Integrated, Specimen #2, Alpha Fetoprotein, Hcg, Estriol, and Inhibin A

Specimen Requirements: Specimen must be drawn between 14 weeks, 0 days and 24 weeks, 6 days gestation (based on the CRL). Recommended time for maternal serum screening is 16 to 18 weeks gestation. Acceptable date ranges to draw the second samples will be provided in the Integrated-1 report. Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial. Separate from cells ASAP or within 2 hours of collection. This test requires that a previous first trimester specimen, Maternal Serum Screening, Integrated, Specimen #1, PAPP-A, NT (ARUP test ID: 3000147), has been performed.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	72 hours

CPT Code Information: 81511

FMT21
57852

MaterniT21 Plus

Specimen Requirements: **NOTE: Completed Sequenom Test Requisition form is required A Core Option must be marked on TRF under MaterniT 21 PLUS test If nothing indicated by client, mark option- Core (chr 21, 18, 13, sex) Preferred evacuated tube: (1)10 mL Streck tube kit (MCL supply number T715). Absolute minimum collection for analysis: (1) 10 mL in Streck tube Collection instructions: Draw 1 tube of blood, 10 mL in special Streck tube kit (MCL supply number T715). Ship ambient. REQUIRED: 1. Specimen MUST be received at MCL within 72 hours of collection. 2. Specimen collected NOT less than 9 weeks of gestation 3. Sequenom collection kit (MCL Supply T715) 4. Completed Sequenom Test Requisition form 5. Maternal Height (inches) 6. Maternal Weight (pounds) 7. Gestational Age (weeks) 8. Gestational Age (days) 9. Gestation (Number of fetuses) 10. Increased risk due to

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Streck	Ambient	7 days	Streck Black/Tan top

CPT Code Information: 81420

MSMRT Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report, Bone Marrow

64946

Specimen Requirements: Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD solution A or B Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 88182-Flow cytometry, cell cycle or DNA analysis; 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow cytometry interpretation, 2 to 8 Markers;

NGAML MayoComplete Acute Myeloid Leukemia, 11-Gene Panel, Varies

65089

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5 to 2 mL tube Specimen Volume: Entire specimen Collection Instructions: 1. DNA must be extracted within 14 days after collection. 2. Label specimen as extracted DNA and source of specimen. 3. Provide volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be

extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied.

Specimen Minimum Volume: Whole blood, one marrow: 1 mL; Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

NGAMT
65661

MayoComplete Acute Myeloid Leukemia, Therapeutic Gene Mutation Panel (FLT3, IDH1, IDH2, TP53), Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. DNA must be extracted within 14 days after collection. 2. Label specimen as extracted DNA and source of specimen. 3. Provide volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied.

Specimen Minimum Volume: Blood, Bone marrow: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81120; 81121; 81245; 81246; 81352;

NGBCL
618477

MayoComplete B-Cell Lymphoma, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Whole blood Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Paraffin-embedded tissue Container/ Tube: Paraffin block Collection Instructions: 1. If available, send 1 representative hematoxylin and eosin-stained slide. 2. Minimum amount of tumor nuclei is 20% 3. Required amount of tissue area is at least 25 mm(2) 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: If the quality of the biopsy specimen is poor or the target tumor cell population is below 20%, testing should not be ordered. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Tissue slide Slides: 10 unstained slides Container/ Tube: Transport in plastic slide holders. Collection Instructions: 1. Send 10 unstained, nonbaked slides with 5-micron thick sections of tissue. 2. If available, also send 1 representative hematoxylin and eosin-stained slide. 3. Minimum amount of tumor nuclei is 20% 4. Required amount of tissue area is at least 25 mm(2) 5. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 6. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection Specimen Stability Information: Frozen Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 5 mL Collection Instructions: Specify the type of fluid being submitted. Specimen Stability Information: Refrigerated 14 days/Frozen 14 days Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. DNA must be extracted within 14 days after collection. 2. Label specimen as extracted DNA and source of specimen. 3. Indicate volume and concentration of DNA on label. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as

failed and a charge will be applied.

Specimen Minimum Volume: Whole blood, bone marrow aspirate, body fluid: 1 mL; Frozen tissue: 50 mg; Extracted DNA: 100 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

MCBPP
619604

MayoComplete Bladder and Prostate Cancer Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual 81457

MayoComplete Chronic Lymphoid Neoplasms, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender or pink top EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Whole blood Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Collection Instructions: 1. If available, send 1 representative hematoxylin and eosin-stained slide. 2. Minimum amount of tumor nuclei is 20% 3. Required amount of tissue area is at least 25 mm(2) 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: If the quality of the biopsy specimen is poor or the target tumor cell population is below 20%, testing should not be ordered. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Tissue slide Slides: 10 unstained slides Container/Tube: Transport in plastic slide holders. Collection Instructions: 1. Send 10 unstained, nonbaked slides with 5-micron thick sections of tissue. 2. If available, also send 1 representative hematoxylin and eosin-stained slide. 3. Minimum amount of tumor nuclei is 20% 4. Required amount of tissue area is at least 25 mm(2) 5. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 6. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection Specimen Stability Information: Frozen Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 5 mL Collection Instructions: Specify the type of fluid being submitted. Specimen Stability Information: Refrigerated 14 days/Frozen 14 days Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. DNA must be extracted within 14 days after collection. 2. Label specimen as extracted DNA and source of specimen. 3. Indicate volume and concentration of DNA on label. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied.

Specimen Minimum Volume: Whole blood, bone marrow aspirate, body fluid: 1 mL; Frozen tissue: 50 mg; Extracted DNA: 100 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

MCCRC
616489

MayoComplete Colorectal Cancer Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm² -Minimum amount of tumor area: tissue 36 mm² -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirements for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm² and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm². Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381 - Microdissection, manual; 81457;

MCSRC
616492

MayoComplete Comprehensive Sarcoma Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 360 mm² -Minimum amount of tumor area: tissue 72 mm² -These amounts are cumulative over up to 15 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen

preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 15 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 15 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 15 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 2 to 4 Slides Collection Instructions: Submit 2 to 4 slides stained and coverslipped with a preferred total of 10,000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81457

MCECP
619631

MayoComplete Endometrial Carcinoma Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81457;

MCGST
616490

MayoComplete Gastrointestinal Stromal Tumor (GIST) Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual 81457

MCGYN
619622

MayoComplete Gynecological Cancer Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area:

tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81457;

NGHIS
618480

MayoComplete Histiocytic Neoplasms, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Whole blood Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Collection Instructions: 1. If available, send 1 representative hematoxylin and eosin-stained slide. 2. Minimum amount of tumor nuclei is 20%. 3. Required amount of tissue area is at least 25 mm(2). 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: If the quality of the biopsy specimen is poor or the target tumor cell population is below

20%, testing should not be ordered. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Tissue slide Slides: 10 unstained slides Container/Tube: Transport in plastic slide holders. Collection Instructions: 1. Send 10 unstained, nonbaked slides with 5-micron thick sections of tissue. 2. If available, also send 1 representative hematoxylin and eosin-stained slide. 2. Minimum amount of tumor nuclei is 20%. 3. Required amount of tissue area is at least 25mm(2). 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection Specimen Stability Information: Frozen Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 5 mL Collection Instructions: Specify the type of fluid being submitted. Specimen Stability Information: Refrigerated 14 days/Frozen 14 days Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied.

Specimen Minimum Volume: Whole blood, bone marrow aspirate, body fluid: 1 mL; Frozen tissue: 50 mg; Extracted DNA: 100 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

MCKCP
619595

MayoComplete Kidney Cancer Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional

Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81457;

MCLBP
614939

MayoComplete Liquid Biopsy Panel, Next-Generation Sequencing, Cell-Free DNA

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Container/Tube: Streck Cell-Free DNA (cfDNA) blood collection kit Specimen Volume: Two 10-mL Streck Cell-Free DNA blood collection tubes Additional Information: Only blood collected in Streck Cell-Free DNA BCT tubes will be accepted for analysis. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10-mL Streck tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	Streck Black/Tan top
	Refrigerated	7 days	Streck Black/Tan top

CPT Code Information: 81463

MCLNM
616487

MayoComplete Lung Cancer Mutations, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen

preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides wit 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

MCLNG
616486

MayoComplete Lung Cancer-Targeted Gene Panel with Rearrangement, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 360 mm(2) -Minimum amount of tumor area: tissue 72 mm(2) -These amounts are cumulative over up to 15 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirements for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36mm(2) Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 15 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 15 unstained, nonbaked slides wit 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 15 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 2 to 4 Slides Collection Instructions: Submit 2 to 4 slides stained and coverslipped with a preferred total of 10,000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81457;

MCLNR
616488

MayoComplete Lung Rearrangements, Rapid Test, Tumor

Specimen Requirements: This assay requires at least 10% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 36 mm(2) -Minimum amount of tumor area: tissue 18 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified Preferred: Specimen Type: Tissue block and cell block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block or cell block with acceptable amount of tumor tissue. Acceptable Specimen Type: Tissue slides Slides: 1 Stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides wit 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 5 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears) Slides: 1 to 3 Slides for smears Collection Instructions: Submit 1 to 3 slides unstained or stained with Diff Quik or Pap and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides used in testing will have everything scraped and not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81449

MCMLN
616491

MayoComplete Melanoma Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirements for Solid Tumor Next-Generation Sequencing. In this

document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm²) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm²). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81457;

NGSHM
63367

MayoComplete Myeloid Neoplasms, Comprehensive OncoHeme Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. DNA must be extracted within 14 days after collection. 2. Label specimen as extracted DNA and source of specimen. 3. Provide volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied.

Specimen Minimum Volume: Blood, Bone marrow: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

MCOCP
619640

MayoComplete Ovarian, Fallopian Tube, and Peritoneal Cancer Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81457;

NGPCM
618479

MayoComplete Plasma Cell Myeloma, Next-Generation

Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate Container/Tube: Lavender or pink top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Minimum plasma cell percentage is 5%. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. 4. Label specimen as bone marrow. 5. Fresh specimen is required for this test, as testing is performed on sorted cells. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerate Specimen Type: Paraffin-embedded bone marrow clot Container/Tube: Paraffin block Collection Instructions: 1. Send 1 slide stained with hematoxylin and eosin. 2. Minimum plasma cell percentage is 20%. 3. Required amount of tissue area is at least 25mm(2). 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Specimen Type: Tissue slide; bone marrow clot Slides: 10 unstained slides Container/ Tube: Transport in plastic slide holders. Collection Instructions: 1. Send 10 unstained, nonbaked slides with 5-micron thick sections of tissue and 1 slide stained with hematoxylin and eosin 2. Minimum amount of plasma cells is 20% 3. Required amount of tissue area is at least 25mm(2). 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient

Specimen Minimum Volume: Bone marrow aspirate: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81450

MCFRC
619613

MayoComplete Renal Cell Carcinoma with Fibromyomatous Stroma Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer

turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479; 81406; 81407; 81404; 81479 (if appropriate for government payers);

MCSMP
616493

MayoComplete Sarcoma Mutation Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81457

MayoComplete Solid Tumor Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. However, 40% tumor is preferred. -Preferred amount of tumor area: 720 mm² tissue on up to 20 unstained slides -Minimum amount of tumor area: 192 mm² tissue on up to 20 unstained slides -Tissue fixation: 10% neutral buffered formalin, not decalcified -For this test, at least 6 mm x 6 mm areas on 20 unstained slides is preferred: this is approximately equivalent to 720 mm². The minimum acceptable area is 3.1 mm x 3.1 mm on 20 unstained slides: approximately equivalent to 192 mm². Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with an acceptable amount of tumor tissue Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 20 unstained Collection Instructions: Submit 1 hematoxylin and eosin (H and E) stained slide and 20 unstained, nonbaked 5-micron thick sections Note: The total amount of required tumor can be obtained by scraping up to 20 slides from the same block. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 2 to 6 slides Collection Instructions: Submit 2 to 6 stained and coverslipped slides with a preferred total of 10,000 nucleated cells or a minimum of at least 6000 nucleated cells Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned. An image of the slides will be stored per regulatory requirements.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81459; 88381-Microdissection, manual;

MayoComplete T-Cell Lymphoma, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Whole blood Container/Tube: Preferred: Lavender or pink top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 14 days/Refrigerate 14 days Additional Information: To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Collection Instructions: 1. If available, send 1 representative hematoxylin and eosin-stained slide. 2. Minimum

amount of tumor nuclei is 20% 3. Required amount of tissue area is at least 25 mm(2) 4. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 5. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: If the quality of the biopsy specimen is poor or the target tumor cell population is below 20%, testing should not be ordered. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Tissue slide Slides: 10 unstained slides Container/Tube: Transport in plastic slide holders. Collection Instructions: 1. Send 10 unstained, nonbaked slides with 5-micron thick sections of tissue. 2. If available, also send 1 representative hematoxylin and eosin-stained slide. 3. Minimum amount of tumor nuclei is 20% 4. Required amount of tissue area is at least 25 mm(2). 5. Tissue should be fixed in 10% neutral-buffered formalin. Other fixatives are not acceptable. 6. Decalcified specimens (eg, bone marrow core biopsies) are not acceptable. Specimen Stability Information: Ambient Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection Specimen Stability Information: Frozen Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 5 mL Collection Instructions: Specify the type of fluid being submitted Specimen Stability Information: Refrigerated 14 days/Frozen 14 days Additional Information: Testing may be canceled if resultant extracted DNA does not meet concentration requirements. Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). We cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied.

Specimen Minimum Volume: Whole blood, bone marrow aspirate, body fluid: 1 mL; Frozen tissue: 50 mg; Extracted DNA: 100 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

JMDMF
616053

MDM2 (12q15) Amplification, Well-Differentiated Liposarcoma/Atypical Lipomatous Tumor, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods are not accepted; provide fixation method used. Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin-stained and 2 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 2 consecutive, unstained, positively charged, unbaked slides with 4 to 5-micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 hematoxylin and eosin-stained and 1 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377

MDM2F
63049

MDM2 (12q15) Amplification, Well-Differentiated Liposarcoma/Atypical Lipomatous Tumor, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by fluorescence in situ hybridization testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained? Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin-stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MEAD
82890

Meadow Fescue, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MFOX
82914

Meadow Foxtail, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ROPG
34941

Measles (Rubeola) Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Instructions: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86765

ROM
80979

Measles (Rubeola) Antibodies, IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86765

ROGM
62066

Measles (Rubeola) Virus Antibody, IgM and IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86765 x2

MEASU
617822**Measles Virus, Molecular Detection, PCR, Random, Urine**

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated	7 days

CPT Code Information: 87798

MEASR
617821**Measles Virus, Molecular Detection, PCR, Throat**

Specimen Requirements: Specimen Type: Throat Swab Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Sterile container with transport media Specimen Volume: Entire collection Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosal surface to maximize recovery of cells. 2. Swab must be placed into viral transport media (eg, Liquid Stuart, M4-RT, M4, M5, Bartels FlexTrans Transport Media, Jiangsu Transport Media)

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

MMRV
61853**Measles, Mumps, Rubella, and Varicella (MMRV) Immune Status Profile, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Instructions: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86735; 86762; 86765; 86787;

FFMTH
75544

Meconium Methadone Screen with Reflex Confirmation

Specimen Requirements: Container/Tube: Sterile collection container Specimen Volume: 3 g
Collection Instructions: Collect specimen into the same sterile collection container until 3 g of meconium have been collected or until the first milk stool appears. When at least 3 g of meconium has been collected, tightly screw on the cap of the collection vial and send specimen ambient. Note: Specimens from different voids may be pooled if necessary.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Ambient (preferred)	14 days
	Frozen	365 days
	Refrigerated	14 days

CPT Code Information: 80307

MCP2Z
616576

MECP2 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask

Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filtration Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy, cultured fibroblasts, dried blood spots, or saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81302; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MCADZ
35478

Medium-Chain Acyl-CoA Dehydrogenase (MCAD) Deficiency Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media,

RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter All other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479-Unlisted molecular pathology procedure; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MEGR
82347

Megrim, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MELAI
82724

Melaleuca leucadendron, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MELAN
70504

Melan A (MART-1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FMARP
75449

Melanoma Associated Retinopathy MAR Panel by Immunoblot and IHC

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a
plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a
plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA
plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular

request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	7 days

CPT Code Information: 84182 x 6

FMELA
75386

Melatonin, Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Plasma Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA) Submission Container/Tube: Plastic vial Specimen volume: 3 mL Collection instructions: 1. Draw blood in EDTA (lavender top) tube(s). 2. Centrifuge and send 1 mL of plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	30 days
	Frozen	365 days
	Ambient	14 days

CPT Code Information: 80299

FMELG
57652

Melons IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

MELN
82762

Melons, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MSMN
620788

Membranous Nephropathy Target Antigen Identification, Mass Spectrometry, Tissue

Specimen Requirements: Specimen Type: Kidney tissue Supplies: Pathology Packaging Kit (T554) Container/Tube: Formalin-fixed, paraffin-embedded tissue block Additional Information: Do not send fixed tissue slides. Testing can only be done on paraffin-embedded tissue blocks.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 82542; 88380;

CSFME
67846

Meningitis/Encephalitis Pathogen Panel, PCR, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Frozen specimens are not acceptable.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated	7 days

CPT Code Information: 87483

FMEP
90090

Meperidine (Demerol) and Normeperidine, serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s). Plasma gel tube is not acceptable. Spin down and send 3 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s). Serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80362

FMMM
57766

Mephedrone, MDPV and Methylone, Urine

Specimen Requirements: Container: Preservative-free plastic urine container Specimen volume: 10 mL Collection instructions collect a random urine specimen No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307-single drug; 80371-(if appropriate);

MEPHS
83778

Mephobarbital and Phenobarbital, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.0 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80184

FMERC
91120

Mercaptopurine (6-MP, Purinethol)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

HGOU
608893

Mercury Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: -HGUOE/ Mercury Occupational Exposure, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83825

HGUOE
608897

Mercury Occupational Exposure, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83825; 82570;

HGU
8592

Mercury, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83825

HG
8618

Mercury, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Collection Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83825**HGHAR**
8498**Mercury, Hair**

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Head, beard, mustache, chest, pubic Specimen Volume: 0.2 g Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing.

Specimen Minimum Volume: 0.05 g**Transport Temperature:**

Specimen Type	Temperature	Time
Hair	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 83825**HGNA**
89856**Mercury, Nails**

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Source: Fingernails or toenails Specimen Volume: 0.2 g Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing. 2. Clippings should be taken from all 10 fingernails or toenails.

Specimen Minimum Volume: 0.05 g**Transport Temperature:**

Specimen Type	Temperature	Time
Nail	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 83825

HGCU
608903

Mercury/Creatinine Ratio, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -HGUCR / Mercury/Creatinine Ratio, Random, Urine -HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random Urine.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83825

HGU CR
608907

Mercury/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83825; 82570;

MERKC
71538

Merkel CC (MCPyV) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MESOR
80460

Mesoridazine (Serentil)

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

HBME
70452

Mesothelial Cell (HBME-1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

MESOP
620227

Mesothelioma Panel (WT1/KRT5/TTF1/pCEA) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

MESOF
609714

Mesothelioma, CDKN2A FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by fluorescence in situ hybridization testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked

slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

MESQ
82776

Mesquite, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

METF
58123

MET (7q31), FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable? Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

MT
619972

Metallothionein Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MHBRP
65129

Metamycoplasma hominis, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Metamycoplasma hominis DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube (preferred). Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

MHRP
65134

Metamycoplasma hominis, Molecular Detection, PCR, Plasma

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Metamycoplasma hominis DNA is unlikely. Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA) Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma into a sterile vial within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

MHRP
60756

Metamycoplasma hominis, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Mycoplasma hominis DNA is not likely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -M4-RT (T605) Sources: Vaginal, cervix, urethra, urogenital, chest/mediastinal; bronchus or lung (donor swab); or upper respiratory sources (only infants <3 months: nasopharynx, nose, throat) Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Swab in transport media: M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: 1 swab Collection Instructions: Vaginal: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Urethra or cervical: 1. Collect specimen by inserting swab 1 to 3 cm and rotating 360 degrees. 2. Place swab back into swab cylinder. Wound: 1. Collect specimen by swabbing back and forth over wound surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Sources: Pelvic, peritoneal, amniotic, prostatic secretions, semen, reproductive drainage or fluid, pleural/chest, chest tube, pericardial Container/Tube: Sterile container Specimen Volume: 1 to 2 mL Specimen Type: Respiratory Sources: sputum, tracheal secretions,

bronchial washings, bronchoalveolar lavage, lung; or nasal washings (Note: Nasal washings may only be submitted for infants <3 months of age.) Container/Tube: Sterile container Specimen Volume: 1 to 2 mL Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube. Specimen Type: Urine (first void), kidney/bladder stone, or ureter Container/Tube: Sterile container Specimen Volume: 10 mL or entire specimen Collection instructions: Urine first void: Specimen can be collected at any time during the day. The patient should not have urinated for at least 1 hour prior to specimen collection. The first voided portion is the initial 20 to 30 mL of the urine stream obtained without cleaning the external urethra. Specimen Type: Tissue Sources: Placenta, products of conception, urogenital, respiratory, bronchus, chest/mediastinal, bone, spine, or joint Container/Tube: Sterile container Specimen Volume: 5 mm(3) Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit fresh tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen.

Specimen Minimum Volume: Fluid: 1 mL Urine, first void: 2 mL Swab: 1 swab Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

META3
65158

Metanephrines with 3-Methoxytyramine, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Tricyclic antidepressants, labetalol, and sotalol medications may elevate levels of metanephrines producing results that cannot be interpreted. If clinically feasible, it is optimal to discontinue these medications at least 1 week before collection. For advice on assessing the risk of removing patients from these medications and alternatives, consider consultation with a specialist in endocrinology or hypertension. Supplies: Urine Tubes, 10 mL (T068) Submission Container/Tube: Plastic urine tube Specimen Volume: 10 mL Collection Instructions: 1. Complete 24-hour urine collections are preferred, especially for patients with episodic hypertension; ideally the collection should begin at the onset of a "spell." 2. Add 10 g (pediatric: 3 g) of boric acid or 25 mL (pediatric: 15 mL) of 50% acetic acid as preservative at start of collection. 3. Collect urine for 24 hours.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 82542; 83835;

METAF
83006

Metanephrines, Fractionated, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Tricyclic antidepressants, labetalol, and sotalol medications may elevate levels of metanephrines producing results that cannot be interpreted. If clinically feasible, it is optimal to discontinue these medications at least 1 week before collection. For advice on assessing the risk of removing patients from these medications and alternatives, consider consultation with a specialist in endocrinology or hypertension. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic urine tube Specimen Volume: 10 mL Collection Instructions: 1. Add 10 g (pediatric: 3 g) of boric acid or 25 mL (pediatric: 15 mL) of 50% acetic acid as preservative at start of collection. 2. Collect urine for 24 hours. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83835

PMET
81609

Metanephrines, Fractionated, Free, Plasma

Specimen Requirements: Patient Preparation: Use of an Epi-pen within the last 7 days may produce inaccurate results. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 2 hours of collection centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	28 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 83835

METRN
609696

Metanephrines, Fractionated, Random, Urine

Specimen Requirements: Patient Preparation: 1. For at least 48 hours prior to test, patient should avoid use of cold medicines, nose drops, and nasal sprays. 2. Patients taking tricyclic antidepressants and labetalol and sotalol (beta blockers) may have falsely elevated levels of metanephrines. If medically feasible, for at least 1 week before specimen collection, the patient should not take these medications. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10 mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83835; 82570;

FMETN
75389

Metformin, Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Plasma Collection Container/Tube: Lavender top or pink top (EDTA) (Plasma gel tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen volume: 1 mL Collection instructions: 1. Draw blood in an EDTA (lavender top or pink top) tube. 2. Centrifuge and aliquot 1 mL of plasma into a preservative-free plastic vial. 3. Send refrigerated (preferred) Specimen Stability Information: Refrigerated (preferred) 30 days/Ambient 30 days/Frozen 2 years

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	

CPT Code Information: 80299

MDNS
36309

Methadone and Metabolites, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.0 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80299

MTDNX
62734

Methadone Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-custody kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect urine specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 10 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80358; G0480 (if appropriate);

MTDNU
83129

Methadone Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: G0480; 80358 (if appropriate for select payers);

FMETH
57996

Methaqualone Confirmation, urine

Specimen Requirements: 20 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80375

MET
81032

Methemoglobin and Sulfhemoglobin, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: Full tube Additional Information: Patient's age is required.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	72 hours

CPT Code Information: 83050-Methemoglobin; 83060-Sulfhemoglobin;

MEV0
608089

Methemoglobin Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	

MEV1
607495

Methemoglobinemia Evaluation, Blood

Specimen Requirements: The following specimens are required for testing: Whole blood ACD-B specimen 2 Whole blood EDTA specimens Container/Tube: Lavender top (EDTA) and yellow top (ACD solution B) Specimen Volume: EDTA: Two 4 mL tubes ACD: One 6 mL tube Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: EDTA blood: 3 mL; ACD blood: 2.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	72 hours
Whole Blood EDTA	Refrigerated	72 hours

CPT Code Information: 83020-26-Hemoglobinopathy Interpretation; 83020-Hb Variant, A2 and F Quantitation; 83021-HPLC Hb Variant; 82657-Methemoglobin reductase; 83050-Methemoglobin, quantitative; 83060-Sulfhemoglobin, quantitative; 82664 (if appropriate); 83068 (if appropriate); 83789 (if appropriate); 88184 (if appropriate);

MEVI
608086

Methemoglobinemia Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	72 hours

CPT Code Information: 83020-26

MECPI
621419

Methicillin Resistance Gene, Molecular Detection, PCR, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Collection Instructions: 1. Perform isolation of bacteria. 2. Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87641

MRSAP
609735

Methicillin Resistant Staphylococcus aureus, PCR, Nasal

Specimen Requirements: Specimen Type: Nasal cavity swab Supplies: BD E-Swab (T853) Container/Tube: Preferred: BD Liquid Amies Elution Swab (E-Swab) Acceptable: Copan Liquid Amies Elution Swab (ESwab); Cepheid nasal sample collection device (dual swab in liquid Stuart media); or Copan swab and transport systems (LQ Stuart or LQ Amies) (scored swabs only) Specimen Volume: Entire collection Collection Instructions: 1. Ask the patient to blow their nose prior to collection. 2. Use one swab for both right and left nares. 3. Insert the white Dacron swab tip (do not insert any further in) into the anterior nares. 4. Rotate the swab for 3 seconds against the nasal mucosa. Apply slight pressure on the outside of the nose with your finger to ensure good contact. 5. Repeat the process on the other nostril. 6. Insert the swab back into the carrier. The swabs should go all the way into the transport container. Tightly cap the container. 7. Label the transport container with patient label and send refrigerate.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Refrigerated (preferred)	5 days
	Ambient	24 hours

CPT Code Information: 87641

MTXSG
62580

Methotrexate Post Glucarpidase, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into an amber vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 80204

MTHX
37047

Methotrexate, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: 1. Methotrexate is sensitive to fluorescent light; avoid prolonged exposure of specimen to direct light. 2. Within 2 hours of collection, centrifuge the specimen. 3. For serum gel tubes, aliquot serum into a plastic vial within 2 hours of collection. Keep protected from light. 4. For red-top tubes, aliquot serum into a plastic vial immediately. Keep protected from light.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 80204

FMETX
91822

Methsuximide (Celontin) as Desmethylnmethsuximide

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80339

MMAAP
31927

Methylmalonic Acid, Quantitative, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Refrigerated (preferred)	48 days
	Ambient	48 days
	Frozen	48 days

CPT Code Information: 83921

MMAS
80289

Methylmalonic Acid, Quantitative, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	48 days
	Ambient	48 days
	Frozen	48 days

CPT Code Information: 83921

MMAU
80290

Methylmalonic Acid, Quantitative, Urine

Specimen Requirements: Patient Preparation: Overnight fast required Supplies: Urine Tubes, 10
mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 4 mL Collection Instructions:
Collect second-voided specimen after an overnight fast.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	28 days
	Refrigerated	28 days
	Ambient	21 days

CPT Code Information: 83921

MMAGP
608021

Methylmalonic Aciduria Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an
allogenic donor will interfere with testing. For instructions for testing patients who have received a bone

marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MPAGP
608022

Methylmalonic Aciduria-Propionic Aciduria Combined Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole

blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MPHNU
608882

Methylphenidate and Metabolite, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3.

Submitting less than 1 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	10 days
	Frozen	28 days

CPT Code Information: G0480; 80360 (if appropriate for select payers);

RIT
80456

Methylphenidate, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and freeze immediately. Send 2 mL of sodium heparin plasma frozen in a plastic vial on dry ice. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and freeze immediately. Send 2 mL serum frozen in a plastic vial on dry ice.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen	180 days

CPT Code Information: 80360; ;

MTAP
605177

Methylthioadenosine Phosphorylase (MTAP) Immunostain, Tech Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MEX
9245

Mexiletine, Serum

Specimen Requirements: Patient Preparation: Specimens should only be collected after patient has been receiving mexiletine for at least 3 days. Trough concentrations should be collected just before administration of the next dose. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

MGMT
36733

MGMT Promoter Methylation, Tumor

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. At least 40% tumor is required for this assay. In general, a 6 mm x 3 mm area of tissue cut at 5-micron thickness is the minimum amount of tissue needed; this could be collected over multiple slides. Acceptable: Specimen Type: Tissue sections Slides: 1 Stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor. At least 40% tumor is required for this assay. In general, a 6 mm x 3 mm area of tissue cut at 5-micron thickness is the minimum amount of tissue needed; this could be collected over multiple slides.

Specimen Minimum Volume: 5 Unstained slides at 5-microns thickness

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81287; 88381;

CERAM MI-Heart Ceramides, Plasma 606777

Specimen Requirements: Patient Preparation: Patients should not be receiving Intralipid because it may cause false elevations in measured ceramides. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge, aliquot at least 1 mL of plasma into a plastic vial and freeze within 8 hours.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	30 days
	Refrigerated	24 hours
	Ambient	8 hours

CPT Code Information: 0119U

MLCPC Microdissection, Laser Capture (Bill Only) 113370

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88380-Microdissection; laser capture

MNLCP
621773

Microdissection, Laser Capture, Membranous Nephropathy (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88380

TMSI
609364

Microsatellite Instability, Tumor

Specimen Requirements: This assay requires at least 40% tumor nuclei for endometrial specimens and at least 20% tumor nuclei for colorectal specimens. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 72 mm(2) -Minimum amount of tumor area: 18 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: formalin-fixed paraffin-embedded, non-decalcified Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Hematoxylin and eosin stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 5 slides from the same block.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81301; 88381-Microdissection, manual;

LCMSP
63097

Microsporidia species, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: 5 g Specimen Type: Preserved

feces Supplies: -ECOFIX Stool Transport Vial (Kit) (T219) -Stool Collection Kit, Random (T635)
 Container/Tube: ECOFIX preservative Specimen Volume: 5 g Specimen Type: Urine Container/Tube:
 Sterile container Specimen Volume: 5 mL Collection Instructions: Mid-stream, clean-catch, suprapubic
 aspirates and catheterization collections are acceptable. Submit in a clean, sterile container free from
 preservatives. The first portion of the voided urine (first void) is also acceptable.

Specimen Minimum Volume: Feces: 1 g Urine: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 87798

MTBS
81507

Microsporidia Stain, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Duodenal aspirate (small intestinal aspirate, jejunal aspirate, small bowel aspirate) Container/Tube: Sterile container Specimen Volume: 0.5 mL Additional Information: ECOFIX and 10% formalin are acceptable preservatives. Specimen Stability Information: Preserved Ambient (preferred) <10 days/Refrigerated <3 days Specimen Type: Respiratory secretions (bronchoalveolar lavage [BAL], sputum, bronchial wash, pleural fluid) Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Stability Information: Refrigerated <3 days (preferred)/Frozen <10 days Specimen Type: Eye (vitreous fluid, ocular fluid) Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Stability: Refrigerated <3 days Specimen Type: Corneal scraping Container/Tube: Sterile container Specimen Volume: 0.5mL in sterile saline Additional Information: Place scrapings in sterile saline for shipping. Specimen Stability: Refrigerated <3 days Specimen Type: Fresh tissue (lung, eye, bladder, rectal, intestinal, colon, skin, muscle, kidney) Container/Tube: Sterile container Specimen Volume: 3-mm biopsy in 0.1-mL sterile saline Specimen Stability: Refrigerated <3 days Specimen Type: Gallbladder aspirate/Bile aspirate Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Stability: Refrigerated <3 days/Frozen <10 days

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87015-Concentration; 87207-Stain;

FMIDZ
90112

Midazolam (Versed), serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate);

FMCG4
57536

Milk Cow IgG4

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

MILK
82871

Milk, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PMLK
82827

Milk, Processed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FMINT
57885

Mint (Mentha Piperita) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FMIRT
57749

Mirtazapine (Remeron)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80335

ZW153
91213

Misc Center for Human Genetics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW204
91801

Misc Cincinnati Childrens Hospital Medical Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW59
90498

Misc Esoterix Endocrinology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW73
90512

Misc Johns Hopkins-DACI Ref Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW179
91403

Misc Medical Neurogenetics, LLC

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW149
91170

Misc Monogram Biosciences, Inc.

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW196
91643

Misc National Jewish Health Mycobacteriology Test

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW146
90585

Misc Prometheus Laboratories Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW119
90558

Misc University of Florida Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements,

please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW305
75411

Misc Washington University Neuromuscular Clinical Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW206
91803

Misc. Seattle Children's Hospital Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please

contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW185
91516

Miscellaneous Ambry Genetics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW242
57378

Miscellaneous ARUP Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW127
90566

Miscellaneous Athena Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW53
90492

Miscellaneous Baylor Institute of Metabolic Disease

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW221
57103

Miscellaneous Baylor Medical Genetics Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW155
91272

Miscellaneous BioAgilytix Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

SCT2
20521

Miscellaneous Biochemical Genetics Testing

Specimen Requirements: Only orderable as part of the miscellaneous test process.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW347
75853

Miscellaneous Blueprint Genetics Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test Name 2.

Performing Lab code 3. Specimen Type 4. Required consent and/or requisition forms, including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW172
91302

Miscellaneous Center for Genetic Testing at St. Francis

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW10
8921

Miscellaneous Chemistry Testing, Varies

Specimen Requirements: For specimen requirements, call Mayo Clinic Laboratories at 800-533-1710.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen	30 days

ZW140
90579

Miscellaneous Child Med Ctr Dallas

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW163
91291

Miscellaneous Children's Hospital of Philadelphia (CHOP)

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW299
76271

Miscellaneous Childrens Hospital Los Angeles

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements,

please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW246
57992

Miscellaneous Childrens Hospital of Colorado Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW239
57180

Miscellaneous Cincinnati Children's Hospital Medical Center-Hematology/Oncology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form

including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW166
91294

Miscellaneous Cincinnati Childs Hosp Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW346
75850

Miscellaneous Cleveland Clinic

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test Name 2. Performing Lab code 3. Specimen Type 4. Required consent and/or requisition forms, including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW58
90497

Miscellaneous Duke University

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW57
90496

Miscellaneous Esoterix Coagulation

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW63
90502

Miscellaneous Esoterix Genetic Laboratories, LLC - MA

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW69
90508

Miscellaneous Eurofins Viracor

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW168
91296

Miscellaneous GeneDx, Inc. Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements,

please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW68
90507

Miscellaneous Greenwood Genetic Ctr

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW193
91601

Miscellaneous HNL Genomics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW143
90582

Miscellaneous IMMCO Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW71
90510

Miscellaneous Inter Science Institute

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW298
75278

Miscellaneous IntrinsicDx

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW300
75311

Miscellaneous Karius Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW175
91323

Miscellaneous Kennedy Krieger Institute

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW76
90515

Miscellaneous LabCorp of America

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW113
90552

Miscellaneous LabCorp-RTP,NC

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW218
91896

Miscellaneous Laboratory For Molecular Medicine

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW266
58067

Miscellaneous Machaon Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external)

or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW207
91852

Miscellaneous MD Anderson Cancer Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW342
75816

Miscellaneous MDX Health Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms or specimen requirements, contact Customer Service at 9-1-800-533-1710. NOTE: Provide when ordering: 1. Test name 2. Referral Lab Code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW78
90517

Miscellaneous Medical Coll of WI

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW80
90519

Miscellaneous Medtox Laboratories, Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW111
90550

Miscellaneous MiraVista Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW1
99991

Miscellaneous MML Referral Test 1

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW2
99992

Miscellaneous MML Referral Test 2

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient

specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW3
99993

Miscellaneous MML Referral Test 3

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW227
57163

Miscellaneous National B Virus Resource Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW85
90524

Miscellaneous National Jewish Health

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW333
75744

Miscellaneous Nationwide Children's Hospital

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW190
91598

Miscellaneous Nemours Children's Health-Gastroenterology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 9-1-800-533-1710. NOTE: Provide when ordering 1. Test name 2. Referral Lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 9-1-800-533-1710 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW335
75641

Miscellaneous New York Blood Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms or specimen requirements, contact Customer Service at 9-1-800-533-1710. NOTE: Provide when ordering: 1. Test name 2. Referral Lab Code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW321
75588

Miscellaneous Next Molecular Analytics

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW86
90525

Miscellaneous NMS Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW214
91861

Miscellaneous Ocular Immunology Laboratory OHSU

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW87
90526

Miscellaneous Palo Alto Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies**ZW194**
91602**Miscellaneous Prevention Genetics Lab**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies**ZW83**
90522**Miscellaneous Quest Diagnostics**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW51
90490

Miscellaneous Quest Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW131
90570

Miscellaneous Quest/Nichols Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW224
57157

Miscellaneous Revvity Omics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW91
90530

Miscellaneous RFFIT Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW124
75456

Miscellaneous Sequenom

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

Miscellaneous Studies Using Chromosome-Specific Probes, FISH

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 4. Results will be reported and telephoned or faxed if requested. Specimen Type: Blood (only accepted for Congenital/Hereditary [nonhematologic] testing) Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Chorionic villi (CVS) Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 to 25 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (eg, CVS media (RPMI)). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Lymph node Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) Specimen Type: Skin biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 1-cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Additional Information: 1. Paraffin embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable: Slides Collection Instructions: For each probe set ordered, 4 consecutive, unstained, 5 micron-thick sections placed on positively charged slides. Include 1 hematoxylin and eosin-stained slide for the entire test order. Specimen Type: Tumor Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5 to 3 cm(3) or larger

Specimen Minimum Volume: Amniotic fluid: 5 mL; Blood: 2 mL; Chorionic villi: 5 mg; Lymph node: 0.5 cm(3); Solid tumor: 0.5 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets

containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

ZW102 90541

Miscellaneous U of TX San Ant Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW288 75170

Miscellaneous UF Health Pathology Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW99 90538

Miscellaneous Univ of AL-Metabolic Disease Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW210
91857

Miscellaneous Univ of IA Molecular Otolaryngology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW128
90567

Miscellaneous University Hospital Clinical Lab Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW234
57175

Miscellaneous University of Alabama at Birmingham

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW186
91515

Miscellaneous University of Chicago Genetics Services

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW187
91514

Miscellaneous University of Iowa Diagnostic Labs

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external)

or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

ZW61
90500

Miscellaneous University of Minnesota Outreach Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW238
57179

Miscellaneous University of Southern California Endocrine Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW191
91599

Miscellaneous University of Texas Health Center at Tyler Microbiology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW280
58092

Miscellaneous University of Washington Medical Center (Molecular Diagnosis Clinical Microbiology Lab)

Specimen Requirements:

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW282
58088

Miscellaneous University of Washington Medical Center (UW Virology Dept of Lab Medicine)

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW278
58078

Miscellaneous University of Washington Medical Center-Clinical Immunology Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW293
75252

Miscellaneous UPMC Molecular and Genomic Pathology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW334
75750

Miscellaneous Variantyx, Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms or specimen requirements, contact Customer Service at 9-1-800-533-1710. NOTE: Provide when ordering: 1. Test name 2. Referral Lab Code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 9-1-800-533-1710 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

ZW121
90560

Miscellaneous Versiti Wisconsin, Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: Varies

IHC
35466

Mismatch Repair (MMR) Protein Immunohistochemistry Only, Tumor

Specimen Requirements: Tumor tissue is required. Preferred: Specimen Type: Tissue block
Collection Instructions: Submit formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue slide Slides: 1 Hematoxylin and eosin stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides (5-micron-thick sections) of tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88341 MLH1, MLH2, or MLH6 (if appropriate); 88342 PMS2 (if appropriate);

MITF
70509

MiTF Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

Mitochondrial Antibodies (M2), Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86381

Mitochondrial DNA Deletion Heteroplasmy, ddPCR, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Muscle tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation Instructions. Specimen Volume: 10-80 mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated Specimen Type: Snap frozen nerve tissue biopsy Collection Instructions: Prepare snap frozen tissue biopsy per surgical procedure Specimen Volume: 0.25-0.5 cm Specimen Stability Information: Frozen Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep

specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: Blood: 1 mL; Blood spots: 2 spots; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

MITOP
62510

Mitochondrial Full Genome Analysis, Next-Generation Sequencing (NGS), Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm Punch Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. Specimen Type: Snap frozen nerve tissue biopsy Collection Instructions: Prepare snap frozen tissue biopsy per surgical procedure Specimen Volume: 0.25 to 0.5 cm Specimen Stability Information: Frozen Specimen Type: Muscle tissue biopsy Supplies: Muscle Biopsy Kit (T541) Specimen Volume: 20 to 80 mg Collection Instructions: Prepare and transport specimen per

instructions in Muscle Biopsy Specimen Preparation. Specimen Stability Information: Frozen (preferred) <24 hours/Ambient <24 hours/Refrigerated <24 hours Additional Information: Specimens are preferred to be received within 24 hours of collection. Extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect a Dried Blood Spot Sample. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Multiple extractions will be required to obtain sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81460-Whole Mitochondrial Genome; 81465-Whole Mitochondrial Genome Large Deletion Analysis; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MMPP
616610

Mitochondrial Metabolites, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (Sodium heparin) Acceptable: Green top (Lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	7 days

CPT Code Information: 82542

FETCE
91844

Mitochondrial Respiratory Chain Enzyme Analysis (ETC) - Skin Fibroblasts

Specimen Requirements: Cultured Fibroblasts 3 T-25 flasks(s) filled to neck with culture media. Maintain sterility and forward promptly at ambient temperature. Complete and submit with specimen: 1. Baylor Mitochondrial request form.

Transport Temperature:

Specimen Type	Temperature	Time
Fibroblasts	Ambient	

CPT Code Information: 84311 x 6

MITAN
621811

Mitotane, Plasma

Specimen Requirements: Collection Container/Tube: Green top (sodium heparin) (Lithium heparin and PST/plasma gel tubes are not acceptable.) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Heparin	Refrigerated (preferred)	21 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80299

FMITU
75773

Mitragynine (Qualitative), Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 2 mL Collection Instructions: Collect 2 mL random urine without preservative. Send specimen refrigerated in a plastic, preservative-free urine container.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 80323

FCDX2
75842

Mitragynine Confirmation (Qualitative), Umbilical Cord Tissue

Specimen Requirements: Only orderable as a reflex test.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80375

BMLHH
35894

MLH1 Hypermethylation Analysis (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies		

CPT Code Information: 81288-MLH1 promoter methylation analysis

MLHPB **MLH1 Hypermethylation Analysis, Blood** 35500

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81288

ML1HM **MLH1 Hypermethylation Analysis, Tumor** 35494

Specimen Requirements: Specimen Type: Tissue block or slide Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides (5-micron thick sections) of the tumor tissue. 2. Sections should contain tumor tissue.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81288; 88381;

BRMLH
35491

MLH1 Hypermethylation and BRAF Mutation Analysis, Tumor

Specimen Requirements: Specimen Type: Tissue block or slide Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides (5 micron-thick sections) of the tumor tissue. 2. Sections should contain both tumor and normal tissue.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: Slide Review; 88381-Microdissection, manual; ; 81210-BRAF (v-raf murine sarcoma viral oncogene homolog B1) (eg, colon cancer), gene analysis, V600E variant, if appropriate; 81288-MLH1 promoter methylation analysis, if appropriate;

MLH1
70510

MLH1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MOC31
70505

MOC-31 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

MOLD1
81878

Mold Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MINT
61696

Molecular Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	30 days
	Ambient	14 days

CPT Code Information:

MOLPS
89270**Molybdenum, Serum**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 1.6 mL Collection Instructions: 1. Allow specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	METAL FREE
	Ambient	14 days	METAL FREE
	Frozen	14 days	METAL FREE

CPT Code Information: 83018

QMPTS
620169**Monoclonal Protein Isotype, Quantitative, Serum**

Specimen Requirements: Only orderable as part of a profile. For more information see QMPSS / Monoclonal Protein Study, Quantitative, Serum. Patient Preparation: None indicated Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 0077U

MPQU
616907**Monoclonal Protein Quantitation, 24 Hour, Urine**

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 50 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Aliquot between 30 mL and 50 mL urine into plastic, 60-mL urine bottle. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 30 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	5 days
	Ambient	24 hours

CPT Code Information: 84156; 84166; 0077U (if appropriate);

RMPQU
616909**Monoclonal Protein Quantitation, Random, Urine**

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 50 mL Collection Instructions: 1. Collect random urine specimen. 2. Aliquot between 30 mL and 50 mL of urine into a plastic, 60-mL urine bottle.

Specimen Minimum Volume: 30 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	5 days
	Ambient	24 hours

CPT Code Information: 84156; 82570; 84166; 0077U (if appropriate);

SMPU
616913**Monoclonal Protein Screen, 24 Hour, Urine**

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 50 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Aliquot between 30 mL and 50 mL of urine into a plastic, 60-mL urine bottle. Additional

Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 30 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	5 days
	Ambient	24 hours

CPT Code Information: 84156; 84166 Electrophoresis, protein (if appropriate); 0077U;

RSMPU
616915

Monoclonal Protein Screen, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 50 mL Collection Instructions: 1. Collect random urine specimen. 2. Aliquot between 30 mL and 50 mL of urine into a plastic, 60 mL urine bottle.

Specimen Minimum Volume: 30 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	5 days
	Ambient	24 hours

CPT Code Information: 84156; 82570; 84166 Electrophoresis, protein (if appropriate); 0077U;

MPU
616911

Monoclonal Protein Studies, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 50 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Aliquot between 30 mL and 50 mL urine into plastic, 60-mL urine bottle. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 30 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	5 days
	Ambient	24 hours

CPT Code Information: 84156; 84166; 0077U;**RMPU**
616912**Monoclonal Protein Studies, Random, Urine****Specimen Requirements:** Supplies: Urine Container, 60 mL (T313) Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 50 mL Collection Instructions: 1. Collect a random urine specimen. 2. Aliquot between 30 mL and 50 mL of urine into a plastic, 60-mL urine bottle.**Specimen Minimum Volume:** 30 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	5 days
	Ambient	24 hours

CPT Code Information: 84156; 82570; 84166; 0077U;**MPEP**
618167**Monoclonal Protein Study, Expanded Panel, Serum****Specimen Requirements:** Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.**Specimen Minimum Volume:** 1.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 83521 x 2; 84155; 84165; 86334; 86334-Immunofixation Delta and Epsilon (if appropriate);

QMPSS
620919

Monoclonal Protein Study, Quantitative, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL total in 2 separate plastic vials, each containing 1 mL Collection Instructions: Centrifuge and aliquot serum into 2 plastic vials, each containing 1 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 0077U; 82784 x 3;

MPSS
800302

Monoclonal Protein Study, Serum

Specimen Requirements: Patient Preparation: Fasting preferred, but not required Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 84155; 84165; 86334; 86334-Immunofixation Delta and Epsilon (if appropriate);

MONOF Monocyte Repartition by CD14/CD16, Blood 610018

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated	72 hours

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 7-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow Cytometry Interpretation, 2 to 8 markers;

FMORS Morphine Confirmation, Serum 75144

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80361

SPSM
9184

Morphology Evaluation (Special Smear), Blood

Specimen Requirements: Collection Container/Tube: 2 slides Specimen Volume: 2 unstained, well prepared peripheral blood smears Collection Instructions: Smears made from blood obtained by either a lavender top (EDTA) tube or finger stick specimen

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	CARTRIDGE	
	Refrigerated	CARTRIDGE	

CPT Code Information: 85007; 85060-(if appropriate); 85027-(if appropriate); 88184-(If appropriate); 88185-(If appropriate); 88187-(if appropriate); 88188-(if appropriate); 88189-(if appropriate);

MSP
82845

Mosquito Species, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MOTH
82738

Moth, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FMNPP
75811

Motor Neuropathy Panel

Specimen Requirements: Specimen Type: Serum Container/Tube: Serum Separator Tube (SST)
Specimen Volume: 4 mL Collection Instructions: Draw blood in a serum gel tube(s). Spin down and send 4 mL serum refrigerated in plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 82784 x 3; 83516 x 7; 84155; 84165; 86334;

CED
82668

Mountain Cedar, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MOUS 82707

Mouse Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MOSP 82792

Mouse Serum Protein, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MOUP
82795

Mouse Urine Protein, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MDS2
606192

Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended before initiation of immunosuppressant medication or intravenous immunoglobulin treatment. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86596; 86255 x 26; 84182; 86341; 0432U; 84182 AGNBS (if appropriate); 86256 AGNTS (if appropriate); 86255 AINCS (if appropriate); 84182 AMIBS (if appropriate); 86256 AMPIS (if appropriate); 84182 AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182 AN2BS (if appropriate); 86256 AN2TS (if appropriate); 86256 AN3TS (if appropriate); 86255 APBCS (if appropriate); 86256 APBTS (if appropriate); 86256 APHTS (if appropriate); 86256 CRMTS (if

appropriate); 86256 DPPTS (if appropriate); 86256 GABIS (if appropriate); 86255 GFACS (if appropriate); 86256 GFATS (if appropriate); 86255 GL1CS (if appropriate); 86256 GL1TS (if appropriate); 86255 GRFCS (if appropriate); 86256 GRFTS (if appropriate); 86256 IG5TS (if appropriate); 86255 ITPCS (if appropriate); 86256 ITPTS (if appropriate); 86256 K11TS (if appropriate); 86255 NCDCS (if appropriate); 86256 NCDTS (if appropriate); 86255 NFHCS (if appropriate); 86255 NFLCS (if appropriate); 86256 NIFTS (if appropriate); 86256 NMDIS (if appropriate); 84182 PC1BS (if appropriate); 86256 PC1TS (if appropriate); 86256 PC2TS (if appropriate); 84182 PCTBS (if appropriate); 86256 PCTTS (if appropriate); 86256 PDETS (if appropriate); 86255 SP5CS (if appropriate); 86256 SP5TS (if appropriate); 86255 SP7CS (if appropriate); 86256 SP7TS (if appropriate); 86255 T46CS (if appropriate); 86256 T46TS (if appropriate);

MDC2
606193

Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended before initiation of immunosuppressant medication, or corticosteroid or intravenous immunoglobulin (IVIg) treatment. Container/Tube: Sterile vial Preferred: Collection vial number 1 Acceptable: Any collection vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x26; 84182; 86341; 0432U; 84182-AGNBC (if appropriate); 86256-GNTC (if appropriate); 86255-AINCC (if appropriate); 84182-AMIBC (if appropriate); 86256-AMPIC (if appropriate); 84182-AN1BC (if appropriate); 86256-AN1TC (if appropriate); 84182-AN2BC (if appropriate); 86256-AN2TC (if appropriate); 86256-AN3TC (if appropriate); 86255-APBCC (if appropriate); 86256-APBTC (if appropriate); 86256-APHTC (if appropriate); 86256-CRMTC (if appropriate); 86256-DPPTC (if appropriate); 86256-GABIC (if appropriate); 86255-GFACC (if appropriate); 86256-GFATC (if appropriate); 86255-GL1CC (if appropriate); 86256-GL1TC (if appropriate); 86255-GRFCC (if appropriate); 86256-GRFTC (if appropriate); 86256-IG5TC (if appropriate); 86255-ITPCC (if appropriate); 86256-ITPTC (if appropriate); 86256-K11TC (if appropriate); 86255-NCDCC (if appropriate); 86256-NCDTC (if appropriate); 86255-NFHCC (if appropriate); 86255-NFLCC (if appropriate); 86256-NIFTC (if appropriate); 86256-NMDIC (if appropriate); 84182-PC1BC (if appropriate); 86256-PC1TC (if appropriate); 86256-PC2TC (if appropriate); 84182-PCTBC (if appropriate); 86256-PCTTC (if appropriate); 86256-PDETC (if appropriate); 86255-SP5CC (if appropriate); 86256-SP5TC (if appropriate); 86255-SP7CC (if appropriate); 86256-SP7TC (if appropriate); 86255-T46CC (if appropriate); 86256-T46TC (if appropriate);

MPLFM
618661

MPL Exon 10 Mutation Detection, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81339

MPLR
36682

MPL Exon 10 Mutation Detection, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see MPNR / Myeloproliferative Neoplasm (MPN), JAK2 V617F with reflex to CALR and MPL.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence

MPLVS
602599

MPL Exon 10 Mutation Detection, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collections Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collections Instructions: 1. Invert several times to mix bone marrow. 2. Send specimens in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2- mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of DNA. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood, Bone marrow: 0.5 mL; Extracted DNA: 50 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence

MPNML
44179

MPL Exon 10 Sequencing, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see MPNCM / Myeloproliferative Neoplasm, CALR with Reflex to MPL, Varies.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence

MPLJM
606807

MPL Exon 10 Variant Detection, Reflex, Bone Marrow

Specimen Requirements: Only orderable as a reflex. For more information see MPNJM / Myeloproliferative Neoplasm, JAK2 V617F with Reflex to CALR and MPL, Bone Marrow.
Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Note: Extracted DNA from bone marrow is not acceptable.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81339

FMPVP
75817

Mpox Virus DNA, Qualitative Real-Time PCR

Specimen Requirements: Specimen Type: Lesion Swab Container/Tube: Viral Culture Media (VCM), Viral Transport Media (VTM), Universal Transport Media (UTM), or equivalent Specimen Volume: 1 swab Collection Instructions: Swab the pustule/lesion vigorously and place the swab in 3 mL Viral Culture Media (VCM), Viral Transport Media (VTM), Universal Transport Media (UTM), or equivalent. Include Patient Race, Ethnicity, Specimen type (source), and Anatomic Location specimen was collected. Ship frozen. Note: Each individual specimen submitted should be transported in its own sealed bag. Multiple specimens collected on a single patient should be submitted separately.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	30 days
	Refrigerated	7 days

CPT Code Information: 87593 x 2

MSH2
70512

MSH2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

MSH6
70513

MSH6 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,

paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

CSMRT
607626

mSMART Plasma Cell Proliferative Disorder, Pre-Analysis Cell Sorting, Bone Marrow

Specimen Requirements: Only orderable as a reflex. For more information see MSMRT / Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report, Bone Marrow or MSMRD / Myeloma Stratification and Risk-Adapted Therapy with Reflex to Minimal Residual Disease, Bone Marrow Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each);

MPCDS
606090

mSMART, Plasma Cell Proliferative Disorder, FISH, Bone Marrow

Specimen Requirements: Only orderable as part of a profile. For more information see MSMRT / Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report, Bone Marrow. Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88274, 88291-FISH Probe, Analysis, Interpretation; 1 probe set; 88271 x 2, 88274-FISH Probe, Analysis; each additional probe set (if appropriate);

MUCN2

605116

Mucin 2, Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUCN4

601740

Mucin 4, Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUCN5
605118**Mucin 5AC, Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUCN6
605120**Mucin 6, Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MPSQU
606299**Mucopolysaccharides Quantitative, Random, Urine**

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 2 mL Pediatric Volume: 1 mL Collection Instructions: Collect a random urine specimen (early morning preferred).

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	90 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 83864; 82570;

MPSER
604905

Mucopolysaccharides Quantitative, Serum

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Pediatric: 0.2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	90 days
	Frozen	90 days
	Ambient	14 days

CPT Code Information: 83864

MP8BS
616836

Mucopolysaccharidoses, Eight-Enzyme Panel, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient 1 year of age or older is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen

Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657; 83864 (if appropriate);

MP9W
616837

Mucopolysaccharidoses, Nine-Enzyme Panel, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

MPS3W
618293

Mucopolysaccharidosis III, Four-Enzyme Panel, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

MPS3B
618292

Mucopolysaccharidosis III, Three-Enzyme Panel, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood spots: 1 Whole blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657; 83864 (if appropriate);

MPS4B
618294

Mucopolysaccharidosis IV Enzyme Panel, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete, ie, unpunched. 3. Let blood dry on filter paper at room

temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657; 83864 (if appropriate);

MPS4W
618295

Mucopolysaccharidosis IV Enzyme Panel, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

MPSWB
113435

Mucopolysaccharidosis, Blood

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 83864**MPSBS**
65095**Mucopolysaccharidosis, Blood Spot**

Specimen Requirements: Patient Preparation: Do not administer low-molecular-weight heparin prior to collection Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 filter paper, Munktell filter paper, local newborn screening card, postmortem screening card, or blood collected in tubes containing ACD or EDTA and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	100 days	FILTER PAPER
	Frozen	100 days	FILTER PAPER
	Refrigerated	100 days	FILTER PAPER

CPT Code Information: 83864**MUC**
82675**Mucor, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MUG
82683

Mugwort, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MULB
82864

Mulberry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RETZZ
614587

Multiple Endocrine Neoplasia Type 2 Syndrome, RET, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406

MRDMR
616031

Multiple Myeloma Minimal Residual Disease by Flow Cytometry, Bone Marrow

Specimen Requirements: Only orderable as a reflex. For more information see MSMRD / Myeloma Stratification and Risk-Adapted Therapy with Reflex to Minimal Residual Disease, Bone Marrow Specimen Type: Redirected bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume:

2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 9-Flow Cytometry; additional cell surface, cytoplasmic or nuclear marker; 88188-Flow Cytometry Interpretation, 9 to 15 Markers;

MRDMM
65218

Multiple Myeloma Minimal Residual Disease, Flow Cytometry, Bone Marrow

Specimen Requirements: Specimen Type: Redirected bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 9-Flow Cytometry; additional cell surface, cytoplasmic or nuclear marker; 88188-Flow Cytometry Interpretation, 9 to 15 Markers;

MSP3
607837

Multiple Sclerosis (MS) Cascade, Serum and Spinal Fluid

Specimen Requirements: Both serum and spinal fluid are required. Spinal fluid must be obtained within 1 week of serum collection. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: 1. Submit CSF from collection vial no. 4.(preferred); vial no. 1, 3, 2 are also acceptable (in this order). 2. Label specimen as spinal fluid. Specimen Type: Serum Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. 2. Label specimen as serum.

Specimen Minimum Volume: Serum, Spinal fluid: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	14 days
	Refrigerated	72 hours
	Ambient	24 hours
Serum	Frozen (preferred)	14 days
	Ambient	14 days
	Refrigerated	14 days

CPT Code Information: 83521; 83916 x2 (if appropriate);

MSDBS
618296

Multiple Sulfatase Deficiency, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient 1 year of age or older is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657; 83864 (if appropriate);

MSDW
618297

Multiple Sulfatase Deficiency, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657

MUM1B
603217

MUM-1/IRF4 Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUM1
70514

MUM-1/IRF4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CMUMP Mumps Virus Antibodies, IgG and IgM, Spinal Fluid

81435

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Submit aliquot from collection vial 1.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86735 x 2

MPPG Mumps Virus Antibody, IgG, Serum

34947

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86735

MMPGM
61854**Mumps Virus Antibody, IgM and IgG, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86735-Mumps, IgG; 86735-Mumps, IgM;

MMPM
80977**Mumps Virus Antibody, IgM, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86735

MUMPR
617823**Mumps Virus, Molecular Detection, PCR, Buccal**

Specimen Requirements: Specimen Type: Buccal Swab Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Sterile container with transport media Specimen Volume: Entire collection Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosal surface around buccal cavity (the space near the upper rear molars between the cheek and the teeth) to maximize recovery of cells. 2. Swab must be placed into viral transport media (eg, M4-RT, M4, M5, Barthels FlexTrans Media or Jiangsu Transport Media)

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

MUMPU
617824

Mumps Virus, Molecular Detection, PCR, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated	7 days

CPT Code Information: 87798

FMTAG
57260

Murine Typhus Antibodies, IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL serum in a screw-capped vial, shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	5 days

CPT Code Information: 86757

MBX
70594

Muscle Pathology Consultation

Specimen Requirements: Preferred: Specimen Type: Frozen muscle biopsy tissue Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation Instructions. Additional Information: 1. All specimens and additional paperwork must be labeled with: -Two patient identifiers (first and last name, date of birth, or medical record number) -Pathology accession/case number -Anatomic site 2. Contact the Mayo Clinic Muscle Laboratory at 800-533-1710 for special problems to maximize benefit of the muscle biopsy. Acceptable: Specimen Type: Stained muscle biopsy slides Collection Instructions: 1. Submit all stains performed on the case. 2. All specimens must be labeled with anatomic site.

Specimen Minimum Volume: 1.5 cm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	
	Ambient	

CPT Code Information: 88342 (if appropriate); 88341 (if appropriate); 88346 (if appropriate); 88350 (if appropriate); 88305 (if appropriate); 88313 (if appropriate); 88319 (if appropriate); 88314 (if appropriate); 88321 (if appropriate); 88323 (if appropriate); 88323-26 (if appropriate); 88325 (if appropriate);

FCDU9
75784

Muscle Relaxants, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

MUSK
64277

Muscle-Specific Kinase (MuSK) Autoantibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86366**FMUSG**
57659**Mushroom IgG****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001**MUSH**
82626**Mushroom, IgE, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.**Specimen Minimum Volume:** For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FMTFG
57679

Mustard Food IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

MSTD
82801

Mustard, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

MUXF3
609437

MUXF3 (Cross-reactive Carbohydrate Determinant), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 86008

FBMO
75510

MVista Blastomyces Quantitative Antigen, Fluid

Specimen Requirements: Submit only one of the following: Specimen Type: Spinal Fluid (CSF) or Bronchoalveolar Fluid Container/Tube: Sterile leak-proof container Specimen Volume: 2 mL
Collection Instructions: CSF: Collect 2 mL of CSF in sterile leak-proof container. Send refrigerated in a plastic screw cap vial. Bronchoalveolar Lavage: Collect 2 mL in sterile leak-proof container. Send refrigerated in a plastic screw cap vial. NOTE: 1. Specimen type is required. 2. Separate order required for each specimen. 3. Sputolysin, sodium hydroxide, and potassium hydroxide treatment degrade the analyte detected in the assay.

Specimen Minimum Volume: CSF: 0.8 mL; BAL: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	

CPT Code Information: 87449

FMVCO
57122

MVista Coccidioides Quantitative Antigen EIA

Specimen Requirements: Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 2 mL Collection Instructions: Collect 2 mL random urine specimen. Ship specimen refrigerated in a plastic, preservative-free urine container. Note: Sputolysin and Sodium Hydroxide are interfering substances.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Ambient	48 hours
	Frozen	

CPT Code Information: 87449

FHST
91957

MVista Histoplasma Ag Quantitative EIA

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	

CPT Code Information: 87385

FHSAG
90017

MVista Histoplasma Ag Quantitative, Spinal Fluid

Specimen Requirements:

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	

CPT Code Information: 87385

MGMR
608980

Myasthenia Gravis Evaluation with Muscle-Specific Kinase (MuSK) Reflex, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86041; 86043 (if appropriate); 86366 (if appropriate);

MGLE
608979

Myasthenia Gravis/Lambert-Eaton Myasthenic Syndrome Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86041; 86596; 86043 (if appropriate); 86366 (if appropriate);

SGTF
35860

MYB (6q23) Rearrangement FISH, Tissue

Specimen Requirements:

Specimen Minimum Volume: Two consecutive unstained 5 micron-thick sections placed on positive-charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

MYC
70515

MYC Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

Mycobacteria and Nocardia Culture, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 1.5 mL Specimen Type: Bone marrow Container/Tube: Sterile container, or green top (lithium or sodium heparin) Specimen Volume: Entire collection Specimen Type: Gastric washing Container/Tube: Sterile container Specimen Volume: 10 mL Collection Instructions: Neutralize specimen within 4 hours of collection with 100 mg of sodium carbonate per 5 to 10 mL of gastric wash. Specimen Type: Respiratory Sources: Bronchoalveolar lavage fluid, bronchial washing, sputum Container/Tube: Sterile container Specimen Volume: 3 mL Collection Instructions: 1. Collect 3 respiratory specimens for acid-fast smears and culture in patients with clinical and chest X-ray findings compatible with tuberculosis. 2. These 3 specimens should be collected at 8 to 24-hour intervals (24 hours when possible) and should include at least 1 first-morning specimen. Specimen Type: Stool Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: 5 to 10 g Specimen Type: Tissue Container/Tube: Sterile container Specimen Volume: 5 to 10 mm Collection Instructions: Collect a fresh tissue specimen. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 20 to 50 mL Collection Instructions: Collect a random urine specimen. Fresh tissue or body fluid is the preferred specimen type instead of a swab specimen. Recovery of mycobacteria from swabs is generally very low yield. Specimen Type: Swab Sources: Wound, tissue, or body fluid Container/Tube: Culture transport swab (noncharcoal) culturette, or Eswab Specimen Volume: Adequate specimen Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are requested or both a bacterial culture and mycobacterial culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87116-Mycobacterial Culture; 87015-Mycobacteria Culture, Concentration (if appropriate); 87118-Id MALDI-TOF Mass Spec AFB (if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87176-Tissue Processing (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

Mycobacterial Culture, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: SPS (sodium polyanethol sulfonate) Specimen Volume: 8 to 10 mL per culture Collection Instructions: 1. Send whole blood specimen in original tube. 2. SPS tubes are acceptable, but not preferred. 3. Note: SPS tubes must be clearly labeled as SPS. If label is obscured, sample may be canceled, as ACD (yellow top) is not an acceptable tube type.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 87116-Mycobacterial Culture; 87118-Id MALDI-TOF Mass Spec AFB (if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87153-Mtb PZA Confirmation, *pcnA* sequence (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

TBSP
607364

Mycobacterium tuberculosis Complex Species Identification, PCR, Varies

Specimen Requirements: Specimen Type: Mycobacterium tuberculosis complex isolate growing in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Growth on solid slant media, eg, Middlebrook 7H10, 7H11 and Lowenstein Jensen; growth in broth medium, eg, Mycobacteria Growth Indicator Tube, 7H9 broth BACT/ALERT MP or VersaTREK Specimen Volume: Isolate with visible growth on solid media; if broth is sent, 3 mL or more of broth culture Collection Instructions: 1. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures. 2. Place specimen in a large infectious container and label as an etiologic agent/infectious substance. Additional Information: If subculture to Middlebrook agar medium is needed to ensure purity, turnaround time for results may be delayed.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87150

MTBXS
619564

Mycobacterium tuberculosis Complex, Molecular Detection and Rifampin Resistance, PCR, Sputum

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Mycobacterium tuberculosis DNA is unlikely. Specimen Type: Sputum (undigested) Container/Tube: Sterile container Specimen Volume: 3 mL Specimen Stability Information: Refrigerated (preferred) 7 days/Ambient 72 hours Additional Information: 1. If a single specimen is being shared between mycobacterial culture, acid-fast smear, and/or M tuberculosis PCR, a minimum volume of 3 mL for the respiratory specimen is required. Specimen volumes less than indicated may decrease sensitivity of testing. 2. If insufficient volume is submitted, testing will be canceled. Specimen Type: N-acetyl-L-cysteine/sodium hydroxide (NALC/NaOH)-digested sputum Container/Tube: Sterile container

Specimen Volume: 3 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen. Specimen Stability Information: Refrigerated 7 days Additional Information: 1. If a single specimen is being shared between mycobacterial culture, acid-fast smear, and/or M tuberculosis PCR, a minimum volume of 3 mL for the respiratory specimen is required. Specimen volumes less than indicated may decrease sensitivity of testing. 2. If insufficient volume is submitted, testing will be canceled.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Sputum	Refrigerated (preferred)	7 days
	Ambient	72 hours

CPT Code Information: 87564

MTBT
62203

Mycobacterium tuberculosis Complex, Molecular Detection, PCR, Paraffin, Tissue

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Mycobacterium tuberculosis DNA is unlikely. Preferred: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue block Sources: Body tissue Container/Tube: Tissue block Collection Instructions: Submit a FFPE tissue block to be cut and returned. Acceptable: Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue sections (scrolls) Sources: Body tissue Container/Tube: Sterile containers, one for each individual cut section (scroll). Collection Instructions: 1. Perform microtomy and prepare five separate 10-micron sections. 2. Place each section (scroll) in a separate sterile container for submission.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87556

MTBRP
88807

Mycobacterium tuberculosis Complex, Molecular Detection,

PCR, Varies

Specimen Requirements: Submit a raw clinical sample (not a culture isolate) for testing. Fresh, undigested specimens are preferred. If no fresh specimen is available, digested respiratory specimens treated with N-acetyl-L-cysteine/sodium hydroxide (NALC/NaOH) are acceptable for some specimen types. For detailed information, see the Specimen Type information below. The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by *Mycobacterium tuberculosis* DNA is unlikely. If a single specimen is being shared between mycobacteria culture, acid-fast smear, and/or M tuberculosis PCR, a minimum volume of 2 mL for body fluid, 3 mL for respiratory specimen, or a pea-sized piece of tissue should be obtained. Specimen volumes less than indicated may decrease sensitivity of testing. If insufficient volume is submitted, test or tests will be canceled. Submit only 1 of the following specimens: Preferred Specimen Types Specimen Type: Body fluid Sources: Body, bone marrow aspirate, ocular, or CSF Container/Tube: Sterile container Specimen Volume: 1 mL Additional Information: Only fresh, non-NALC/NaOH-digested body fluids are acceptable. Specimen Type: Gastric washing Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Neutralize specimen within 4 hours of collection with 20 mg of sodium carbonate per 2 mL of gastric washing. Specimen Type: Respiratory Sources: BAL, bronchial washing, tracheal secretion, or sputum Container/Tube: Sterile container Specimen Volume: 1 mL if only PCR ordered or 3 mL if PCR ordered with smear and culture Additional Information: Before collecting sputum specimens, see Ordering Guidance. Specimen Type: Feces Container/Tube: Sterile container Specimen Volume: 5 to 10 g Additional Information: Only fresh, non-NALC/NaOH-digested fecal specimens are acceptable. Specimen Type: Tissue Sources: Fresh tissue, bone, or bone marrow biopsy Container/Tube: Sterile container Specimen Volume: 5 to 10 mm Collection Instructions: Keep moist with sterile water or sterile saline Additional Information: Only fresh, non-NALC/NaOH-digested tissue is acceptable. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Acceptable Specimen Types Specimen Type: NALC/NaOH-digested respiratory specimens Sources: Lavage fluid, bronchial washing, gastric washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen.

Specimen Minimum Volume: Body fluid, nondigested respiratory specimen, urine: 0.5 mL; Fresh tissue or bone: 5 mm; NALC-NaOH-digested specimen, gastric washing: 1 mL; Stool: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87556-Mycobacterium tuberculosis, complex, molecular detection, PCR; 87015-Mycobacteria culture, concentration (if appropriate);

MTBPZ
56099

Mycobacterium tuberculosis Complex, Pyrazinamide Resistance by pncA DNA Sequencing, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large

(T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87153-Mtb PZA Confirmation, pncA Sequence

MPA
81563

Mycophenolic Acid, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before the next scheduled dose (trough). 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 80180

RPMPM
610248

Mycoplasma (Mycoplasmoides) pneumoniae Macrolide (Azithromycin) Resistance Prediction, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Mycoplasma (Mycoplasmoides) pneumoniae DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-swab (T853) -Nasopharyngeal Swab (Nylon Mini-Tip Swab) (T861) -Culture Swab-Liquid Stuarts/Single Swab (NP Swab) (T515) -M4-RT (T605) Sources: Throat, nasal, or nasopharyngeal Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Culture transport swab (Stuart's media) or place swab in M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: Swab Collection Instructions: 1. Collect

specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Sources: Pleural, pericardial, cerebrospinal Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, tracheal secretions, sputum Container/Tube: Sterile container Specimen Volume: 1 mL

Specimen Minimum Volume: Respiratory: 0.5 mL Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

MPRP
62394

Mycoplasma (Mycoplasmoides) pneumoniae with Macrolide Resistance Reflex, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Mycoplasma (Mycoplasmoides) pneumoniae DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -Nasopharyngeal Swab (Nylon Mini-Tip Swab) (T861) -Culture Swab-Liquid Stuarts/Single Swab (NP Swab) (T515) -M4-RT (T605) Sources: Throat, nasal, or nasopharyngeal Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Culture transport swab (Stuart's media) or place swab in M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: Swab Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Sources: Pleural, pericardial, cerebrospinal Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, tracheal secretions, sputum Container/Tube: Sterile container Specimen Volume: 1 mL

Specimen Minimum Volume: Respiratory specimen: 0.5 mL Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87581

MMGEN
620733

Mycoplasma genitalium, Transcription-Mediated Amplification, Post-Prostatic Massage Fluid/Urine or Peritoneal Fluids

Specimen Requirements:

Specimen Minimum Volume: Peritoneal fluid: 1 mL; Post-prostatic massage fluid/urine (VBIII): See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	APTIMA VIAL	

CPT Code Information: 87563

AMGEN
616513

Mycoplasma genitalium, Transcription-Mediated Amplification, Urine or Urogenital Swab

Specimen Requirements:

Specimen Minimum Volume: Urine-first void: 2 mL; Swabs (endocervical, urethral, vaginal, penile/ meatal): See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	APTIMA VIAL	

CPT Code Information: 87563

MYCO
48394

Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86738 x 2-Mycoplasma pneumoniae by EIA; 86738-Mycoplasma pneumoniae by indirect IFA (if appropriate);

MYCOG
48317

Mycoplasma pneumoniae Antibodies, IgG, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see MYCO / Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86738

MYCOM
48318

Mycoplasma pneumoniae Antibodies, IgM, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see MYCO / Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86738

MYCON Mycoplasma pneumoniae Antibody Interpretation

48319

Specimen Requirements: Only orderable as part of a profile. For more information see MYCO / Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CXCFX MYD88 Reflex to CXCR4 Mutation Detection, Varies

601508

Specimen Requirements: No additional specimen is required. Only orderable as a reflex. For more information see LPLFX / Lymphoplasmacytic Lymphoma/Waldenstrom Macroglobulinemia, MYD88 L265P with Reflex to CXCR4, Varies.

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 20 mcL with a concentration of at least 10 nanograms per mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	10 days

CPT Code Information: 81479-Unlisted molecular pathology procedure

MYD88 MYD88, L265P, Somatic Gene Mutation, DNA Allele-Specific PCR, Varies

62927

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type:

Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerated Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability: Ambient Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerated Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection. Specimen Stability: Frozen Specimen Type: Unstained slides Container/Tube: Unstained tissue slides Specimen Volume: 10 to 20 Slides Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, acute myelocytic leukemia), not solid tumors. Specimen Stability: Ambient Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Indicate volume and concentration of the DNA on the label. Specimen Stability: Frozen (preferred)/Refrigerated Specimen Type: Methanol-acetic acid (MAA) fixed pellets Container/Tube: Plastic container Specimen Stability: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Whole blood, Bone marrow: 1 mL; Extracted DNA: 50 mcL at 20 ng/mcL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	10 days

CPT Code Information: 81305

MOGFS
65563

Myelin Oligodendrocyte Glycoprotein (MOG-IgG1) Fluorescence-Activated Cell Sorting (FACS) Assay, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection should occur prior to initiation of immunosuppressant medication. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86363; 86363-titer (if appropriate);

MAGES Myelin-Associated Glycoprotein Autoantibodies, IgM, Serum

607034

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83520

MDSDF Myelodysplastic Syndrome (MDS), Diagnostic FISH, Varies

614276

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 12, 88275 x 6, 88291-FISH Probe, Analysis, Interpretation; 6 probe sets; 88271 x 2, 88275-FISH Probe, Analysis; each additional probe set (if appropriate);

MDSMF
614287

Myelodysplastic Syndrome (MDS), Specified FISH, Varies

Specimen Requirements: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. Acceptable Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

MYEFL
63414

Myelodysplastic Syndrome by Flow Cytometry, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA), green top (heparin) Specimen Volume: 2-5 mL Slides: Include 5 to 10 unstained bone marrow aspirate smears, if possible, labeled with 2 unique identifiers. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) x18; 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

MSTF
35844

Myeloid Sarcoma, FISH, Tissue

Specimen Requirements: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides. Include 1 hematoxylin and eosin (H and E)-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88291; 88271 x 2 (if appropriate); 88271 x 2 (if appropriate); 88271 (if appropriate); 88271 x 2 (if appropriate); 88271 x 3 (if appropriate); 88274 w/modifier 52 (if appropriate); 88274 (if appropriate); 88275 (if appropriate);

MSMRD
616030

Myeloma Stratification and Risk-Adapted Therapy with Reflex to Minimal Residual Disease, Bone Marrow

Specimen Requirements: Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

CPT Code Information: 86255 x 16; 86053; 84182; 86363; 86341; 84182 AGNBS (if appropriate); 86256 AGNTS (if appropriate); 86255 AINCS (if appropriate); 84182 AMIBS (if appropriate); 84182 AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182 AN2BS (if appropriate); 86256 AN2TS (if appropriate); 86256 AN3TS (if appropriate); 86255 APBCS (if appropriate); 86256 APBTS (if appropriate); 86256 APHTS (if appropriate); 86256 CRMTS (if appropriate) 86256 DPPTS (if appropriate); 86256 GABIS (if appropriate); 86255 GFACS (if appropriate); 86256 GFATS (if appropriate); 86255 GL1CS (if appropriate); 86256 GL1TS (if appropriate); 86363 MOGTS (if appropriate); 86255 NCDCS (if appropriate); 86256 NCDTS (if appropriate); 86255 NFHCS (if appropriate); 86255 NFLCS (if appropriate); 86256 NIFTS (if appropriate) 86053 NMOTS (if appropriate); 84182 PC1BS (if appropriate); 86256 PC1TS (if appropriate); 86256 PC2TS (if appropriate); 86255 SP7CS (if appropriate); 86256 SP7TS (if appropriate); 86255 T46CS (if appropriate); 86256 T46TS (if appropriate);

MAC1
605126

Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Collection vial number 1 Acceptable: Any collection vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 16; 86053; 86341; 84182; 84182 AGNBC (if appropriate); 86256 AGNTC (if appropriate); 86255 AINCC (if appropriate); 84182 AMIBC (if appropriate); 84182 AN1BC (if appropriate); 86256 AN1TC (if appropriate); 84182 AN2BC (if appropriate); 86256 AN2TC (if appropriate); 86256 AN3TC (if appropriate); 86255 APBCC (if appropriate); 86256 APBTC (if appropriate); 86256 APHTC (if appropriate); 86256 CRMTC (if appropriate); 86256 DPPTC (if appropriate); 86256 GABIC (if appropriate); 86255 GFACC (if appropriate); 86256 GFATC (if appropriate); 86255 GL1CC (if appropriate); 86256 GL1TC (if appropriate); 86255 NCDCC (if appropriate); 86256 NCDTC (if appropriate); 86255 NFHCC (if appropriate); 86255 NFLCC (if appropriate); 86256 NIFTC (if appropriate); 86053 NMOTC (if appropriate); 84182 PC1BC (if appropriate); 86256 PC1TC (if appropriate); 86256 PC2TC (if appropriate); 86255 SP7CC (if appropriate); 86256 SP7TC (if appropriate); 86255 T46CC (if appropriate); 86256 T46TC (if appropriate);

MYPO
70511

Myeloperoxidase (MPO) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,

paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MPO
80389

Myeloperoxidase Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

MPNCM
65115

Myeloproliferative Neoplasm, CALR with Reflex to MPL, Varies

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9; 81339 -MPL (MPL proto-oncogene, thrombopoietin receptor) (eg, myeloproliferative disorder) gene analysis; sequence analysis, exon 10 (if appropriate);

MPNJM
606805

Myeloproliferative Neoplasm, JAK2 V617F with Reflex to CALR

and MPL, Bone Marrow

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Note: Extracted DNA from bone marrow is not acceptable.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant; 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9 (if appropriate); 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence (if appropriate);

MPNR
63031

Myeloproliferative Neoplasm, JAK2 V617F with Reflex to CALR and MPL, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerate 7 days Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerate 7 days Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood, bone marrow: 0.5 mL; Extracted DNA: 50 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	7 days

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9 (if appropriate) 81339-MPL (MPL proto-oncogene, thrombopoietin receptor) (eg, myeloproliferative disorder) gene analysis; sequence analysis, exon 10 (if appropriate)

GNMY9
619299

MYH9-Related Disorders, MYH9 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

MEF2B
619494

Myocyte Enhancer Factor 2 (MEF2B) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYODT **MYOD1 Mutation Analysis, Next-Generation Sequencing, Tumor**
619685

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479;

MYOD1 **Myogenic Differentiation Antigen 1 (MYOD1) Immunostain, Technical Component Only**
70518

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYOGE **Myogenin Immunostain, Technical Component Only**
70516

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYOGL
70517

Myoglobin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYGLU
621087

Myoglobin, Random, Urine

Specimen Requirements: Supplies: Urine Myoglobin Transport Tube (T691) Container/Tube: Plastic, 5-mL urine myoglobin transport tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a preservative-free, random urine specimen. 2. If specimen is at ambient temperature, aliquot the urine to a urine myoglobin transport tube within 1 hour of collection. Refrigerate specimen. 3. If specimen is at refrigerate temperature, aliquot the urine to a urine myoglobin transport tube within 2 hours of collection. Additional Information: Urinary myoglobin is highly unstable unless alkalized with sodium carbonate preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated	7 days	MYOGLOBIN TRANSPORT TUBE

CPT Code Information: 83874

MYGLS Myoglobin, Serum 621090

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 83874

FMMPP MyoMarker 3 Plus Profile 75594

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube:
Plastic vial Specimen Volume: 5 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-
top tube(s), serum gel tube is acceptable. Separate serum from cells within 1 hour of collection and send 5
mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 4 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516 x 10; 86235 x 7 ;

FMYO3
75595

MyoMarker 3 Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Separate serum from cells within 1 hour of collection and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 4 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83516 x 9; 86235 x 7;

MSAES
622116

Myositis Specific Antibody Evaluation, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86255 x10; 82397; 86235; 84182-SRPBS (if appropriate); 86256-SRPTS (if appropriate);

DDITF
35265

Myxoid/Round Cell Liposarcoma, 12q13 (DDIT3 or CHOP) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 4 consecutive, unstained, positively charged, unbaked slides with 5-micron-thick sections of the tumor tissue. Slides cut from blocks prepared with alternative fixation methods may be acceptable; provide fixation method used.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291 DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

NAACD
621423

N-Acetylaspartic Acid, Canavan Disease, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing. Collection Instructions: 1. Collect a random urine specimen (first morning void preferred). 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	90 days
	Refrigerated	90 days
	Ambient	14 days

CPT Code Information: 83921

NAT2Q
610617**N-Acetyltransferase 2 (NAT2) Genotype, Varies**

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479-Unlisted molecular pathology procedure

NMH24
605135**N-Methylhistamine, 24 Hour, Urine**

Specimen Requirements: Patient Preparation: Patient must not be taking monoamine oxidase inhibitors (MAOIs) or aminoguanidine as these medications increase N-methylhistamine (NMH) levels. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Aliquot into plastic tube and send at refrigerate temperature. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82542

NMH1D
605159

N-Methylhistamine, 24 Hour, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see NMH24 / N-Methylhistamine, 24 Hour, Urine. Patient Preparation: Patient must not be taking monoamine oxidase inhibitors (MAOIs) or aminoguanidine as these medications increase N-methylhistamine (NMH) levels. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Aliquot into plastic tube and send at refrigerate temperature.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82542

NMHR1
605015

N-Methylhistamine, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see NMHR / N-Methylhistamine, Random, Urine. Patient Preparation: Patient must not be taking monoamine oxidase inhibitors (MAOI) or aminoguanidine as these medications increase N-methylhistamine (NMH) levels. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 82542

NMHR
604981

N-Methylhistamine, Random, Urine

Specimen Requirements: Patient Preparation: Patient must not be taking monoamine oxidase inhibitors (MAOI) or aminoguanidine as these medications increase N-methylhistamine (NMH) levels. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen within a few hours of symptom onset. 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 82542; 82570;

FINA
91447

NAbFeron (IFNB-1) Neutralizing Antibody Test

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 2 mL of serum refrigerate in a plastic vial. Note: Sample needs to be collected either before treatment with interferon or more than 24 hours following the most recent dose. Patient should not be on steroid therapy for at least two weeks prior to testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 86382

FNAD
80761

Nadolol, Serum/Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Submit only 1 of the following specimens. Serum Specimen Type: Serum Collection Container/Tube: Red top Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum

refrigerated in a plastic preservative-free vial. Plasma Specimen Type: Plasma Collection Container/Tube: Lavender top or pink top (EDTA) Specimen volume: 1 mL Collection Instructions: Draw blood in a lavender-top (EDTA) or Pink top tube(s). (Plasma gel tube is not acceptable.) Spin down and send 1 mL of EDTA plasma refrigerated in a plastic preservative-free vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 80299

FNALO
91784

Naloxone - Total (Conjugated/Unconjugated), Screen, Urine

Specimen Requirements: **Must submit one specimen per order. Specimens cannot be shared between multiple orders.**
*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine. Send specimen refrigerated in a plastic (preservative-free) urine container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 80307; 80362 if appropriate; G0480 if appropriate;

NAPSN
70519

Napsin A Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NARC
82026

Narcolepsy-Associated Antigen, HLA-DQB1 Typing, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A), lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original vial. Do not aliquot. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 81376-HLA Class II typing, low resolution (eg, antigen equivalents); one locus (eg, HLA-DRB1/3/4/5, -DQB1, -DQA1, -DPB1, or -DPA1), each

QNKS
60616

Natural Killer (NK)/Natural Killer T-Cell Subsets, Quantitative, Blood

Specimen Requirements: Container/Tube: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	30 hours	GREEN TOP/HEP

CPT Code Information: 86356 x3; 86359; 86357;

NMS1
603542

Necrotizing Myopathy Evaluation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge within 2 hours of collection and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255; 82397; 86256 (if appropriate); 84182 (if appropriate);

FNECT
57941

Nectarine (Prunus spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

NEGCT
70410**Negative Control, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

MGRNA
61646**Neisseria gonorrhoeae, Miscellaneous Sites, Nucleic Acid Amplification, Varies**

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87591

GCRNA
61552**Neisseria gonorrhoeae, Nucleic Acid Amplification, Varies**

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87591

SCGCV
621939

Neisseria gonorrhoeae, Self-Collect, Amplified RNA, Vaginal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87591

SCGCR
621936

Neisseria gonorrhoeae, Self-Collect, Nucleic Acid Amplification, Rectal

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87591

SCGCT
621933

Neisseria gonorrhoeae, Self-Collect, Nucleic Acid Amplification, Throat

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Ambient	APTIMA VIAL	
	Frozen	APTIMA VIAL	

CPT Code Information: 87591**FNMIEN**
91669**Neisseria Meningitidis IgG Vaccine Response**

Specimen Requirements: Container/Tube: Preferred: Red top tube Acceptable: Serum gel tube
 Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial. Note: Serum gel tube is acceptable, but must pour off into a plastic vial.

Specimen Minimum Volume: 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86317/x4**NBILI**
82133**Neonatal Bilirubin, Serum**

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T915) Collection
 Container/Tube: Preferred: 2 Serum gel Microtainers Acceptable: 2 Red top Microtainers Submission
 Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel microtainers should be centrifuged within 2 hours of collection. 2. Red-top microtainers should be centrifuged, and the serum aliquoted into an amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	24 hours	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	6 hours	LIGHT PROTECTED

CPT Code Information: 82247; 82248;

FNEOS 75451

Neopterin

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.8 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.8 mL serum light protected in a screw-capped vial (Supply T915 amber vial), shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	LIGHT PROTECTED
	Refrigerated	72 hours	LIGHT PROTECTED

CPT Code Information: 83520

RSCGP 618128

Nephrocalcinosis, Nephrolithiasis, and Renal Electrolyte Imbalance Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404 x 4; 81405 x 2; 81406 x 8; 81407 x 2; 81479; 81479 (if appropriate for government payers);

NETT
82734

Nettle, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

NEUN
70631

Neu-N Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NELL1
610585

Neural Epidermal Growth Factor-Like 1 Protein Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NONCP
603047

Neuro-Oncology Expanded Gene Panel with Rearrangement, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 360 mm(2) -Minimum amount of tumor area: tissue 72 mm(2) -If ordered in conjunction with CMAPT / Chromosomal Microarray, Tumor, Formalin-Fixed Paraffin-Embedded, the preferred amount of tissue is 430 mm(2), the minimum amount is 180 mm(2). -These amounts are cumulative over up to 15 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. For this test, 6 mm x 6 mm x 10 slides are preferred: approximate/equivalent to 360 mm(2); with the minimum acceptable of 4 mm x 4 mm x 10 slides: approximate/equivalent to 144 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 15 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 15 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 15 slides from the same block. Additional information: 1. If the amount of tissue available is close to the minimum required, the ordering provider may be asked to prioritize between the DNA and RNA components of the assay. 2. Unused unstained slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81455

NONCM
622295

Neuro-Oncology Gene Panel, Mutations Only, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 288 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -If ordered in conjunction with CMAPT / Chromosomal Microarray, Tumor, Formalin-Fixed Paraffin-Embedded, the preferred amount of tissue is 430 mm(2), the minimum amount is 180 mm(2). -These amounts are cumulative over up to 15 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified - For this test, at least 6 mm x 6 mm areas on 8 unstained slides is preferred: this is approximately equivalent to 288 mm(2). The minimum acceptable area is 6 mm x 6 mm on 1 unstained slides: approximately equivalent to 36 mm(2). For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Hematoxylin and eosin-stained and 15 unstained Collection Instructions: Submit the following slides: 1 Slide stained with hematoxylin and eosin AND 15 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 15 slides from the same block. Additional information: Unused unstained slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81455

NONCR
606322

Neuro-Oncology Gene Panel, Rearrangements Only, Tumor

Specimen Requirements: This assay requires at least 10% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -If ordered in conjunction with CMAPT / Chromosomal Microarray, Tumor, Formalin-Fixed Paraffin-Embedded, the preferred amount of tissue is 430 mm(2), the minimum amount is 180 mm(2). -These amounts are cumulative over up to 15 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For this test, at least 6 mm x 6 mm areas on 4 unstained slides is preferred: this is approximately equivalent to 144 mm(2). The minimum acceptable area is 6 mm x 6 mm on 1 unstained slides: approximately equivalent to 36 mm(2). For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Hematoxylin and eosin-stained and 15 unstained Collection Instructions: Submit the followings slides: 1 Slide stained with hematoxylin and eosin AND 15 Unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be

obtained by scraping up to 15 slides from the same block. Additional information: Unused unstained slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81456

NCDCS
615865

Neurochondrin Antibody, Cell-Binding Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

NCDCC
615864

Neurochondrin Antibody, Cell-Binding Assay, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -PCDEC / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Spinal Fluid Container/Tube: Sterile vial
Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

NCDTS
616111

Neurochondrin Antibody, Tissue Immunofluorescence Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

NCDTC
616112

Neurochondrin Antibody, Tissue Immunofluorescence Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -PCDEC / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Spinal Fluid Container/Tube: Sterile

vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

NF4FS
614591

Neurofascin-155 IgG4, Flow Cytometry, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: -CIDP / Chronic Inflammatory Demyelinating Polyradiculoneuropathy/Nodopathy Evaluation, Serum -DMNES / Peripheral Nervous System Demyelinating Neuropathy, Autoimmune Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

NF1Z
614585

Neurofibromatosis Type 1, NF1, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710 Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes before collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81408

NF2F
70520

Neurofilament (2F11) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NFSMI
71354

Neurofilament (SMI31) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NFLP
622765

Neurofilament Light Chain, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Submission Container/Tube: Plastic screw-top vial Specimen Volume: 0.6 mL Collection Information: Centrifuge and aliquot plasma into a plastic vial. Do not submit specimen in original tube.

Specimen Minimum Volume: 0.50 mL

Transport Temperature:

Specimen Type	Temperature	Time
EDTA Plasma	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 83884

PNEFS
84300

Neuroimmunology Antibody Follow-up, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: 13 x 75-mm plastic screw-top vial Specimen Volume: 4 mL Collection Instructions: Centrifuge within 2 hours. Aliquot and ship in 13 x 75-mm plastic screw-top vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83519 GANG (if appropriate); 86043 ACMFS (if appropriate); 84182 AGNBS (if appropriate); 86255 AINCS (if appropriate); 86255 AMPCS (if appropriate); 86255 AMPHS (if appropriate); 84182 AMIBS (if appropriate); 84182 AN1BS (if appropriate); 84182 AN2BS (if appropriate); 86255 AGN1S (if appropriate); 86255 ANN1S (if appropriate); 86255 ANN2S (if appropriate); 86255 ANN3S (if appropriate); 86255 APBCS (if appropriate); 86255 APBIS (if appropriate); 86255 CS2CS (if appropriate); 86255 CRMS (if appropriate); 86255 DPPCS (if appropriate); 86255 DPPIS (if appropriate); 86255 GABCS (if appropriate); 86255 GFACS (if appropriate); 86255 GFAIS (if appropriate); 86255 GRFCS (if appropriate); 86255 GRFIS (if appropriate); 83516 IGG_A (if appropriate); 83516 IGG_D (if appropriate); 86255 IG5CS (if appropriate); 86255 IG5IS (if appropriate); 83516 IGM_A (if appropriate); 83516 IGM_D (if appropriate); 83516 IGM_M (if appropriate); 86255 ITPCS (if appropriate); 86255 ITPIS (if appropriate); 86255 LG1CS (if appropriate); 86255 GL1CS (if appropriate); 86255 GL1IS (if appropriate); 86255 NCDCS (if appropriate); 86255 NCDIS (if appropriate); 86255 NFHCS (if appropriate); 86255 NIFIS (if appropriate); 86255 NFLCS (if appropriate); 86255 NMDCS (if appropriate); 83519 CCPQ (if appropriate); 84182 PC1BS (if appropriate); 84182 PCTBS (if appropriate); 86255 PCABP (if appropriate); 86255 PCAB2 (if appropriate); 86255 PCATR (if appropriate); 86255 PDEIS (if appropriate); 86255 SP5CS (if appropriate); 86255 SP5IS (if appropriate); 86255 SP7CS (if appropriate); 86255 SP7IS (if appropriate); 86255 SRPIS (if appropriate); 84182 SRPBS (if appropriate); 86255 T46CS (if appropriate); 86255 T46IS (if appropriate);

PNEFC
84299

Neuroimmunology Antibody Follow-up, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable:
Any vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 84182 AGNBC (if appropriate); 86255 AINCC (if appropriate); 86255 AMPCC (if appropriate); 86255 AMPHC (if appropriate); 84182 AMIBC (if appropriate); 84182 AN1BC (if appropriate); 84182 AN2BC (if appropriate); 86255 AGN1C (if appropriate); 86255 ANN1C (if appropriate); 86255 ANN2C (if appropriate); 86255 ANN3C (if appropriate); 86255 APBCC (if appropriate); 86255 APBIC (if appropriate); 86255 CS2CC (if appropriate); 84182 CRMWC (if appropriate); 86255 CRMC (if appropriate); 86255 DPPCC (if appropriate); 86255 DPPIC (if appropriate); 86255 GABCC (if appropriate); 86255 GFACC (if appropriate); 86255 GFAIC (if appropriate); 86255 GRFCC (if appropriate); 86255 GRFIC (if appropriate); 86255 IG5CC (if appropriate); 86255 IG5IC (if appropriate); 86255 ITPCC (if appropriate); 86255 ITPIC (if appropriate); 86255 LG1CC (if appropriate); 86255 GL1CC (if appropriate); 86255 GL1IC (if appropriate); 86255 NCDCC (if appropriate); 86255 NCDIC (if appropriate); 86255 NFHCC (if appropriate); 86255 NIFIC (if appropriate); 86255 NFLCC (if appropriate); 86255 NMDCC (if appropriate); 84182 PC1BC (if appropriate); 84182 PCTBC (if appropriate); 86255 PCTRC (if appropriate);

appropriate); 86255 PCA1C (if appropriate); 86255 PCA2C (if appropriate); 86255 PDEIC (if appropriate); 86255 SP5CC (if appropriate); 86255 SP5IC (if appropriate); 86255 SP7CC (if appropriate); 86255 SP7IC (if appropriate); 86255 T46CC (if appropriate); 86255 T46IC (if appropriate);

NMOFS
38324

Neuromyelitis Optica (NMO)/Aquaporin-4-IgG Fluorescence-Activated Cell Sorting (FACS) Assay, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86053; 86053-titer (if appropriate);

NMOFC
38325

Neuromyelitis Optica (NMO)/Aquaporin-4-IgG Fluorescence-Activated Cell Sorting (FACS) Assay, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86053; 86053-titer (if appropriate);

NSESF
81796

Neuron-Specific Enolase (NSE), Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	15 days
	Ambient	72 hours

CPT Code Information: 83520

NSEI
70630

Neuron-Specific Enolase Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NSE
80913

Neuron-Specific Enolase, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Specimens should not be transported by tube system prior to centrifugation. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Ambient	5 days

CPT Code Information: 83520

NCLGP
608014

Neuronal Ceroid Lipofuscinosis (Batten Disease) Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

NCLBS
616838

Neuronal Ceroid Lipofuscinosis, Two-Enzyme Panel, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete, ie, unpunched. 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Refrigerated (preferred) 60 days/Ambient 7 days/Frozen 60 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 7 days/Ambient 48 hours

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82657

NCLW
616839

Neuronal Ceroid Lipofuscinosis, Two-Enzyme Panel, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 82657**NEUD1**
622267**Neuronal Differentiation 1 (NeuroD1), Technical Component only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block OR 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;**FNEU2**
75905**Neurotensin**

Specimen Requirements: Patient preparation: 1. Patient should be fasting 10 to 12 hours prior to collection of specimen. 2. Patient should not be on any antacid medication or medications that affect gastroentero-intestinal function, if possible, for at least 48 hours prior to collection. Supplies: Z-Tube Preservative Inter Science Institute (MCL T701) Specimen Type: Plasma Container/Tube: Z tube (MCL T701) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Collect 10 mL of blood directly into special Z-tube and separate as soon as possible. 2. Freeze immediately after separation. 3. Send 3 mL of plasma frozen.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Z-Tube Plasma	Frozen	180 days

CPT Code Information: 83519

FNEU
91688

Neurotransmitter Metabolites (5HIAA, HVA, 3OMD) (CSF)

Specimen Requirements: Medical Neurogenetics collection kit (MCL Supply T657) required. Each collection kit contains 5 microcentrifuge tubes. **COLLECTION PROTOCOL:** 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the sample integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL - If sample's not blood contaminated, the tubes should be placed on dry ice at bedside - If sample's are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen - Store samples at -80 until they can be shipped 2) Complete Medical Neurogenetics, LLC request form. Include test required, sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside a specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Specimen Minimum Volume: 4.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	CSF KIT	

CPT Code Information: 82542; 83497; 83150;

FNTSM
91940

Neurotransmitter Profile 3

Specimen Requirements: Medical Neurogenetics collection kit (MCL Supply T657) required. Each collection kit contains 5 microcentrifuge tubes. **COLLECTION PROTOCOL:** 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes. Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the same integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL -If samples not blood contaminated, the tubes should be placed on dry ice at bedside. -If samples are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen. -Store samples at -80 until they can be shipped. 2) Complete Medical Neurogenetics, LLC request form, marking the following three tests: Neurotransmitter Metabolites, Tetrahydrobiopterin and 5-Methyltetrahydrofolate. Also include sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside the specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	CSF KIT	

CPT Code Information: 82542 - 5-Methyltetrahydrofolate; 82542 - Tetrahydrobiopterin/Neopterin; 82542, 83497, 83150 - Neurotransmitter Metabolites/Amines;

NADF
35312

Newborn Aneuploidy Detection, FISH, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Other anticoagulants are not recommended and are harmful to the viability of the cells. 4. Cord blood is acceptable.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

NIU
8626

Nickel, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic aliquot container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 0.5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83885

NIS
8622

Nickel, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Collection Container/Tube: Royal blue-top (metal-free, no additive) Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, vial Specimen Volume: 0.5 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, screw-capped vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	METAL FREE
	Ambient	7 days	METAL FREE
	Frozen	7 days	METAL FREE

CPT Code Information: 83885

NIUCR
614552

Nickel/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83885; 82570;

NIUC
614553

Nickel/Creatinine Ratio, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see NIUCR / Nickel/Creatinine Ratio, Random, Urine. Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

NICOU
82510

Nicotine and Metabolites, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic, 5 mL, aliquot tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 80323; G0480 (if appropriate);

NICOS
82509

Nicotine and Metabolites, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80323; G0480 (if appropriate);

NCSRY
46918

Nicotine Survey, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80323

NITU
607705

Nitrogen, Total, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. Refrigerated is the preferred preservation method. Specimen Stability Information: Frozen 3 years Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	

CPT Code Information: 84999

NITF
607704

Nitrogen, Total, Feces

Specimen Requirements: Patient Preparation: Laxatives and enemas should not be used during collection as barium and boric acid interfere with test procedure. Supplies: Stool Containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container; complies with shipping requirements, do not use other containers. Specimen Volume: Entire collection (24, 48, 72, or 96 hours) Collection Instructions: 1. All containers must be sent together. 2. Entire collection must contain at least 5 g of feces. 3. The number of containers sent should be indicated on the labels (ie, 1 of 4) Specimen Stability Information: Frozen 3 years Additional Information: Patient can store sample at refrigerate temperature during collection period.

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 84999

NKX3
606692

NKX3.1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SSF1
87294

Nocardia Stain, Varies

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: 0.2 mL Collection Instructions: Collect a raw specimen.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87206; 87176-Tissue processing (if appropriate);

NDSPC
113339

Non-Gynecologic Direct Smear (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88104

NTPPC
113337

Non-Gynecologic, ThinPrep (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88112

NSIP
31769

Non-Seasonal Inhalant Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 10

NSFIB
604200

Nonalcoholic Steatohepatitis (NASH)-FibroTest, Serum and

Plasma

Specimen Requirements: Both serum and plasma are required for this test. Patient Preparation: Fasting for a minimum of 12 hours is required Specimen Type: Serum Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 4 mL Collection Instructions: 1. Centrifuge and aliquot serum into an amber vial within 2 hours of collection. 2. Centrifuged serum must be light protected within 4 hours of collection. It is acceptable to draw the blood and then protect it from light after centrifugation as long as it's within 4 hours of collection. 3. Label specimen as serum. Specimen Type: Plasma Collection Container/Tube: Gray top (potassium oxalate/sodium fluoride) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot plasma into plastic vial. 2. Label specimen as plasma.

Specimen Minimum Volume: Serum: 2 mL Plasma: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma NaFl-KOx	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 0003M

NSRGG
617393

Noonan Syndrome and Related Conditions Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be

accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells
 Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated
 Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Other specimen type: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81442; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

LNORO
65170

Norovirus PCR, Molecular Detection, Feces

Specimen Requirements: Supplies: Culture and Sensitivity Stool Transport Vial (T058)
 Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium - either Cary-Blair, Para-Pak Culture and Sensitivity Media) Specimen Volume: Representative portion of diarrheal fecal sample, 1 gram or 5 mL
 Collection Instructions: 1. Collect fresh feces and place in preservative within 1 hour of collection. 2. Visibly formed feces are not consistent with Norovirus gastrointestinal disease and should not be submitted for testing.

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient	7 days

CPT Code Information: 87798 x 2

NEREG
31767

Northeast Regional Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 10**NOTRP**
37119**Nortriptyline, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299**NTC3Z**
616563**NOTCH3 Gene, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask

Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to -4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing. Specimen Stability Information: Ambient 30 days

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479 88233-Tissue culture, skin, solid tissue biopsy (if appropriate) 88240-Cryopreservation (if appropriate)

FCDU4
75779

Novel Psychoactives, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

NR4A3
64940

NR4A3 (9q22.33) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results by FISH testing; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 4 unstained Collection Instructions: Submit 4 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-NA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

PBNP1
615897

NT-Pro B-Type Natriuretic Peptide, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	7 days

CPT Code Information: 83880

NTRK Gene Fusion Panel, Tumor

Specimen Requirements: This assay requires at least 10% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81194; 88381;

NTRK Genes Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479;

NMRLP
603839

Nuclear Magnetic Resonance Lipoprotein Profile, Serum

Specimen Requirements: Patient Preparation: 1. Fasting overnight (12-14 hours) is required. On night before examination, evening meal should be eaten before 6 p.m. and should contain no fatty foods. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Allow isopropyl alcohol (from phlebotomy site prep) to dry thoroughly before venipuncture. 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	8 hours

CPT Code Information: 83704

NMITO
617090

Nuclear Mitochondrial Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with whole blood or dried blood spot testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and

streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81440

NPMFM
620654

Nucleophosmin (NPM1) Mutation Analysis, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Refrigerated (preferred)	72 hours
	Ambient	72 hours

CPT Code Information: 81310

NPM1Q
604418

Nucleophosmin (NPM1) Mutation Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not

aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL; Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	5 days
	Ambient	72 hours

CPT Code Information: 81310-NPM1 (nucleophosmin) (eg, acute myeloid leukemia) gene analysis; exon 12 variants

NUT
70521

NUT Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NUT1F
63431

NUTM1 (15q14) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 4 Consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: 2 consecutive, unstained, 5 micron- thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); ; 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274-w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

NMEG 82497

Nutmeg, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

NUTSP 31771

Nuts Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 5

FNGPG
57930

Nuts and Grains Panel IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 17

FOAKE
57999

Oak Live (*Quercus virginiana*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FROE
57907

Oak Red (*Quercus rubra*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

OAK
82673

Oak, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FOATG
57576

Oat IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

OATS
82688

Oat, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

OCT2
70522

OCT-2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OCT4
70523

OCT3/4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OCTO
82820

Octopus, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FLNZ
91129

Olanzapine (Zyprexa)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.50 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

OLIG2
71357

OLIG2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OLIGS
2783

Oligoclonal Banding, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: -OLIG / Oligoclonal Banding, Serum and Spinal Fluid -MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 83916**OLIG**
8017**Oligoclonal Banding, Serum and Spinal Fluid**

Specimen Requirements: Both serum and spinal fluid are required. Spinal fluid must be obtained within 7 days of serum collection. Specimen Type: Serum Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection. 2. Label specimen as serum. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: Serum, Spinal Fluid: 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 83916 x 2**OLIGC**
3484**Oligoclonal Banding, Spinal Fluid**

Specimen Requirements: Only orderable as part of a profile. For more information, see: -OLIG / Oligoclonal Banding, Serum and Spinal Fluid -MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 83916**OLIGU**
64889**Oligosaccharide Screen, Random, Urine**

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 8 mL Pediatric Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative 3. Immediately freeze specimen.

Specimen Minimum Volume: 2.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	365 days
	Refrigerated	15 days
	Ambient	7 days

CPT Code Information: 84377**FOLBG**
57671**Olive Black IgG**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

OLIV
82733

Olive Tree, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

OLIVF
86306

Olive-Food, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FONG
57636

Onion IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001**ONIN**
82806**Onion, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**OPTMX**
62736**Opiate Confirmation, Chain of Custody, Meconium**

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Refrigerated	28 days
	Ambient	14 days

CPT Code Information: 80361; 80365; G0480 (if appropriate);

OPATM Opiate Confirmation, Meconium

84326

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288)
 Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection
 Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Refrigerated	28 days
	Ambient	14 days

CPT Code Information: G0480; 80361 (if appropriate for select payers); 80365 (if appropriate for select payers);

OPATX Opiates Confirmation, Chain of Custody, Random, Urine

62735

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit containing the specimen containers, seals, and documentation is required. Specimen Volume: 5 mL Collection Instructions: Collect urine specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 5 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80361; 80365; 80362; G0480 (if appropriate);

OPATU 8473

Opiates Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: G0480; 80361 (if appropriate for select payers); 80365 (if appropriate for select payers); 80362 (if appropriate for select payers);

FOPIA 75030

Opiates, Serum or Plasma, Quantitative

Specimen Requirements: Submit only one of the following specimens: Plasma Specimen Type: Plasma Container/Tube: Gray top (potassium oxalate/sodium fluoride), Green top (sodium heparin), Lavender top (EDTA), or pink top (K2EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a gray top (potassium oxalate/sodium fluoride), green (sodium heparin), lavender (EDTA) or pink (K2EDTA) tube(s). Spin down and send 1 mL of plasma refrigerated in a plastic vial. Note: Label specimen appropriately (plasma). Serum Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). Spin down and send 1 mL of serum refrigerated in a plastic vial. Note: Label specimen appropriately (serum).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Ambient	7 days
	Frozen	

CPT Code Information: 80361, 80365

FCDU1
75776

Opiates, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

FORNG
57632

Orange IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

ORNG
82740

Orange, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ORCH
82907

Orchard Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FORGG
57661

Oregano IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

OREG
82496

Oregano, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ORXNA
604230

Orexin-A/Hypocretin-1, Spinal Fluid

Specimen Requirements: Patient Preparation: Patient should not have recently received radioisotopes, either therapeutically or diagnostically, due to potential assay interference. Collection Container/Tube: Sterile vial Submission Container/Tube: Plain vial with no additives Specimen Volume: 1.5 mL Pediatric Volume: 0.5 mL Collection Instructions: 1. Obtain aliquot from second collection vial (preferred, not required). 2. Hemolyzed specimens will give false-positive results. Specimens should be centrifuged to remove any red cells prior to shipping.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	120 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 83519

OAU
80619

Organic Acids Screen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing. Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	416 days
	Refrigerated	14 days

CPT Code Information: 83919

O AUS
610707

Organic Acids Screen, Urine Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 filter paper, Munktell filter paper Specimen Volume: 1 Filter paper card soaked with urine, typically requires 2 to 3 mL of urine Collection Instructions 1. Soak a filter paper card with urine, approximately 22 cm(2) in area (typically requires 2 to 3 mL of urine; exact measurement is not important as urine volume will be normalized to creatinine). Note: Filter paper sample may be collected by dipping the card into a collection cup of urine. Avoid dilute urine if possible. 2. Let urine dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	28 days	FILTER PAPER
	Ambient	14 days	FILTER PAPER
	Refrigerated	14 days	FILTER PAPER

CPT Code Information: 83919

IDENT 9221

Organism Referred for Identification, Aerobic Bacteria

Specimen Requirements: Supplies: Infectious Container, Large (T146) Specimen Type: Pure culture of organism from source cultured Container/Tube: Agar slant or other appropriate media Specimen Volume: Entire specimen Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87077-Organism Referred for Identification, Aerobic Bacteria; 87077-Identification Commercial Kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 3-Serologic Agglut Method 1 Ident (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87147 x 2-6 - Serologic Agglut Method 4 Ident (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87798-Identification by PCR (if appropriate);

ANIDE 8114

Organism Referred for Identification, Anaerobic Bacteria

Specimen Requirements: Specimen Type: Pure culture of organism from a source not normally colonized by anaerobes Acceptable Sources: Abscesses, percutaneous transtracheal aspirates, sterile body fluids, suprapubic aspirations, or wounds Supplies: -Anaerobic Transport Tube (T588) -Infectious Container, Large (T146) Container/Tube: Preferred: Anaerobic transport tube Acceptable: Thioglycollate broth or any other suitable anaerobic transport system Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87076-Organism ref for ID, anaerobic bact; 87076-Id MALDI-TOF mass spec anaerobe (if appropriate); 87076-Anaerobe Ident (if appropriate); 87153-Anaerobe ident by sequencing (if appropriate); 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria identification (if appropriate); 87077-Additional identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87798-Identification by PCR (if appropriate);

OROT
8905**Orotic Acid, Random, Urine**

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative needed.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	90 days

CPT Code Information: 83921

FORRT
57968**Orris Root (Iris florentina) IgE**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

OTP
620710

Orthopedia Homeobox Protein (OTP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OPTU
614360

Orthostatic Protein, Timed Collection, Urine

Specimen Requirements: Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. Supplies: 2 Sarstedt 5 mL Aliquot Tube (T914) Daytime Collection Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a 16-hour (daytime) urine specimen. 2. No preservative. 3. Invert well before taking 4-mL aliquot. 4. Do not over fill aliquot tube 4 mL at most. 5. Collect specimen per instructions in Orthostatic Protein Measurement 24-Hour Urine: Collection Site Instructions (T546) in Special Instructions. Nighttime (Supine) Collection Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect an 8-hour (nighttime) urine specimen. 2. No preservative. 3. Invert well before taking 4-mL aliquot at most.

Specimen Minimum Volume: 1 mL from 16-hour (daytime) urine collection/1 mL from 8-hour (nighttime) urine collection

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84156 x 2

ORTHP
617766

Orthostatic Proteinuria, Random, Urine

Specimen Requirements: Patient Preparation: Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. This is a nighttime (supine) collection. 2. Void immediately prior to lying down to sleep. 3. Collect an 8-hour (nighttime) urine specimen. 4. Upon awaking in the morning, the patient should immediately void into the specimen cup. 4. No preservative. 5. Invert well before taking 4-mL (maximum) aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: CRETR- 82570; PRCON- 84156;

OSM24
622326

Osmolality, 24 Hour, Urine

Specimen Requirements: Supplies: -Diazolidinyl Urea (Germall), 5.0 mL (T822) -Urine Tubes, 10 mL (T068) Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours 2. Add 5 mL of diazolidinyl urea as preservative at start of collection or refrigerate specimen during and after collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 83935

OSMOF Osmolality, Feces 606758

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 84999

UOSMU Osmolality, Random, Urine 606520

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83935

UOSMS
614057

Osmolality, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	24 hours

CPT Code Information: 83930

FRAG
9064

Osmotic Fragility, Erythrocytes

Specimen Requirements:

Specimen Minimum Volume: Patient whole blood, shipping control: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Control	Refrigerated	72 hours
Whole Blood EDTA	Refrigerated	72 hours

CPT Code Information: 85557

OSG_F
610305

Osmotic Gap, Feces

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for
96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291)
Collection Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a
very liquid fecal specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 84302-Sodium; 84999-Potassium;

OSCAL
80579

Osteocalcin, Serum

Specimen Requirements: Patient Preparation: 1. Fasting (12 hours) 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	72 hours

CPT Code Information: 83937

OIBFG
617407

Osteogenesis Imperfecta and Bone Fragility Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability

Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Molecular Testing, Chorionic Villi/Products of Conception. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406 x2; 81408 x2; 81479; 81479 (if appropriate for government payers);

OAPNS
39855

Ova and Parasite, Microscopy, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bile Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Stability Information: Refrigerate 5 days Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) and/or slides Specimen Volume: 4 mL EDTA and/or 1 slide (unstained preferred) Collection Instructions: 1. Bone marrow and/or slides will be accepted for this test. 2. If submitting slides with EDTA tube, label and bag specimens together. Send refrigerate as one collection. Specimen Stability Information: Refrigerate 5 days Specimen Type: Colonic washing Container/Tube: Preferred: ECOFIX preservative Acceptable: 10% Buffered formalin AND zinc polyvinyl alcohol (Zn PVA) (one vial of each) Specimen Volume: at least 2 mL Collection Instructions: 1. Place specimen into preservative within 30 minutes of collection. 2. Follow instructions on the container as follows: a. Colonic washings should be placed into ECOFIX preservative vial (or 10% formalin and Zn-PVA vials) in a ratio of 1 part preservative:1 part specimen. Some preservative may need to be removed from the vial to maintain this ratio. b. Place washings into vial, twist the cap tightly closed, and shake vigorously until the contents are well mixed. c. Do not fill above the fill line indicated on the preservative container. Specimen Stability Information: Ambient (preferred)/Refrigerate 5 days Specimen Type: Duodenal aspirate Preferred: ECOFIX preservative Acceptable: 10% Buffered formalin AND Zn PVA (one vial of each) Specimen Volume: at least 2 mL Collection Instructions: 1. Place specimen into preservative within 30 minutes of collection. 2. Follow instructions on the container as follows: a. Duodenal aspirate should be placed into ECOFIX preservative vial (or 10% formalin and Zn-PVA vials) in a ratio of 1 part preservative:1 part specimen. Some preservative may need to be removed from the vial to maintain this ratio. b. Place washings into vial, twist the cap tightly closed, and shake vigorously until the contents are well mixed. c. Do not fill above the fill line indicated on the preservative container. Specimen Stability Information: Ambient

(preferred)/Refrigerate 5 days Specimen Type: Spinal fluid Container/Tube: Sterile container Specimen Volume: At least 1 mL Specimen Stability Information: Refrigerate 5 days Specimen Type: Fluid, abscess, drainage material Sources: Abdominal, ascites, brain, cyst (must specify anatomical location of cyst), liver, lymphatic, peritoneal, splenic Container/Tube: Sterile container AND either ECOFIX preservative vial or one zinc (Zn)-PVA AND one 10% formalin vial Specimen Volume: 15 mL Collection Instructions: 1. Place half of collection into preservative (either ECOFIX or PVA and 10 % Formalin combo) in a ratio of 1 part preservative: 1 part specimen. Some preservative may need to be removed from the vial to maintain this ratio. 2. Label the preservative type on the side of each vial. 3. Place other half of collection in a sterile container. 3. Label both specimens, bag together, and send refrigerate as one collection. Specimen Stability Information: Refrigerate 5 days Specimen Type: Respiratory Source: Bronchial washing, bronchoalveolar lavage, sputum Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Stability Information: Refrigerate 5 days Specimen Type: Tissue Sources: Bladder, brain, colon, intestine, liver, lymph node, lung, muscle, rectal, spleen (must specify anatomical location of tissue) Container/Tube: Sterile container Specimen Volume: 5 to10 mm Collection Instructions: Place specimen in sterile container with 1 to 2 drops of sterile saline to keep tissue moist. Specimen Stability Information: Refrigerate 5 days

Specimen Minimum Volume: Respiratory specimens, spinal fluid, abscess, or drainage material: 0.5 mL Tissue: 3 mm Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	5 days

CPT Code Information: 87015-Concentration (any type), for infectious agents (if applicable); 87209-Smear, primary source with interpretation; complex special stain (eg, trichrome, iron hematoxylin) for ova and parasites (If applicable); 87210-Wet mount for infectious agents (if applicable); 87207-Smear, primary source, with interpretation; special stain for inclusion bodies or intracellular parasites (if applicable);

OPE
619736

Ova and Parasite, Travel History or Immunocompromised, Feces

Specimen Requirements: Patient Preparation: Specimen collection should be delayed for 7 to 10 days after administration of barium, bismuth, kaolin, magnesia, castor oil or mineral oil, and 2 to 3 weeks after antibiotics have been given since these may interfere with identification of protozoa. Specimen Type: Feces Supplies: ECOFIX Stool Transport Vial (Kit) (T790) Preferred: ECOFIX preservative Acceptable: 10% Buffered formalin AND zinc polyvinyl alcohol (Zn PVA) (one vial of each) Specimen Volume: Portion of stool: 2 g or 2 mL Collection Instructions: 1. Follow instructions on the container as follows: a. Place specimen into Ecofix preservative vial or one 10% formalin AND one Zn PVA preservative vial within 30 minutes of passage or collection. Refer to the fill line on the preservative vial. Do not fill above the line indicated on the container. b. Mix the contents of the tube with the spoon, twist the cap to close tightly, and shake vigorously until the contents are well mixed. Additional Information: 1. Stool placed in 10% buffered formalin can be accepted if accompanied by Zn PVA-preserved specimen; 10% buffered formalin-preserved specimens submitted without an accompanying Zn PVA-preserved specimen will be canceled. 2. Specimen submitted in low viscosity (LV)-PVA, mercury PVA or copper (Cu)-PVA will be rejected.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	21 days
	Refrigerated	21 days

CPT Code Information: 87177-Concentration (any type), for infectious agents; 87209-Smear, primary source with interpretation; complex special stain (eg, trichrome, iron hematoxylin) for ova and parasites;

OVAL
82826

Ovalbumin, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

FOVAS
57836

Ovarian Antibody Screen with Reflex to Titer, IFA

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86255; 86256 (if appropriate);

OVMU
82825

Ovomucoid, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008

OXI
82679

Ox-Eye Daisy, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

DOXA1
606473

Oxalate Analysis, Hemodialysate

Specimen Requirements: Specimen Type: Dialysate fluid Patient Preparation: Patient should avoid taking vitamin C supplements for 24 hours prior to dialysis Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: Adjust the pH of the specimen to 2.5 to 3.0 with 6M Hydrochloric Acid Additional Information: Nonacidified frozen hemodialysate delivered to the laboratory within 3 days from collection will be accepted and the following comment will be added to the result: In nonacidified hemodialysate stored frozen, oxalate values may increase spontaneously.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Dialysate Fluid	Frozen	14 days

CPT Code Information: 83945

OXU
606737

Oxalate, 24 Hour, Urine

Specimen Requirements: Patient Preparation: For 24 hours before, as well as during the collection process, patient should not take large doses (>2 g orally/24 hours) of vitamin C. Supplies: -Diazolidinyl Urea (Germall) 5.0 mL (T822) -Sarstedt Aliquot Tube, 5mL (T914) Container/Tube: Plastic tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea (Germall) as a preservative at start of collection or refrigerate specimen during and after collection. 2. Collect urine for 24 hours. 3. Mix container thoroughly and aliquot urine into plastic vial. 4. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 indicate bacterial contamination, and testing will be canceled. Do not attempt to adjust pH, as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 83945

POXA1
606472

Oxalate, Plasma

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Heparin	Frozen	30 days

CPT Code Information: 83945

ROXUR
606747

Oxalate, Random, Urine

Specimen Requirements: Patient Preparation: Avoid taking large doses (>2 g orally/24 hours) of vitamin C prior to specimen collection. Supplies: Urine Tubes, 10 mL tube (T068) Container/Tube: 10-mL plastic tube or a clean, plastic container with no metal cap Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 may indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 83945; 82570;

OXCO1
606748

Oxalate, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ROXUR / Oxalate, Random, Urine. Patient Preparation: Avoid taking large doses (>2 g orally/24 hours) of vitamin C prior to specimen collection. Supplies: Urine Tubes, 10 mL tube (T068) Container/Tube: 10-mL plastic

tube or a clean, plastic container with no metal cap Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 may indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 83945

RAT11
606751

Oxalate/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ROXUR / Oxalate, Random, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

FOXAZ
90108

Oxazepam (Serax), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate);

OMHC
81030

Oxcarbazepine Metabolite, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80183

FOXFU
75390

Oxycodone - Free (Unconjugated), Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 80365

OXYSX
61727

Oxycodone Screen, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation is required. Specimen Volume: 20 mL Collection Instructions: Collect a random specimen without preservative in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

OXYSU
62623

Oxycodone Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5 mL tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80307

OXYCX
61728

Oxycodone with Metabolite Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of custody kit containing the specimen containers, seals, and documentation is required. Specimen Volume: 5 mL Collection Instructions: Collect urine specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain of custody testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80365; G0480 (if appropriate);

OXYCU
62616

Oxycodone with Metabolite Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: G0480; 80365 (if appropriate for select payers);

OXYMU
62622

Oxymorphone Confirmation, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: G0480; 80365 (if appropriate for select payers);

OXYWB
113429

Oxysterols, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) or yellow top (ACD B) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original vial. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	72 hours
	Ambient	48 hours

CPT Code Information: 82542

OXYBS Oxysterols, Blood Spot

63147

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection Card (Filter Paper) Acceptable: Whatman Protein Saver 903 filter paper, PerkinElmer 226 filter paper, Munktell filter paper, Postmortem Screening Card or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry completely on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete, (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

OXNP Oxysterols, Plasma

62988

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	65 days

CPT Code Information: 82542

OYST
82883

Oyster, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CCPQ
81185

P/Q-Type Calcium Channel Antibody, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum MGLE / Myasthenia Gravis/Lambert-Eaton Myasthenic Syndrome Evaluation, Serum PNEFS / Neuroimmunology Antibody Follow-Up, Serum

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86596

P16
70524

p16 (INK4a/CDKN2A) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

P40NA
70526

p40 + Napsin A Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

P40
70527

p40 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P504S
610458

P504S Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P53
70528

p53 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P57I
70529

p57 (KIP2/CDKN1C) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P62
70629

p62 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

P63
70530

p63 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

SQUI
82821

Pacific Squid, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PN10X
62911

Pain Clinic Survey 10, Chain of Custody, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see PANOX / Pain Clinic Survey 10, Chain of Custody, Urine. Supplies: Chain of Custody Kit (T282)
Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation is required. Specimen Volume: 30 mL Collection Instructions: Collect a random specimen without preservative in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise the ability to perform all necessary testing.

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307

PANOX
62737

Pain Clinic Survey 10, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation is required. Specimen Volume: 30 mL Collection Instructions: Collect a random specimen without preservative in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80307

FPALI
75392

Paliperidone, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	

CPT Code Information: 80342

FPAN2
75907

Pancreastatin, Plasma

Specimen Requirements: Patient Preparation: 1. Patient should not be on any medications that may influence Insulin levels, if possible, for at least 48 hours prior to collection. 2. Patient should be fasting 10 hours prior to collection. Patient may drink plain water; no other liquid is acceptable. Specimen Type: Plasma Collection Container/Tube: Z tube (MCL T701) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw 10 mL of blood in special Z-tube, pre-chilled (MCL T701). 2. Separate plasma from cells immediately after draw and freeze immediately after separation. 3. Send 3 mL of plasma frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Z-Tube Plasma	Frozen	60 days

CPT Code Information: 83519

ELASF
609492

Pancreatic Elastase, Feces

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 5 g Collection Instructions: 1. Collect a fresh random fecal specimen, no preservatives. 2. If specimen is sent refrigerate, send immediately after collection. 3. If specimen cannot be sent immediately, freeze specimen and send frozen. Additional Information: 1. Separate specimens must be submitted when multiple tests are ordered, with the exception of CALPR / Calprotectin, Feces. If only a single specimen is collected, it must be split prior to transport. 2. Testing cannot be added on to a previously collected specimen.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	28 days
	Ambient	72 hours
	Refrigerated	72 hours

CPT Code Information: 82653

HPP
8014

Pancreatic Polypeptide, Plasma

Specimen Requirements: Patient Preparation: Fasting (8 hours) Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Place specimen on wet ice and keep cold at all times following collection. 2. Centrifuge (refrigerated centrifuge is not required) and aliquot plasma into a plastic vial. Freeze immediately.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	90 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 83519

WESPR
621326

Panel to Whole Exome Sequencing Reflex Test, Varies

Specimen Requirements: For most patients, a new specimen submission will not be required. Testing can be performed using stored DNA from the original whole exome sequencing test. To order testing on the stored specimen, see Additional Testing Requirements. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. If a cord blood specimen is received, MATCC / Maternal Cell Contamination, Molecular Analysis, Varies will be performed at an additional charge. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions:

Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formally Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable, but not recommended. Multiple extractions will be required to obtain sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81417-Patient only; 81417, 81416-Patient and one family member comparator sample (duo) (as appropriate); 81417, 81416 x 2-Patient and two family member comparator samples (trio or non-traditional trio) (as appropriate); 81417, 81416 x 3-Patient and three family member comparator samples (quad) (as appropriate);

PAPY
82356

Papaya, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number

of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PAPR
82810

Paprika, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PFIB
601950

Parafibromin, Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PNPAB
61881

Paraneoplastic Pemphigus Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 86255

PVLE
607409

Paraneoplastic Vision Loss Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication. 2. This test should not be requested for patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed or canceled if radioactivity remains. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x1; 84182 x1; 84182 CRMWS (if appropriate); 86256 CRMTS (if appropriate);

PAVAL
83380

Paraneoplastic, Autoantibody Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended before starting immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 9; 84182-AGNBS (if appropriate); 86256-AGNTS (if appropriate); 84182-AMIBS (if appropriate); 86256-APHTS (if appropriate); 84182-AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182-AN2BS (if appropriate); 86256 AN2TS (if appropriate); 86256 AN3TS (if appropriate); 86256 CRMTS (if appropriate); 84182-CRMWS (if appropriate); 84182-PC1BS (if appropriate); 86256 PC1TS (if appropriate); 86256 PC2TS (if appropriate); 84182-PCTBS (if appropriate); 86256 PCTTS (if appropriate);

PAC1
37430

Paraneoplastic, Autoantibody Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 2 Acceptable: Any vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 9; 84182-AGNBC (if appropriate); 86256-AGNTC (if appropriate); 84182-AMIBC (if appropriate); 84182-AN1BC (if appropriate); 86256-AN1TC (if appropriate); 84182-AN2BC (if appropriate); 86256-AN2TC (if appropriate); 86256-AN3TC (if appropriate); 86256-APHTC (if appropriate); 86256-CRMTC (if appropriate); 84182-CRMWC (if appropriate); 84182-PC1BC (if appropriate); 86256-PC1TC (if appropriate); 86256-PC2TC (if appropriate); 84182-PCTBC (if appropriate); 86256-PCTTC (if appropriate);

PARID
9202

Parasite Identification, Varies

Specimen Requirements: Specimen Type: Parasitic worms, insects, or mites Container/Tube: Sterile container (10% formalin or 70% alcohol may be added if appropriate specimen type) Specimen Volume: Entire specimen Collection Instructions: 1. For scabies, submit skin scrapings on glass microscope slide. Cover with a clean slide and use a rubber band to hold the 2 slides together (do not tape). Place the slides in a clean, dry container for transport. If no slides are available at time of collection, the dry skin scraping can be submitted in a sterile container and will be placed on slide at time of examination. Skin scraping must be visible with the naked eye to be of a quantity sufficient for testing. 2. Submit whole worms and worm segments in 70% alcohol or formalin. Worms must be clean of stool to be suitable for examination. 3. Submit arthropods (ticks, lice, nits, bed bugs, etc) in a clean, dry container. Do not wrap in tape, gauze, or tissue that might obscure them during examination.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87168-Arthropod (if appropriate); 87169-Parasite (if appropriate);

PTH
70544

Parathyroid Hormone (PTH) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PTHFN
61526

Parathyroid Hormone, Fine-Needle Aspiration Biopsy (FNAB)-Needle Wash

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fine Needle Wash	Frozen (preferred)	30 days
	Refrigerated	4 hours

CPT Code Information: 83970

PTH2
28379

Parathyroid Hormone, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). 2. Patient should be fasting for 12 hours Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	72 hours
	Ambient	8 hours

CPT Code Information: 83970

PTH2RP
81774

Parathyroid Hormone-Related Peptide, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection

Container/Tube: Ice-cooled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge specimen in a refrigerated centrifuge or in chilled centrifuge cups. 2. Aliquot plasma into plastic vial and freeze.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	30 days

CPT Code Information: 82397

PPAP
52964

Parental Sample Prep for Prenatal Microarray Testing, Blood

Specimen Requirements: This test requires 2 blood specimens: 1 sodium heparin and 1 EDTA Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) and lavender top (EDTA) Specimen Volume: 3 mL EDTA and 4 mL sodium heparin Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimens in original tubes. Do not aliquot.

Specimen Minimum Volume: 2 mL EDTA and 2 mL sodium heparin whole blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	
	Refrigerated	

CPT Code Information: This test ID contains no charge and serves as a way to correlate proband parental specimens. If additional testing is warranted, the appropriate tests will be added.

PCAB
83728

Parietal Cell Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

PJUD
82877

Parietaria judaica, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

POFF
82549

Parietaria officinalis, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PLINK
62139

Paroxysmal Nocturnal Hemoglobinuria, PI-Linked Antigen, Blood

Specimen Requirements: Specimen must arrive within 3 days of collection. Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 2.6 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 88184-Flow cytometry, RBC x 1; 88184-Flow cytometry, WBC x 1; 88185-Flow cytometry, additional marker (each), RBC x 1; 88185-Flow cytometry, additional marker (each), WBC x 6; 88188-Flow Cytometry Interpretation, 9-15 Markers x 1;

FPRTF
57967

Parrot Australian (Budgerigar) Feathers IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FPARG
57686

Parsley IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PSLY
82765

Parsley, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PARVS
48395

Parvovirus B19 Antibodies, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86747 x 2

PARVG
48320

Parvovirus B19 Antibodies, IgG, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see PARVS / Parvovirus B19 Antibodies, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86747

PARVM
48321

Parvovirus B19 Antibody, IgM, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see PARVS / Parvovirus B19 Antibodies, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86747

PARVN
48322

Parvovirus B19 Antibody, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see PARVS / Parvovirus B19 Antibodies, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

PARVP
86337

Parvovirus B19, Molecular Detection, PCR, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

PARVO
83151

Parvovirus B19, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 0.5 mL Collection Instructions: 1. Do not centrifuge. 2. Label specimen as amniotic fluid. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: 1. Do not centrifuge. 2. Label specimen as spinal fluid. Specimen Type: Synovial fluid Container/Tube: Sterile vial or lavender top (EDTA) Specimen Volume: 0.5 mL Collection Instructions: Label specimen as synovial fluid.

Alternate: Specimen Type: Bone marrow Container/Tube: Sterile container or lavender top (EDTA)
Specimen Volume: 0.5 mL Collection Instructions: Label specimen as bone marrow.

Specimen Minimum Volume: Amniotic Fluid, Bone Marrow, and Spinal Fluid 0.3 mL;
Synovial fluid 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

PARVI
70532

Parvovirus Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed,
paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per
test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PFRUT
82355

Passion Fruit, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number
of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CONFL 620379

Pathology Consultation

Specimen Requirements: Additional Information: All specimens and additional paperwork must be labeled with: -Two patient identifiers (first and last name, date of birth, or medical record number) -Specimen type and anatomic site Supplies: MCF Pathology Packaging Kit (T994) Specimen Type: Tissue Container/Tube: Formalin fixed paraffin-embedded blocks, stained slides and/or unstained slides Note: Submit only pertinent hematoxylin and eosin (H and E) and all special stains relevant to the diagnostic questions for the case. Include positively charged unstained slides and/or a formalin-fixed, paraffin-embedded tissue block if it is anticipated that additional stains or ancillary testing may be necessary. Bone Marrow Case Specimen Requirements For information on collecting specimens, see Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline. Specimen Type: Bone marrow aspirate Slides: 5 Preferred: Freshly prepared slides made at the time of specimen collection Acceptable: Slides made from EDTA specimen, within 2 hours of collection Submission Container/Tube: Plastic slide holder Specimen Type: Bone marrow aspirate clot Container/Tube: Bone marrow aspirate clot embedded in paraffin block Collection Instructions: Process and embed clot in paraffin Specimen Type: Bone marrow core biopsy Container/Tube: Fixed biopsy core embedded in paraffin block Collection Instructions: Process and embed core in paraffin.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
MMLDRY	Ambient	

CPT Code Information: 88321 (if appropriate); 88323 (if appropriate); 88325 (if appropriate);

PATHC 70317

Pathology Consultation

Specimen Requirements: Additional Information: All specimens and additional paperwork must be labeled with: -Two patient identifiers (first and last name, date of birth, or medical record number) -Specimen type and anatomic site Supplies: Pathology Packaging Kit (T554) Specimen Type: Tissue Container/Tube: Formalin-fixed paraffin-embedded blocks, stained slides, and/or unstained slides Note: Submit only pertinent hematoxylin and eosin (H and E) and all special stains relevant to the diagnostic questions for the case. Include positively charged unstained slides and/or a formalin-fixed, paraffin-embedded tissue block if it is anticipated that additional stains or ancillary testing may be necessary. Bone Marrow Case Specimen Requirements For information on collecting specimens, see Bone Marrow Core

Biopsy, Clot, and Aspirate Collection Guideline. Specimen Type: Bone marrow aspirate Slides: 5 Preferred: Freshly prepared slides made at the time of specimen collection Acceptable: Slides made from EDTA specimen, within 2 hours of collection Submission Container/Tube: Plastic slide holder Specimen Type: Bone marrow aspirate clot Container/Tube: Bone marrow aspirate clot embedded in paraffin block Collection Instructions: Process and embed clot in paraffin Specimen Type: Bone marrow core biopsy Container/Tube: Fixed biopsy core embedded in paraffin block Collection Instructions: Process and embed core in paraffin. Specimen Type: Blood Slides: 2 Preferred: 2 Freshly prepared fingerstick slides Acceptable: 2 Slides made from whole blood in EDTA, made within 8 hours of collection Submission Container/Tube: Plastic slide holder

Transport Temperature:

Specimen Type	Temperature	Time
MMLDRY	Ambient	

CPT Code Information: 88321 (if appropriate); 88323 (if appropriate); 88325 (if appropriate);

PAX5
70533

PAX-5 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PAX2
607795

PAX2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PAX8 70534

PAX8 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

PDGF 58102

PDGFB (22q13), Dermatofibrosarcoma Protuberans/Giant Cell Fibroblastoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Collection Instructions: Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used Acceptable: Slides Specimen Volume: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

FBEP
57935

Pea Black-Eyed/Cow Pea (Vigna sinensis) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FPGNG
57654

Pea Green IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FPEAC
57666

Peach IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of

serum in a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PECH
82816

Peach, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPNTG
57537

Peanut IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FPNG4
57571

Peanut IgG4

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PEANT
64756

Peanut, IgE with Reflex to Peanut Components, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 86003

PEAN
82888

Peanut, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 86003

FPEAR
57683

Pear IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PEAR
82807

Pear, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested

Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPCFG
57688

Pecan Food IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PCANH
62600

Pecan Hickory, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PEC
82880

Pecan-Food, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PAS38
83346

Pediatric Allergy Screen 3 to 8 Years, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.6 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 6

PAS3
83345

Pediatric Allergy Screen

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 5

PAS8
83347

Pediatric Allergy Screen >8 Years, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.5 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 5

PCDES
605129

Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen
collection is recommended before starting immunosuppressant medication or intravenous

immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86341; 86363; 86053; 86255 x 11; 86256 AMPIS (if appropriate); 84182 AN1BS (if appropriate); 86256 AN1TS (if appropriate); 84182 AN2BS (if appropriate); 86256 DPPTS (if appropriate); 86256 GABIS (if appropriate); 86255 GFACS (if appropriate); 86256 GFATS (if appropriate); 86255 GL1CS (if appropriate); 86256 GL1TS (if appropriate); 86363 MOGTS (if appropriate); 86255 NCDCS (if appropriate); 86256 NCDTS (if appropriate); 86256 NMDIS (if appropriate); 86053 NMOTS (if appropriate); 84182 PCTBS (if appropriate); 86256 PCTTS (if appropriate);

PCDEC
605130

Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Collection vial number 1 Acceptable: Any collection vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 11; 86341; 86053; 86256 AMPIC (if appropriate); 84182 AN1BC (if appropriate); 86256 AN1TC (if appropriate); 84182 AN2BC (if appropriate); 86256 DPPTC (if appropriate); 86256 GABIC (if appropriate); 86255 GFACC (if appropriate); 86256 GFATC (if appropriate); 86255 GL1CC (if appropriate); 86256 GL1TC (if appropriate); 86255 NCDCC (if appropriate); 86256 NCDTC (if appropriate); 86256 NMDIC (if appropriate); 86053 NMOTC (if appropriate); 84182 PCTBC (if appropriate); 86256 PCTTC (if appropriate);

PBPO
82660

Penicillin G, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PENIV
82656

Penicillin V, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PENL
82913

Penicillium chrysogenum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**PENTS**
8239**Pentobarbital, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum in plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.7 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80299**FPBPG**
57657**Pepper Bell/Paprika IgG**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FPBLG
57645

Pepper Black IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FPCYE
57538

Pepper Cayenne (*Capsicum frutescens*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FPEPI
75916

Pepsinogen I (PG I)

Specimen Requirements: Patient preparation: 1. Patient should be fasting 10 to 12 hours prior to specimen collection. 2. Antacids or other medications affecting stomach acidity or gastrointestinal motility should be discontinued, if possible, for at least 48 hours prior to collection. Specimen Type:

Serum Collection Container/Tube: Preferred: Red top Acceptable: Serum gel, EDTA Submission
Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in plain red-
top tube(s), serum gel tube(s) or EDTA is acceptable. 2. Centrifuge and aliquot 3 mL serum into a plastic
vial. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 83520; ;

PERAM
609438

Perampanel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Red top (serum gel/SST is not acceptable) Acceptable: None Submission
Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately
before next scheduled dose. 2. For sustained-release formulations ONLY, draw blood a minimum of 12
hours after last dose. 3. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

SAT
2503

Percent Saturation

Specimen Requirements: Only orderable as part of profile. For more information see SFEC / Iron
and Total Iron-Binding Capacity, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	365 days

FOPE
57938

Perch Ocean

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

SMPB
37406

Peripheral Blood Smear Review

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood Slide	Refrigerated	CARTRIDGE	

CPT Code Information: 85060

PNBX
70598

Peripheral Nerve Pathology Consultation

Specimen Requirements: Specimen Type: Nerve biopsy tissue, slides, or block Supplies: Nerve Biopsy Kit (to order call 507-284-8065 or 800-533-1710) Collection Instructions: Prepare and transport specimen per Nerve Biopsy Specimen Preparation Instructions (T580).

Specimen Minimum Volume: 4.5 cm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Frozen	

CPT Code Information: 88305 (if appropriate); 88313 (if appropriate); 88321 (if appropriate); 88323 (if appropriate); 88323-26 (if appropriate); 88325 (if appropriate); 88362 (if appropriate); 88348 (if appropriate); 88342 (if appropriate); 88341 (if appropriate);

DMNES
621103

Peripheral Nervous System Demyelinating Neuropathy, Autoimmune Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, specimen collection is recommended to occur before starting immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 83516 x5; 83520; 86255 x2; 83520 x4 (if applicable);

PINTP
71114

Peripheral Smear Interpretation, Whole Blood

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 85060

ACASM
83632

Pernicious Anemia Cascade, Serum

Specimen Requirements:

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	24 hours

CPT Code Information: 82607; 82941-(if appropriate); 83921-(if appropriate); 86340-(if appropriate);

PDGP
608013

Peroxisomal Disorder Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood

spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

PNZN
9789

Perphenazine, (Trilafon), Serum

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s). Plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in amber vial (T915) to protect from light. Serum Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in amber vial (T915) to protect from light.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	180 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 80342

PERS
82353

Persimmon, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

STK1Z
614588

Peutz-Jeghers Syndrome, STK11, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes before collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole Blood 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405

UPH24 606521 pH, 24 Hour, Urine

Specimen Requirements: Supplies: Diazolidinyl Urea (Germall), 5.0 mL (T822) Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours 2. Add 5 mL of diazolidinyl urea as preservative at start of collection or refrigerate specimen during and after collection. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH >8 indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83986

UPHB 606522 pH, Body Fluid

Specimen Requirements: Supplies: Metal Free Specimen Vial (T173) Container/Tube: Metal-free container Specimen Volume: 5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	7 days
	Ambient	24 hours

CPT Code Information: 83986

FPHFL
57309

pH, Fecal

Specimen Requirements: 5 g of liquid, random stool. Ship frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 83986

PHU
606510

pH, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collections Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83986

FPHAS
57580

Phadiatop (Allergy Screen)

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86005**PCPMX**
62740**Phencyclidine (PCP) Confirmation, Chain of Custody, Meconium**

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)**Transport Temperature:**

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Ambient	28 days
	Refrigerated	28 days

CPT Code Information: 83992; G0480 (if appropriate);**PCPMC**
89069**Phencyclidine (PCP) Confirmation, Meconium**

Specimen Requirements: Supplies: Stool container. Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)**Transport Temperature:**

Specimen Type	Temperature	Time
Meconium	Frozen (preferred)	28 days
	Ambient	28 days
	Refrigerated	28 days

CPT Code Information: G0480; 83992 (if appropriate for select payers);

PCPUG
9788

Phencyclidine (PCP), Confirmation, serum

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 83992

PCPX
62739

Phencyclidine Confirmation, Chain of Custody, Random, Urine

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 83992; G0480 (if appropriate);

PCPU
80371

Phencyclidine Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube:
Plastic urine container Submission Container Tube: Plastic, 10 mL urine tube Specimen Volume: 10 mL

Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: G0480; 83992 (if appropriate for select payers);

FCDUA
75785

Phencyclidine, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

PBR
37049

Phenobarbital, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80184

FPGT
91757

Phenosense Combination HIV Drug Resistance Assay

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 87900/Infectious agent drug susceptibility phenotype prediction; 87901/Infectious agent genotype analysis by nucleic acid; reverse transcriptase and protease; 87903/Infectious agent phenotype analysis by nucleic acid with drug resistance tissue culture analysis; first through 10 drugs tested; 87904/x12 Each additional drug tested;

FPFUZ
91755

Phenosense Entry HIV Drug Resistance Assay

Specimen Requirements:

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 87903

FPHIV
91756

Phenosense HIV Drug Resistance Replication Capacity

Specimen Requirements: Specimen Type: Plasma Container/Tube: Lavender-top (EDTA) or plasma preparation tube (PPT) Specimen Volumes: 3 mL Collection Instructions: Draw blood into two 5-mL PPT (pearl top) or EDTA (lavender top) tubes. Centrifuge specimen within 6 hours of collection. Transfer plasma to one or more polypropylene screw-capped tube(s) and freeze. Freeze immediately. Send 3 mL plasma in a screw-cap vial frozen. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested. **RECOMMENDED:** 1. Patient's most recent viral load. 2. Viral load collection date. **NOTE:** 1. Intended for use only for patients with viral loads greater than or equal to 500 copies/mL. For best results, viral loads should be confirmed within two weeks prior to submission for testing at Monogram. 2. Patient samples submitted

<30 days apart are considered duplicate and will be canceled.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 87903; 87904 x12;

PKUBS
65593

Phenylalanine and Tyrosine, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Ambient (preferred) 90 days/Refrigerated 90 days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate 6 days

Specimen Minimum Volume: Blood spots: 1 Whole blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 84030; 84510; 82542 (if appropriate for government payers);

PKU
8380

Phenylalanine and Tyrosine, Plasma

Specimen Requirements: Patient Preparation: Patient should fast overnight (8-12 hour fast); infants should have specimen collected before next feeding (4 hour fast) Collection Container/Tube: Preferred: Green top (Sodium heparin) Acceptable: Green top (Lithium heparin), lavender top (EDTA)

Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge and aliquot plasma into a plastic vial. 2. Send plasma frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 84030 Phenylalanine; 84510 Tyrosine; 82542 (if appropriate for government payers);

PKUSC
610508

Phenylalanine and Tyrosine, Self-Collect, Blood Spot

Specimen Requirements: Supplies: Blood Spot Collection-Self Collect (T858) Container/Tube: Blood Spot Self Collection Card Specimen Volume: 2 Blood spots Additional Information: 1. Order test each time the patient is to collect a dried blood specimen at home and mail the specimen directly to Mayo Clinic Laboratories. 2. Order should be placed a minimum of 3 days prior to desired date of collection. 3. Enter patient's address information for each order created, including street address (post office [PO] boxes are not acceptable delivery locations), city, state abbreviation, zip code, country, and home phone number. 4. For each order, the Blood Spot Collection-Self Collect kit will be mailed directly to the patient for self-collection (delivery to a PO box will not occur). 5. For more information on how to collect blood spots, see the following: -How to Collect Dried Blood Spot Samples via fingerstick. -Blood Spot Collection Instructions-Fingerstick -Blood Spot Collection Instructions-Fingerstick-Spanish

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 0382U

PHEGP
608032

Phenylalanine Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an

allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81406 x 2; 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 81479 (if appropriate for government payers);

PNYF
37052

Phenytoin, Free, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 80186

PNTFT
37051

Phenytoin, Total and Free, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: Phenytoin, total-80185; Phenytoin, free-80186;

PNYG
37050

Phenytoin, Total and Phenobarbital Group, Serum

Specimen Requirements: One serum specimen (0.5 mL of serum) may be sent if using a red top tube. Serum for Phenytoin: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection. Serum for Phenobarbital: Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL for 2 specimens; 0.25 mL for 1 serum red top

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 80184-Phenobarbital; 80185-Phenytoin, total;

PNYA
37048

Phenytoin, Total, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 80185

PHLDF
609577

Philadelphia Chromosome-like Acute Lymphoblastic Leukemia (Ph-like ALL), Diagnostic FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x14, 88275x7, 88291 x1-FISH Probe, Analysis, Interpretation; 7 probe sets; 88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate);

PHMA
82736

Phoma betae, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PTEN
614126

Phosphatase and Tensin Homolog (PTEN) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PETH
617480

Phosphatidylethanol Confirmation, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL
Collection Instructions: 1. Do not use alcohol to clean arm. Use alternative (such as Betadine, also known as Povidone Iodine) to cleanse site before specimen collection. 2. Draw blood in tubes smaller than 10 mL if possible. 3. Do not centrifuge. 4. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Frozen (preferred)	28 days
	Refrigerated	14 days

CPT Code Information: G0480; 80321 (if appropriate for select payers);

PSPTG
62578

Phosphatidylserine/Prothrombin Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86148

PT217
621635

Phospho-Tau 217, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic screw-top vial Specimen Volume: 0.6 mL Collection Information: Centrifuge and aliquot plasma into plastic vial. Do not submit in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
EDTA Plasma	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	72 hours

CPT Code Information: 84393

PDETS
620070

Phosphodiesterase 10A (PDE10A) IgG, Tissue Immunofluorescence Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PDETC
620069

Phosphodiesterase 10A (PDE10A) IgG, Tissue Immunofluorescence Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal

Fluid

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PDEIS
620068

Phosphodiesterase 10A (PDE10A) IgG, Tissue Immunofluorescence, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

PDEIC
620067

Phosphodiesterase 10A (PDE10A) IgG, Tissue Immunofluorescence, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see: DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

PFK1
607456

Phosphofructokinase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) or yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	11 days

CPT Code Information: 82657

PFKC
608422

Phosphofructokinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	11 days

CPT Code Information: 82657

PGKC
608423

Phosphoglycerate Kinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657

PGK1
607457

Phosphoglycerate Kinase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657

PLAIF
70592

Phospholipase A2 Receptor (PLA2R), Renal Biopsy

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Unstained slides (unfixed) Source: Kidney tissue Slides: 2 Slides Collection Instructions: 2 frozen tissue unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick, centered on the slide, and submitted on dry ice. Acceptable: Specimen Type: Unfixed tissue block (O.C.T) Source: Kidney tissue Specimen Volume: Entire specimen Collection Instructions: 1. Embed in O.C.T. compound. 2. Freeze specimen and ship on dry ice. Acceptable: Specimen Type: Wet tissue Source: Kidney tissue Supplies: Renal Biopsy Kit (T231) Container/Tube: Renal Biopsy Kit, Zeus/Michel's Specimen Volume: Entire specimen Collection Instructions: Collect specimens according to the instructions in Renal Biopsy Preparation Instructions. Additional Information: If standard immunoglobulin and complement immunofluorescence have already been performed, submit the residual frozen tissue (must contain glomeruli) on dry ice.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Special	Frozen	

CPT Code Information: 88346-primary IF

EURO
606475

Phospholipase A2 Receptor, Enzyme Linked Immunosorbent Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see PMND1 / Primary Membranous Nephropathy Diagnostic Cascade, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	8 hours

CPT Code Information: 83520

PLA2I
607367

Phospholipase A2 Receptor, Immunofluorescence, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	8 hours

CPT Code Information: 86255

PLA2M
607366

Phospholipase A2 Receptor, Monitoring, Enzyme-Linked Immunosorbent Assay, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	8 hours

CPT Code Information: 83520

ACLIP
86179

Phospholipid (Cardiolipin) Antibodies, IgA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86147

CLPMG
82976

Phospholipid (Cardiolipin) Antibodies, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86147 x 2

GCLIP
80993

Phospholipid (Cardiolipin) Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86147

MCLIP
81900

Phospholipid (Cardiolipin) Antibodies, IgM, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86147

PMMIL
89656

Phosphomannomutase and Phosphomannose Isomerase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

PHOS
8408

Phosphorus (Inorganic), Serum

Specimen Requirements: Patient Preparation: Patient should fast overnight (12-14 hours) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	365 days
	Refrigerated	7 days

CPT Code Information: 84100**POU**
610832**Phosphorus, 24 Hour, Urine**

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84105**POU_F**
606757**Phosphorus, Feces**

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g**Transport Temperature:**

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	48 hours

CPT Code Information: 84100

RPHOC Phosphorus, Random, Urine

610829

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84105

PHTDP Phosphorylated TDP43 Immunostain, Technical Component Only

71482

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

PAHD
82786

Phthalic Anhydride, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CVSPC
72163

Physician Interpretation Conventional, Varies

Specimen Requirements: This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	SLIDE	
	Refrigerated	SLIDE	

CPT Code Information: 88141

TPSPC
72162

Physician Interpretation Screen, Varies

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	THIN PREP	
	Refrigerated	THIN PREP	

CPT Code Information: 88141

TPDPC
72129

Physician Interpretation, Diagnostic, Varies

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	THIN PREP	
	Refrigerated	THIN PREP	

CPT Code Information: 88141

PIGE
82781

Pig Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPIGF
75555

Pigeon Feathers IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PIGF
82145

Pigeon Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPDD
75548

Pigeon/Dove Droppings Gel Diffusion

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 86331

PIK3T
614801

PIK3CA Mutation Analysis, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. The amount of tissue needed is dependent on a variety of preanalytical factors (eg, cellularity, ischemic time, fixation). The FFPE input required is equivalent to a 4 to 5 micron slide thickness with a total tumor surface area of 100 mm². This can be created by combining material from multiple slides from one tissue block. Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81309

PINE
82381

Pine Nut, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPINP
75410

Pine Ponderosa IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FPIAP
57670

Pineapple IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PNAP
82815

Pineapple, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PINW
9204

Pinworm Exam, Perianal

Specimen Requirements: Supplies: Swubes (T300) Specimen Type: Perianal Container/Tube:
SWUBE disposable paddle (Falcon) or similar method of collection Specimen Volume: Entire specimen
Collection Instructions: See Pinworm Collection Instructions

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 87172

PIPU
81248

Pipecolic Acid, Random, Urine

Specimen Requirements: Supplies: Urine tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL
urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No
preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	94 days
	Refrigerated	14 days

CPT Code Information: 82542**PIPA**
81326**Pipecolic Acid, Serum**

Specimen Requirements: Patient Preparation: Fasting 12 hours or more. (Collect specimens from infants and small children just before next feeding) Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	94 days
	Refrigerated	14 days

CPT Code Information: 82542**PISTA**
82808**Pistachio, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PIT1
72124

PIT-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PKLRZ
610058

PKLR Full Gene Analysis, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405

PLAP
70539

Placental Alkaline Phosphatase (PLAP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PLAI
82837

Plaice, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PBLI
9302

Plasma Cell Assessment, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Specimen Volume: 10 mL Collection Instructions: 1. Do not centrifuge. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 88184-Flow cytometry, cell surface, cytoplasmic; 88185 x 5-Each additional marker; 88187-Flow cytometry, interpretation; 2 to 8 markers;

PCPRO
61654

Plasma Cell DNA Content and Proliferation, Bone Marrow

Specimen Requirements: Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or green top (sodium heparin) Specimen Volume: 4 mL Specimen Stability Information: 3 days

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88182-Flow cytometry, cell cycle or DNA analysis; 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow cytometry interpretation, 2 to 8 Markers (added as FCINT);

CSPMM
618626

Plasma Cell Myeloma Pre-Analysis Cell Sorting, Bone Marrow

Specimen Requirements: Only orderable as a reflex. For more information see NGPCM / MayoComplete Plasma Cell Myeloma, Next-Generation Sequencing, Varies. Specimen Type: Bone marrow aspirate Container/Tube: Lavender or pink top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Minimum plasma cell percentage is 5%. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. 4. Label specimen as bone marrow. 5. Fresh specimen is required for this test, as testing is performed on sorted cells. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerate

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient	4 days

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each);

PLASF
35293

Plasma Cell Proliferative Disorder, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Tissue slides Slides: 1 Hematoxylin and eosin stained and 10 unstained Collection Instructions: Submit 10 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue and 1 slide stained with hematoxylin and eosin.

Specimen Minimum Volume: Tissue block: 1 block Tissue slides: 1 Hematoxylin and eosin stained and 7 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

PCPDS
606079

Plasma Cell Proliferative Disorder, High Risk with Reflex Probes, Diagnostic FISH Evaluation, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow 2, Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 88271 x 2, 88274, 88291-FISH Probe, Analysis, Interpretation; 1 probe set; 88271 x 2, 88274-FISH Probe, Analysis; each additional probe set (if appropriate);

CSPCF
607625

Plasma Cell Proliferative Disorder, Pre-Analysis Cell Sorting, Bone Marrow

Specimen Requirements: Only orderable as a reflex. See PCPDS / Plasma Cell Proliferative Disorder, High Risk with Reflex Probes, Diagnostic FISH Evaluation, Bone Marrow Specimen Type: Bone marrow Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow 2. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each);

PLHBB
9096

Plasma Free Hemoglobin, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge and transfer plasma to a plastic vial within 2 hours of collection. 2. Results could be falsely elevated due to artifactual red blood cell lysis if not centrifuged within 2 hours of collection.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	20 days
	Frozen	30 days
	Ambient	4 days

CPT Code Information: 83051

PGRBC
609675

Plasmalogens, Blood

Specimen Requirements: Patient Preparation: Specimen must be collected either prior to or 6 weeks after a blood transfusion. Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin), yellow top (ACD solution A or B) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Ambient	14 days

CPT Code Information: 82542

PGDBS
609664

Plasmalogens, Blood Spot

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Patient Preparation: Specimen must be collected either prior to or 6 weeks after a blood transfusion. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card Acceptable: Local newborn screening card, PerkinElmer 226 filter paper, Munktel filter paper, Whatman Protein Saver 903 paper, or blood collected in tubes containing ACD, EDTA, or heparin spotted and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred) 90 days/Refrigerated 90days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Acceptable Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin), yellow top (ACD solution A or B) Specimen Volume: 2 mL Collection Instructions:

Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate (preferred) 14 days/Ambient 11 days

Specimen Minimum Volume: Blood spot: 1 Whole blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 82542

PAI1
86083

Plasminogen Activator Inhibitor Antigen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

CPT Code Information: 85415

FPAIG
75142

Plasminogen Activator Inhibitor-1, 4G/5G Genotyping (PAI-1 Polymorphism)

Specimen Requirements: Specimen Type: Whole Blood Preferred: EDTA Acceptable: ACD (Yellow top) Specimen volume: 5 mL Collection Instructions: Draw 5 mL whole blood in a lavender top (EDTA) or yellow top (ACD) tube. Send refrigerated.

Specimen Minimum Volume: 1.00 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	8 days
	Ambient	8 days

CPT Code Information: 81400

PSGN
9079

Plasminogen Activity, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85420

MALCT
610710

Plasmodium Percent Parasitemia Reflex, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87207

PLABN
35794

Platelet Antibody Screen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	365 days
	Refrigerated	48 hours

CPT Code Information: 86022

GNPLT
619285

Platelet Disorders, Comprehensive Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Cultured fibroblasts/skin biopsy: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

GNPFD
619355

Platelet Function Defect Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

PNP
8866

Platelet Neutralization Procedure, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma Specimen Stability Information: Frozen 2 years

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

CPT Code Information: 85597

GNSPD
619327

Platelet Storage Pool Deficiency Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

PLAFL
64278

Platelet Surface Glycoprotein by Flow Cytometry, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668)
Collection Container/Tube: ACD solution A or B Specimen Volume: 6 mL Pediatric Volume: 1 mL
Collection Instructions: Do not transfer blood to other containers.

Specimen Minimum Volume: Adult: 1 mL Pediatric 200 mcL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD	Ambient	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker;
88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) X5; 88187-Flow
cytometry interpretation, 2 to 8 markers;

PTEM
63682

Platelet Transmission Electron Microscopic Study, Whole Blood

Specimen Type	Temperature	Time
Whole Blood ACD	Ambient	72 hours

CPT Code Information: 85390; 88348;

FPLAT
75450

Platinum, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared
between multiple orders.*** Draw blood in a plain, royal blue top tube(s). (Serum gel tube is not
acceptable.) Spin down and send 1 mL of serum refrigerated in an acid washed (MCL Supply T619) or
trace metal-free plastic container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	60 days
	Ambient	60 days
	Frozen	60 days

CPT Code Information: 83018

PLUM
82809

Plum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PMLR
84114

PML::RARA Quantitative, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL; Bone Marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81315-PML/RAR-alpha (t(15;17)), (PML-RARA regulated adaptor molecule 1) (eg, promyelocytic leukemia) translocation analysis; all breakpoints (eg, intron 3, intron 6 and variable in exon 6), qualitative or quantitative

PMPDD 66569

PMP22 Gene, Large Deletion/Duplication Analysis, Varies

Specimen Requirements: Patient Preparation: A previous hematopoietic stem cell transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a hematopoietic stem cell transplant, call 800-533-1710. Submit only 1 of the following specimens:
Specimen Type: Whole blood **Container/Tube:** Preferred: Lavender top (EDTA) or yellow top (ACD) **Acceptable:** None **Specimen Volume:** 3 mL **Collection Instructions:** 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. **Specimen Stability Information:** Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days **Additional Information:** 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. **Specimen Type:** Cord blood **Container/Tube:** Preferred: Lavender top (EDTA) or yellow top (ACD) **Acceptable:** None **Specimen Volume:** 3 mL **Collection Instructions:** 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. **Specimen Stability Information:** Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days **Additional Information:** 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. **Specimen Type:** Extracted DNA **Container/Tube:** Preferred: Screw Cap Micro Tube, 2mL with skirted conical base **Acceptable:** Matrix tube, 1mL **Collection Instructions:** 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. **Specimen Stability Information:** Frozen (preferred) 1 year/Ambient/Refrigerated **Additional Information:** DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81324

PMS2
70540

PMS2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PNRP
81698

Pneumocystis jiroveci, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Pneumocystis species DNA is unlikely. Preferred Specimens: Pleural, respiratory (eg, bronchoalveolar lavage [BAL], bronchial washing, sputum), or fresh tissue Acceptable Specimens: If no fresh specimen is available, digested respiratory specimens treated with N-acetyl-L-cysteine-sodium hydroxide (NALC/NaOH) are acceptable (eg, BAL, bronchial washing, respiratory fluid, sputum, or tracheal secretion) Submit only 1 of the following specimens: Preferred Specimen Type: Body fluid Sources: Pleural Container/Tube: Sterile container Specimen Volume: 1 mL Additional Information: Only fresh, non-NALC/NaOH-digested body fluid is acceptable. Specimen Type: Respiratory Sources: BAL, bronchial washing, tracheal secretions, or sputum Container/Tube: Sterile container Specimen Volume: 1 mL if only PCR ordered or 3 mL if PCR ordered with smear and culture Specimen Type: Tissue Sources: Respiratory Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: 1. Submit fresh tissue. 2. Keep tissue moist with sterile water or sterile saline Acceptable Specimen Type: NALC/NaOH-digested respiratory specimens Sources: BAL, bronchial washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen.

Specimen Minimum Volume: Body fluid or nondigested respiratory specimen: 0.5 mL; Fresh tissue: 5 mm; NALC-NaOH-digested specimen: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87594**D240**
70416**Podoplanin (D2-D40) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**POLET**
619676**POLE Mutation Analysis, Next-Generation Sequencing, Tumor**

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81479;

FPOLO
75165

Poliovirus (Types 1, 3) Antibodies, Neutralization

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	5 days

CPT Code Information: 86382 x 2

FPOLE
57942

Pollock White (Pollachius virens) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

PVJAK
65116

Polycythemia Vera, JAK2 V617F with Reflex to JAK2 Exon 12-15, Sequencing for Erythrocytosis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow aspirate Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 8 mL; Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	5 days
	Ambient	5 days

CPT Code Information: 81270-JAK2 V617; 0027U (if appropriate);

TALDO
61843

Polyols, Quantitative, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 82542

FPOM
57918

Pomegranate (*Punica granatum*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

PD2T
65296

Pompe Disease Second-Tier Newborn Screening, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, local newborn screening card, or blood collected in tubes containing ACD or EDTA and then spotted and dried on filter paper. Specimen Volume: 3 Blood spots Collection Instructions: 1. Completely fill at least 3 circles on the filter paper card (approximately 100 microliters blood per circle). 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	90 days
	Frozen	90 days
	Ambient	28 days

CPT Code Information: 83789

PDBS
602280

Pompe Disease, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, local newborn screening card, or blood collected in tubes containing ACD or EDTA, and dried on filter paper
 Specimen Volume: 3 Blood spots
 Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Completely fill at least 3 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry completely on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry
 Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	90 days
	Frozen	90 days
	Ambient	28 days

CPT Code Information: 83789

GAAZ
35430

Pompe Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1740 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask

Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated 24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406-GAA (glucosidase, alpha; acid) (eg, glycogen storage disease type II [Pompe disease]), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FPOPW
57557

Poplar White (Populus alba) IgE

Specimen Requirements: Draw blood in a plain, red-top tube, serum gel tube are acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

POPSD Poppy Seed, IgE, Serum

82632

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FPORG Pork IgG

57627

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FPRK4
57564

Pork IgG4

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

PORK
82700

Pork, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PBALP
64661

Porphobilinogen and Aminolevulinic Acid, Plasma

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for at least 24 hours prior to specimen collection. Supplies: Amber Frosted Tube, 5mL (T915) Collection

Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Green top (lithium heparin), lavender top (EDTA), yellow top (ACD A or B) Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: 1. It is recommended that specimen collection occur during the acute phase. Porphobilinogen and aminolevulinic acid may be normal when the patient is not exhibiting symptoms. 2. Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	21 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 82542; 82135;

PBGDW
31894

Porphobilinogen Deaminase, Washed Erythrocytes

Specimen Requirements:

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time
Washed RBC	Frozen (preferred)	14 days
	Refrigerated	14 days
	Ambient	48 hours

CPT Code Information: 82657

PBGD_
88925

Porphobilinogen Deaminase, Whole Blood

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection. This is essential as ethanol induces porphobilinogen deaminase activity, which may lead to a false-normal result. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Specimen Volume: 4 mL Collection Instructions: Refrigerate specimen as soon as possible.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	8 days
	Ambient	7 days

CPT Code Information: 82657

PBGU
82068

Porphobilinogen, Quantitative, Random, Urine

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for at least 24 hours prior to collection. Supplies: Urine Container-Amber, 60 mL (T596) Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative necessary but pH must be above 5.0. 3. Specimens should be protected from light and frozen immediately following collection.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	7 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 84110

PCGP
608023

Porphyria Comprehensive Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient

(preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81406 x 2; 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 81479 (if appropriate for government payers);

PEWE
31893

Porphyrins Evaluation, Washed Erythrocytes

Specimen Requirements:

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time
Washed RBC	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 84311-Spectrophotometry, analyte not elsewhere specified;

82542-Chromatography (if appropriate);

PEE
88886

Porphyrins Evaluation, Whole Blood

Specimen Requirements: All porphyrin tests on whole blood can be performed on 1 collection tube. Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Dark blue top (metal free heparin), green top (lithium heparin), lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: Immediately place specimen on wet ice.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated	7 days

CPT Code Information: 84311; 82542-if appropriate;

FQPPS
81652

Porphyrins, Feces

Specimen Requirements: Patient Preparation: 1. For 3 days before collection and during the entire specimen collection period, patient must refrain from eating red meat and or taking any aspirin-containing medications. 2. Patient should not use barium, laxatives, or enemas for 24 hours before starting, as well as during, specimen collection. Collection Container/Tube: Stool Containers - 24, 48, 72 Hour Kit (T291). No preservative. Specimen Volume: Entire collection (48, 72, or 96 hour). 24-Hour collection is adequate if the collection volume is at least 100 g Collection Instructions: 1. Collect all stool specimens within a 24, 48, 72, or 96 hour timeframe. 2. Do not add preservative. 3. Send entire collection. Additional Information: 1. Length of collection period is required. 2. Specimens smaller than 100 g may not provide accurate results. 3. Include a list of medications the patient is currently taking.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 84126

PQNU
8562

Porphyrins, Quantitative, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Patient should not consume any alcohol for the 24 hours before, as well as during, specimen collection. Supplies: -Urine Container - Amber, 60-mL (T596) -Sodium Carbonate, 5 gram (T272) Container/Tube: Amber, 60-mL urine container Specimen Volume: 20 to 50 mL Collection Instructions: 1. Add 5 g of sodium carbonate as preservative at start of collection. This preservative is intended to achieve a pH above 7. Do not substitute sodium bicarbonate for sodium carbonate. 2. Collect a 24-hour urine specimen. 3. The container should be refrigerated and protected from light as much as possible during collection. 4. Record volume and duration. An aliquot should be frozen when collection is complete. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	7 days	LIGHT PROTECTED

CPT Code Information: 84110-Porphobilinogen, quantitative; 84120-Porphyrins, quantitation and fractionation;

PQNRU
60597

Porphyrins, Quantitative, Random, Urine

Specimen Requirements: Patient Preparation: Patient should not consume any alcohol for the 24 hours before specimen collection. Supplies: Urine Container - Amber, 60 mL (T596) Container/Tube: Amber, 60-mL urine container Specimen Volume: 20 to 50 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	72 hours	LIGHT PROTECTED

CPT Code Information: 84110-Porphobilinogen, quantitative; 84120-Porphyrins, quantitation and fractionation;

PTP
8731

Porphyrins, Total, Plasma

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection. Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube:

Preferred: Green top (sodium or lithium heparin) Acceptable: Lavender top (EDTA) Submission Container/Tube: Amber vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge specimen and aliquot plasma into amber vial. 2. Send plasma frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 84311-Porphyrins, total; 82542-Porphyrins, fractionation (if appropriate);

FPPOS
75889

Posaconazole Susceptibility Testing

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Test Lab Request Form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in a large infectious container (T146) and label as etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999 - Unlisted Microbiology Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen organism.); 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate);

POSA
89591

Posaconazole, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Within 2 hours of collection, centrifuge, and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80187

POSV 9205

Post Vasectomy Check, Semen

Specimen Requirements: Patient Preparation: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Container/Tube: Semen Analysis Kit (T178)
Specimen Volume: Total ejaculate

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Semen	Ambient	

CPT Code Information: 89321

PMAOG 620568

Postmortem Aortopathy Gene Panel, Tissue

Specimen Requirements: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81410

PMARG
620582

Postmortem Arrhythmia Gene Panel, Tissue

Specimen Requirements: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81439

PMCAG
620596

Postmortem Cardiomyopathy and Arrhythmia Gene Panel, Tissue

Specimen Requirements: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81439

PMCMG
620610

Postmortem Cardiomyopathy Gene Panel, Tissue

Specimen Requirements: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81439

PCMSP
620638

Postmortem Inherited Congenital Myasthenia Syndrome Gene Panel, Tissue

Specimen Requirements: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81443

PMHLH
620624

Postmortem Primary Hemophagocytic Lymphohistiocytosis (HLH) Gene Panel, Tissue

Specimen Requirements: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81443

PMSBB
81931

Postmortem Screening, Bile and Blood Spot

Specimen Requirements: Both bile and blood spots are required. Supplies: Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Card-Postmortem Screening Card (Filter Paper) Acceptable: Whatman Protein Saver 903 paper or local newborn screening card Specimen Volume: Properly completed screening card Collection Instructions: 1. Collect blood in a heparin-containing tube and drop 25 mcL of blood onto the 2 circles labeled Blood. 2. Collect bile by direct puncture of the gallbladder and drop 25 mcL of bile onto the 2 circles labeled Bile. 3. Allow to dry at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Fill out information on page 2 of collection card. 5. Do not expose specimen to heat or direct sunlight. 6. Do not stack wet specimens. 7. Keep specimen dry.

Specimen Minimum Volume: Bile spot: 1; Blood spot: 1

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	FILTER PAPER	
	Frozen	FILTER PAPER	
	Refrigerated	FILTER PAPER	

CPT Code Information: 83789

KUR
614060

Potassium, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-Hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84133

RKUR
610696

Potassium, Random, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84133

KS
602352

Potassium, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	48 hours

CPT Code Information: 84132

FPTWG
57539

Potato White IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

POU2F
618483

POU2F3 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FMPG
57931

Poultry and Meat Panel IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 7; ;**POWV**
616098**Powassan Virus, IgM, Enzyme-Linked Immunosorbent Assay, Serum**

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 86790**POWVB**
617484**Powassan Virus, RNA, Molecular Detection, PCR, Blood**

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

POWVU
617487

Powassan Virus, RNA, Molecular Detection, PCR, Random, Urine

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect random urine in a sterile container. 2. Label specimen as urine.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

POWVS
617486

Powassan Virus, RNA, Molecular Detection, PCR, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection centrifuge and aliquot serum into a sterile container. 2. Serum specimens not aliquoted from the serum gel collection tube into a sterile container will be rejected.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

POWVC
617485

Powassan Virus, RNA, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: 1. Send specimen from collection vial 2. 2. Do not centrifuge or heat inactivate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

PWAS
35535

Prader-Willi/Angelman Syndrome, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. **PRENATAL SPECIMENS** Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen Specimen Type: Confluent cultured amniocytes Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured amniocytes from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and/or extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene

regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81331-SNRPN/UBE3A, (small nuclear ribonucleoprotein polypeptide Nand ubiquitin protein ligase E3A) (eg, Prader-Willi syndrome and/or Angelman syndrome), methylation analysis; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

PRAME
615794

PRAME Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PALB
9005

Prealbumin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 84134

C2NAD **PrecivityAD, Plasma**

621651

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	

CPT Code Information: 0412U

C2AD2 **PrecivityAD2, Plasma**

621652

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	

CPT Code Information: 0503U

AD2AR **PrecivityAD2, Reflex to Apolipoprotein E, Plasma**

621654

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	

CPT Code Information: 0503U

PERA
621166

Preeclampsia sFlt-1/PlGF (Soluble fms-Like Tyrosine Kinase 1/ Placental Growth Factor) Ratio, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, the patient should not receive intravenous heparin. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	24 hours

CPT Code Information: 0482U

PGN
65119

Pregabalin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge, and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

17PRN
88646

Pregnenolone and 17-Hydroxypregnenolone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	28 days

CPT Code Information: 84140-Pregnenolone; 84143-17-Hydroxypregnenolone;

PREGN
88645

Pregnenolone, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge the specimen and immediately aliquot serum into a plastic vial. 2. Freeze immediately.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	28 days

CPT Code Information: 84140

Prenatal Aneuploidy Detection, FISH

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 to 25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 12 mL. 4. If ordering with CHRAF / Chromosome Analysis, Amniotic Fluid, submit a minimum of 12 mL. 5. If ordering with both CMAP and CHRAF, then submit a minimum of 26 mL. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Acceptable: Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 to 30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (Such as CVS Media (RPMI) and Small Dish). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. 4. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 12 mg. 5. If ordering with CHRCV / Chromosome Analysis, Chorionic Villus Sampling, submit a minimum of 12 mg. 6. If ordering with both CMAP and CHRCV, then submit a minimum of 26 mg.

Specimen Minimum Volume: Amniotic fluid: 2 mL; Chorionic villi: 2 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

Prenatal Hepatitis Evaluation, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.2 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into a plastic vial and ship frozen (preferred).

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	84 days	
	Refrigerated	6 days	

CPT Code Information: 87340; 86803 ; G0472 (if appropriate for government payers); 87522 (if appropriate); 86707 (if appropriate); 87341 (if appropriate); 87350 (if appropriate);

PHEPU
620973

Previous Viral Hepatitis (Unknown Type), Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Serum gel (red-top tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.6 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot 1.8 mL serum into a plastic vial and ship frozen (preferred).

Specimen Minimum Volume: 1.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 86704; 86706; 86708; 86803; 87340; 87341 (if appropriate); 87522 (if appropriate);

PBCPN
620737

Primary Biliary Cholangitis Antibody Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86039; 83516 x2; 86381;

PCDGG
617421

Primary Ciliary Dyskinesia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous hematopoietic stem cell transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a hematopoietic stem cell transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. Specimen Type: Tissue biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5 to 3 cm(3) or larger Specimen Stability Information:

Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect a Dried Blood Spot Sample. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Multiple extractions will be required to obtain sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

HLHGP
619830

Primary Hemophagocytic Lymphohistiocytosis Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2.

Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Whole blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

PMND1
609778

Primary Membranous Nephropathy Diagnostic Cascade, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	8 hours

CPT Code Information: 83520; 86255 (x1 or x2, if applicable);

PRMB
37053

Primidone and Phenobarbital, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: PRIMD-80188; PBR-80184;

PTRE
82784

Privet Tree, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PRKSG
617435

PRKAR1A Full Gene Sequencing with Deletion/Duplication, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred:

Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks are required to culture fibroblasts before genetic testing can occur. Specimen Type: Tissue biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5 to 3 cm³ or larger Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect a Dried Blood Spot Sample. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Multiple extractions will be required to obtain sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions

that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

GAL2
606833

Probability of Hepatocellular Carcinoma, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	5 days

PA
8683

Procainamide and N-Acetylprocainamide, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 80192

PRCAL
602598

Procalcitonin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	48 hours
	Ambient	24 hours

CPT Code Information: 84145

PINP
61695

Procollagen I Intact N-Terminal, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 83519

LDAI
621645

Progentec aiSLE DX Lupus Disease Activity Index, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Yellow top (ACD solution A) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge at 1500 x g for 20 minutes. 2. Aliquot plasma into plastic vial. 3. Freeze specimen within 2 hours of collection. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	74 days

CPT Code Information: 0446U

LFRI
621644

Progentec aiSLE DX Lupus Flare Risk Index, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Yellow top (ACD solution A) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge at 1500 x g for 20 minutes. 2. Aliquot plasma into plastic vial. 3. Freeze specimen within 2 hours of collection. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	74 days

CPT Code Information: 0447U

PROG
70542

Progesterone Receptor (PR) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PGSN
8141

Progesterone, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	72 hours
	Ambient	8 hours

CPT Code Information: 84144

22C3
603762

Programmed Death-Ligand 1 (PD-L1) (22C3), Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554) Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360**288PD**
609994**Programmed Death-Ligand 1 (PD-L1) (28-8), Semi-Quantitative Immunohistochemistry, Manual**

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554)
 Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue
 Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360**SP142**
603769**Programmed Death-Ligand 1 (PD-L1) (SP142), Semi-Quantitative Immunohistochemistry, Manual**

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554)
 Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue
 Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

SP263
603755

Programmed Death-Ligand 1 (PD-L1) (SP263), Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554)
Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

PINS
80908

Proinsulin, Plasma

Specimen Requirements: Patient Preparation: 1. Patient should fast for 8 hours before specimen collection. 2. Infants younger than 2 years should fast a maximum of 6 hours. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Ice-cooled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. After collection, place the whole blood on ice for at least 10 minutes, then centrifuge at refrigerated temperature. 2. Aliquot plasma into a plastic vial and send frozen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	30 days

CPT Code Information: 84206

PRLI
70541

Prolactin (PRL) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per

test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PLPMA
35090

Prolactin, Pituitary Macroadenoma, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	24 hours

CPT Code Information: 84146

PRL
85670

Prolactin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	24 hours

CPT Code Information: 84146

APRI
603183

Prolonged Clot Time Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26 Special Coagulation Interpretation

APROL
603308

Prolonged Clot Time Profile, Plasma

Specimen Requirements:

Specimen Minimum Volume: 4 plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85379-DIMER; 85384-CLFIB; 85390-26-APRI; 85610-PTSC; 85613-DRV1; 85670-TTSC; 85730-APTSC; 85130-Chromogenic FVIII (if appropriate); 85130-Chromogenic FIX (if appropriate); 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85240-Factor VIII (if appropriate); 85250-Factor IX (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85335-Bethesda titer (if appropriate); 85335-Factor V inhibitor screen (if appropriate); 85335-Factor VIII inhibitor screen (if appropriate); 85335-Factor IX inhibitor screen (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Hex LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirm (if appropriate);

85635-Reptilase time (if appropriate); 85732-APTT mix 1:1 (if appropriate);

PHD2
61683

Prolyl Hydroxylase Domain-2 (PHD2/EGLN1) Gene Sequencing, Whole Blood

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations, Whole Blood. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	30 days
	Ambient	14 days

CPT Code Information: 81479

FPHEG
90101

Promethazine (Phenergan)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

FIBDD
57459

PROMETHEUS IBD sgi Diagnostic

Specimen Requirements: Requires both whole blood and serum Note: Specimens must be shipped

together Note: Informed consent required from NYS clients Blood: Collect 2 mL lavender top EDTA whole blood. Ship refrigerate. Serum: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Spin down and send 2 mL of serum refrigerated.

Specimen Minimum Volume: Blood = 2 mL, Serum = 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Ambient	7 days
Whole Blood EDTA	Refrigerated (preferred)	21 days
	Ambient	7 days

CPT Code Information: 82397 x 4; 83520 x 6; 86255 x 2 ; 81479; 86140;

FPLAC
91783

PROMETHEUS LactoTYPE

Specimen Requirements: Patient Preparation: Informed consent required from NYS clients. Container/Tube: Whole Blood EDTA Specimen Volume: 2 mL Collection Instructions: Collect 2 mL EDTA (lavender top) whole blood. Ship refrigerated.

Specimen Minimum Volume: 2.0 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	30 days
	Ambient	10 days

CPT Code Information: 81400

PFN
80295

Propafenone, Serum

Specimen Requirements: Patient Preparation: Specimens should only be collected after patient has been receiving propafenone for at least 3 days. Trough concentrations should be collected just before administration of the next dose. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

FPROP
90362

Propofol, Serum/Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. Centrifuge and send 2 mL of serum refrigerate in plastic vial. Note: 1. Indicate serum on request form. 2. Label specimen appropriately (serum). Plasma Draw blood in a lavender-top (EDTA) tube(s). Plasma gel tube is not acceptable. Centrifuge and send 2 mL of EDTA plasma refrigerate in plastic vial. Note: 1. Indicate plasma on request form. 2. Label specimen appropriately (plasma).

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	

CPT Code Information: 80299

FPROS
75902

Prostaglandin D2 (PG D2), Random Urine

Specimen Requirements: Patient Preparation: Patient should not be on aspirin, indomethacin, or anti-inflammatory medications, if possible, for at least 48 hours prior to collection of specimen. Specimen Type: Urine Submission Container/Tube: Plastic, 10-mL tube (T068) Specimen Volume: 10 mL Collection Instructions: 1. Collect 10 mL random urine (NO preservative). 2. Freeze immediately and send specimen frozen in plastic, 10-mL urine tube (T068) 3. Specimen must remain frozen prior to and during shipping. Note: 24-hour urine collection is not acceptable.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	60 days

CPT Code Information: 84150

FPDPG
75900

Prostaglandin D2 (PGD2)

Specimen Requirements: Patient preparation: Patient should not be on aspirin, indomethacin, or anti-inflammatory medications, if possible, for at least 48 hours prior to collection of specimen.

Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial

Specimen Volume: 3 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. 2. Centrifuge as soon as possible, aliquot 3 mL of serum into a plastic vial, and freeze immediately. 3. Send frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	60 days

CPT Code Information: 84150

PHI11
113000

Prostate Health Index Reflex, Serum

Specimen Requirements: Patient Preparation: 1. Specimens for testing should be collected prior to prostate manipulations such as digital rectal examination, prostatic massage, transrectal ultrasound, and prostatic biopsy. 2. A 6-week waiting period between needle biopsy and specimen collection is recommended. 3. Specimens should not be collected from patients receiving therapy with high biotin (vitamin B7) doses (ie, >5 mg/day) until at least 8 hours following the last biotin administration.

Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection

Instructions: Within 3 hours of collection, centrifuge, aliquot serum into a plastic vial, and refrigerate. Freeze sample within 24 hours of collection and send frozen.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	150 days
	Ambient	24 hours
	Refrigerated	24 hours

CPT Code Information: 84153 - Total PSA; 84154 - Free PSA (if appropriate); 86316 - [-2]ProPSA (if appropriate);

PSAIM
70543

Prostate Specific Antigen (PSA) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PTRIP
610456

Prostate Triple (P63/KRT/P504S), Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

PSA
9284

Prostate-Specific Antigen (PSA) Diagnostic, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection. Additional Information: Free prostate-specific antigen (PSA) can only be added on within 72 hours of performing total PSA. Specimen must have been shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	5 days

CPT Code Information: 84153

SPSA
82023

Prostate-Specific Antigen (PSA) Screen, Serum

Specimen Requirements: Supplies: Starstedt Aliquot Tube 5mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Red-top tube must be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection. 2. Serum gel tube must be centrifuged within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	5 days

CPT Code Information: 84153; G0103 (if appropriate);

PSAU
64061

Prostate-Specific Antigen (PSA) Ultrasensitive, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the

serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	180 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 84153

PSAFT
81944

Prostate-Specific Antigen (PSA), Total and Free, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 3 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	72 hours

CPT Code Information: 84153; 84154;

PACPI
70531

Prostatic Acid Phosphatase (PACP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PACP
8019

Prostatic Acid Phosphatase, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days

CPT Code Information: 84066

CFX
9339

Protein C Activity, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85303

PCAG
9127

Protein C Antigen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	

CPT Code Information: 85302

GNPRC
619173

Protein C Deficiency, PROC Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

SFX
617792

Protein S Activity, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85306

PSF
80338

Protein S Antigen, Free, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85306

PSTF
83049

Protein S Antigen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85306-Free; 85305-Total (if appropriate);

PST
80994

Protein S Antigen, Total, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85305

GNPRS
619187

Protein S Deficiency, PROS1 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

12PU1
614042

Protein, Total, 12 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5 mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a 12-hour urine specimen. Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. 2. No preservative. 3. Invert well before taking 4-mL aliquot. 4. Do not overfill aliquot tube, 4 mL at most. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84156

PTU
614001

Protein, Total, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. 2. No preservative. 3. Invert well before taking 4-mL aliquot. 4. Do not over fill aliquot tube 4 mL at most. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84156

TPBF
606619

Protein, Total, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84157

PRCON
617782

Protein, Total, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: ORTHP / Orthostatic Proteinuria, Random, Urine Patient Preparation: Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. This is a nighttime (supine) collection. 2. Void immediately prior to lying down. 3. Collect an 8-hour (nighttime) urine specimen. 4. Upon awaking in the morning, the patient should immediately void into the specimen cup. 4. No preservative. 5. Invert well before taking 4-mL (maximum) aliquot.

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84156

TP
8520

Protein, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days

CPT Code Information: 84155

TPSF 872

Protein, Total, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Centrifuge specimen to remove any cellular material.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	72 hours
	Frozen	180 days

CPT Code Information: 84157

RPTU1 614004

Protein/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Invert well before taking 4 mL aliquot. 4. Do not over fill aliquot tube, 4 mL at most.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84156; 82570;

RATO2
617783

Protein/Creatinine, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ORTHP / Orthostatic Proteinuria, Random, Urine.

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	24 hours

PR3
82965

Proteinase 3 Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

FPF12
75657

Prothrombin Fragment 1+2 MoAb

Specimen Requirements: Patient Preparation: Do not draw from an arm with a heparin lock or heparinized catheter. Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (citrate) Specimen Volume: 2 mL Collection Instructions: 1. Draw blood in a light blue-top (Sodium citrate) tube(s). 2. Centrifuge and aliquot 2 mL citrated plasma into a plastic vial. 3. Send frozen. Note: To avoid delays in turnaround time when requesting multiple tests on frozen samples, please submit separate frozen specimens for each test requested.

Specimen Minimum Volume: 1 mL (Note: This volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	365 days

CPT Code Information: 83520**PTNT**
81742**Prothrombin G20210A Mutation, Blood**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B), light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	14 days
	Frozen	14 days
	Refrigerated	14 days

CPT Code Information: 81240-F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G>A variant

PTSC
602171**Prothrombin Time (PT), Plasma**

Specimen Requirements: Only orderable as part of a profile or reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85610

PTMSC Prothrombin Time Mix 1:1, Plasma

602183

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85611

PTTP Prothrombin Time, Plasma

40934

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions see Coagulation Guidelines for Specimen Handling and Processing 2. Centrifuge, remove plasma, and centrifuge plasma again. 3. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen (preferred)	30 days
	Ambient	24 hours

CPT Code Information: 85610

PPFWE
31891

Protoporphyrins, Fractionation, Washed Erythrocytes

Specimen Requirements:

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time
Washed RBC	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 82542

PPFE
8739

Protoporphyrins, Fractionation, Whole Blood

Specimen Requirements: All porphyrin tests on whole blood can be performed on 1 tube.
Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection.
Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Dark blue top (metal free heparin), green top (lithium heparin), or lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: Refrigerate specimen as soon as possible.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated	7 days

CPT Code Information: 82542

PROTR
9797

Protriptyline (Vivactyl)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80335

PRSSZ
35532

PRSS1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81404-PRSS1 (protease, serine, 1 [trypsin 1]) (eg, hereditary pancreatitis), full gene sequence

PCHE1
606604

Pseudocholinesterase, Total, Serum

Specimen Requirements: Patient Preparation: For patients with prolonged apnea following surgery, wait at least 24 hours before obtaining specimen. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	24 hours

CPT Code Information: 82480

PSY
62235

Psychosine, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) Acceptable: PerkinElmer 226 filter paper, Munktell filter paper, Whatman protein Saver 903 paper, local newborn screening card, or blood collected in tubes containing EDTA (preferred) or heparin and dried on filter paper
 Specimen Volume: 2 Blood spots
 Collection Instructions: 1. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 2. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry.
 Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	96 days	FILTER PAPER
	Frozen	96 days	FILTER PAPER
	Refrigerated	96 days	FILTER PAPER

CPT Code Information: 82542

PSYCF
606146

Psychosine, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial. Specimen Volume: 0.15 mL
 Collection Instructions: Do not aliquot.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen	7 days

CPT Code Information: 82542

PSYR
606145

Psychosine, Whole Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated	7 days

CPT Code Information: 82542

PSYQP
610060

Psychotropic Pharmacogenomics Gene Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 2 Swabs, use 2 kits for collection Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, testing cannot proceed to reflex testing for CYP2D6 sequencing and will stop after initial testing is complete. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2-mL screw top tube Specimen Volume: 100 µL (microliters) Collection Instructions: 1. The preferred volume is 100 µL at a concentration of 50 ng/µL. 2. Provide concentration of DNA and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Saliva, extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81418

PTFIB
65820

PT-Fibrinogen, Plasma

Specimen Requirements: Only orderable as part of a coagulation reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85385

PTNZ
614586

PTEN Hamartoma Tumor Syndrome, PTEN Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81321**FPTH**
90182**PTH Antibody**

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red or SST
 Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and send 1 mL of serum ambient in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Ambient (preferred)	14 days
	Frozen	28 days
	Refrigerated	14 days

CPT Code Information: 83519**PU1**
70545**PU.1 Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PUSE
82362

Pumpkin Seed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PUPYP
65151

Purines and Pyrimidines Panel, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	90 days

CPT Code Information: 82542

PUPYU
41977

Purines and Pyrimidines Panel, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 3 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	90 days

CPT Code Information: 82542

PC1TS
43437

Purkinje Cell Cytoplasmic Antibody Type 1 (PCA-1) Titer, Serum

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PC1TC
43446

Purkinje Cell Cytoplasmic Antibody Type 1 (PCA-1) Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PC2TS
43438

Purkinje Cell Cytoplasmic Antibody Type 2 (PCA-2) Titer, Serum

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PC2TC
43447

Purkinje Cell Cytoplasmic Antibody Type 2 (PCA-2) Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PCTTS
43439

Purkinje Cell Cytoplasmic Antibody Type Tr (PCA-Tr) Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -PAVAL / Paraneoplastic Autoantibody Evaluation, Serum -DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

PCTTC
43448

Purkinje Cell Cytoplasmic Antibody, Type Tr (PCA-Tr) Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid -PCDEC / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Spinal Fluid
Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

FPYRE
57540

Pyrethrum IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FPYD
90281

Pyridostigmine, Serum/Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Submit only 1 of the following specimens: Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. 2. Centrifuge and freeze immediately. Send 5 mL of serum frozen in a plastic, preservative-free vial. 3. Label specimen appropriately (serum). Specimen Type: Plasma Collection Container/Tube: Preferred: Lavender-top EDTA Acceptable: Green-top (Heparin) Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Draw blood in a lavender-top (EDTA) or green-top (Heparin) tube(s). Plasma gel tube is not acceptable. 2. Centrifuge and freeze immediately. Send 5 mL of plasma frozen in a preservative-free plastic vial. 3. Label specimen appropriately (plasma).

Specimen Minimum Volume: 2.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen	21 days

CPT Code Information: 80375

FPD5C
75891

Pyridoxal 5-phosphate (CSF)

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	CSF KIT	

CPT Code Information: 84207

PLP
42359

Pyridoxal 5-Phosphate, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen	29 days	LIGHT PROTECTED

CPT Code Information: 84207

B6PA
42361

Pyridoxic Acid, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen	29 days	LIGHT PROTECTED

CPT Code Information: 82542

P5NT
80650

Pyrimidine 5' Nucleotidase, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 5 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 83915

PK1
607459

Pyruvate Kinase Enzyme Activity, Blood

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 84220

PKC
608418

Pyruvate Kinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: HAEV1 / Hemolytic Anemia Evaluation, Blood EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 84220

PYRC
83356

Pyruvate, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.6 mL Collection Instructions: Send specimen from vial 4.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 84210

PYR
8657

Pyruvic Acid, Blood

Specimen Requirements: Call 800-533-1710 or 507-266-5700 to order special collection tube. Patient Preparation: Fasting (at least 4 hours) Supplies: Perchloric Acid-Pyruvate Tube (T012) Container/Tube: Special collection tube containing 2.5 mL of 6% perchloric acid Specimen Volume: Exactly 1 mL Collection Instructions: 1. Special collection tube must be prechilled prior to collection. 2. Draw enough blood directly into syringe to add exactly 1 mL of blood to the prechilled special collection tube. 3. Taking care to not spill any of the preservative, cautiously remove the cap from the tube. 4. Immediately transfer blood, once drawn, to the prechilled, special collection tube, recap, and shake vigorously to mix. Additional Information: 1. Check expiration date before using. Supplied collection tube expires 14 months after preparation. 2. If perchloric acid (preservative) spills, obtain a new, prechilled tube.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	15 days	PYRUVATE

CPT Code Information: 84210

QFEVR
616832

Q Fever Antibody Screen with Titer Reflex, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 86638; 86638 x 4 (if applicable);

QFP
83149

Q Fever IgM and IgG, Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see QFEVR / Q Fever Antibody Screen with Titer Reflex, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 86638 x 4

QUAD1
113145

Quad Screen (Second Trimester) Maternal, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Do not collect specimen after amniocentesis as this could affect results. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial. Additional Information: 1. For an assessment that includes neural tube defect results, gestational age must be between 15 weeks, 0 days and 22 weeks, 6 days. 2. Assessments for trisomy 21 (Down syndrome) and trisomy 18 (Edwards syndrome) only are available between 14 weeks, 0 days and 22 weeks, 6 days. 3. Initial or repeat testing is determined in the laboratory at the time of report and will be reported accordingly. To be considered a repeat test for the patient, the testing must be within the same pregnancy and trimester, with interpretable results for the same tests, and both tests are performed at Mayo Clinic. 4. Maternal Serum Screening patient education brochure (T522) is available upon request.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 81511

QFT4
113563

QuantiFERON-TB Gold Plus, Blood

Specimen Requirements: Supplies: -QuantiFERON-TB Gold Plus Collection Kit (T794)
-QuantiFERON-TB Gold Plus HIGH ALTITUDE Collection Kit (T795) Collection Instructions: 1. Special collection, incubation, and centrifugation procedures must be followed. 2. For blood collection options (1-tube collection or 4-tube collection) and specimen transport instructions, see Mycobacterium tuberculosis Infection Determination by Quanti-FERON-TB Gold Plus Collection and Processing Instructions (T688).

Specimen Minimum Volume: 4 mL: 1 mL per tube (4 tubes)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	28 days	QTBKIT

CPT Code Information: 86480

TBBS
9336

Quantitative Lymphocyte Subsets: T, B, and Natural Killer (NK) Cells, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	52 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355; 86357; 86359; 86360;

TBNK
800295

Quantitative Lymphocyte Subsets: T, B, and NK, Blood

Specimen Requirements: For serial monitoring, it is recommended that specimen collection be performed at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355-B cells, total count; 86357-Natural killer (NK) cells, total count; 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio;

QPALM
82863

Queen Palm, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FQUET
91727

Quetiapine (Seroquel)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

QUIN
8302

Quinidine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 80194

FQUIN
57922

Quinoa (Chenopodium quinoa) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

REPII
82782

Rabbit Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RAMB
82860

Rabbit Meat, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RSER
82544

Rabbit Serum Proteins, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RUPR
82148

Rabbit Urine Proteins, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FRFIT
90330

Rabies Antibody Endpoint

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), Spin down and send 2 mL of serum refrigerated in a plastic vial. Note: 1. Serum gel tube is acceptable, but must be poured off into plastic vial. 2. Collection date is required.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days

CPT Code Information: 86382

FRAD
57933

Radish (*Raphanus sativus*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

RASE
82366

Rape Seed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RWEED Rape Weed, IgE, Serum 82616

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

B RTP Rapid Hereditary Breast Cancer Treatment Decision Panel, 619957 Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For information about testing patients who have received a bone marrow transplant, call 800-533-1710. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are

inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81432

MAL
9240

Rapid Malaria/Babesia Smear, Varies

Specimen Requirements: Both blood and slides are required. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Type: Blood films Slides: 2 Thin blood films and 2 thick blood films Container/Tube: Plastic slide container Collection Instructions: 1. Slides must be clean and grease-free. 2. Blood films should be made from fresh blood using fingerstick or drops of blood from needle following venipuncture. However, EDTA anticoagulated blood is also acceptable. 3. Prepare thin blood films as follows: a. Prepare 2 thin smears with a slide prep machine. OR b. Prepare a thin film with a "feathered edge" that is no more than a single cell thick. c. Allow the film to thoroughly air dry and then fix by briefly immersing in either absolute or 95% methyl alcohol. d. Allow to air dry after fixation. 4. Prepare thick blood films as follows: a. Place a large drop of blood (approximately the size of a dime and preferably from a fingerstick) on a slide. b. Using a corner of a second slide spread the drop in a circular motion while applying firm pressure to literally scratch the blood onto the carrier slide. This technique allows the blood to dry quickly and adhere well to the slide. Use approximately 20 circular sweeps with the second slide. The drop of blood should be about the size of a quarter when finished. c. Do not fix. Air dry thoroughly (approximately 45 minutes) before placing in transport container.

Specimen Minimum Volume: Blood: 0.5 mL Slides: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 87207

RPRT1
616863

Rapid Plasma Reagin (RPR) Screen with Reflex to Titer, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86592; 86593-Rapid Plasma Reagin Titer (if appropriate);

RPRT3
616970

Rapid Plasma Reagin (RPR) with Reflex to Treponema pallidum Particle Agglutination, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86592; 86593- (if appropriate); 86780- (if appropriate);

RRPRS
616866

Rapid Plasma Reagin Screen with Reflex to Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see SYPH1 / Syphilis IgG with Reflex, Enzyme Immunoassay, Serum Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86592-Rapid Plasma Reagin Screen; 86593-Rapid Plasma Reagin Titer (if appropriate); 86780-Syphilis Antibody by TP-PA (if appropriate);

RPRS
603261

Rapid Plasma Reagin Screen with Reflex, Serum

Specimen Requirements: Only available as a reflex test. For more information see SYPHT / Syphilis Total Antibody with Reflex, Serum. Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86593-Rapid Plasma Reagin Titer (if appropriate); 86780-Syphilis Antibody by TP-PA (if appropriate);

RPRT2
616865

Rapid Plasma Reagin Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see RPRT1 / Rapid Plasma Reagin (RPR) Screen with Reflex to Titer, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86593

RPDEI
620377

Rapidly Progressive Dementia Evaluation Interpretation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	BlueTop SARSTEDT
	Refrigerated	14 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

RPDE
620376

Rapidly Progressive Dementia Evaluation, Spinal Fluid

Specimen Requirements: Supplies: CJD/RPD Evaluation Kit (T966) Container/Tube: Preferred: 2 Sarstedt CSF False Bottom Tubes 63.614.625 (2.5 mL) Acceptable: Sarstedt 72.703.600 (1.5 mL) or Sarstedt 72.694.600 (2 mL) Specimen Volume: 2 tubes; each containing 1.5 to 2.5 mL Collection Instructions: 1. Perform lumbar puncture and discard the first 1 to 2 mL of cerebrospinal fluid (CSF). 2. Collect two tubes of CSF directly into an acceptable collection tube until the tube is at least 50% full. 3. Send CSF specimen in original collection tube. Do not aliquot. Note: Polystyrene collection tubes are not acceptable. Exposure of CSF to polystyrene tubes may result in falsely low Abeta42 concentrations. The Alzheimer's Association consensus protocol for handling of CSF for clinical measurements of Abeta42 and tau recommends using the drip method for CSF collection and directly collecting into a low-bind polypropylene tube. Although some clinicians prefer the syringe pull method due to speed of collection, the drip method reduces the risk of Abeta42 binding to the plastic of any syringe used. 4. Collection instructions can also be found on Spinal Fluid Specimen Collection Instructions for Creutzfeldt-Jakob Disease and Rapidly Progressive Dementia Evaluations (T974).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	BlueTop SARSTEDT
	Refrigerated	14 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CPT Code Information: 84999; 82234; 84393; 84394;

RSBV
621403

Rare Subepithelial Autoimmune Blistering Disease Variants, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 86255

FRASP
57665

Raspberry IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

RASP
86305

Raspberry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RAT
82725

Rat Epithelium, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RTSP
82793

Rat Serum Protein, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RTUP
82794

Rat Urine Protein, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RAVMP
618645

Ravulizumab Monitoring Panel, Serum

Specimen Requirements:

Specimen Minimum Volume: 1 mL in 2 plastic vials, each vial containing 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days
Serum Red	Frozen	14 days

CPT Code Information: 80299; 86161 ;

RAVU
609420

Ravulizumab, Serum**Specimen Requirements:**

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	28 days
	Ambient	28 days
	Refrigerated	28 days

CPT Code Information: 80299

NGSFX
65718

Reanalysis of Acute Myeloid Leukemia 4- or 11- Gene Panels, Additional Genes

Specimen Requirements: No additional specimen is required. This is a bioinformatics review of additional gene regions not analyzed in the previously ordered NGAMT / MayoComplete Acute Myeloid Leukemia, Therapeutic Gene Mutation Panel (FLT3, IDH1, IDH2, TP53), Next-Generation Sequencing, Varies or NGAML / MayoComplete Acute Myeloid Leukemia, 11-Gene Panel, Varies. Call 800-533-1710 for assistance with ordering.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	14 days

CPT Code Information: 81450

NCYB
618977

Recessive Congenital Methemoglobinemia, CYB5 and CYB5 Reductase Genetic Analysis, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

RCVBS
610009

Recoverin-IgG Antibody, Immunoblot, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 84182

EEEV1
607493

Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 12 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	11 days

CPT Code Information: 82955-G6PD Enzyme Activity; 84087-Glucose phosphate isomerase; 84220-Pyruvate Kinase Enzyme Activity; 82657-Hexokinase; 82657-Adenylate Kinase; 82657-Phosphofructokinase; 82657-Phosphoglycerate Kinase; 82657-Triosephosphate Isomerase; 82978-Glutathione ; 83915-Pyrimidine 5' Nucleotidase;

EEEEVI
608087

Red Blood Cell (RBC) Enzyme Interpretation

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	11 days

NENZ
619047

Red Blood Cell Enzyme Disorders Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

Red Blood Cell Membrane Disorders Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 81479; 81479 (if appropriate for government payers);

Red Blood Cell Membrane Evaluation, Blood

Specimen Requirements: A whole blood EDTA specimen, an EDTA shipping control specimen, and 2 well-made peripheral blood smears (Wright stained or fixed in absolute methanol) are required for testing. The shipping control is used to evaluate whether a patient result has been compromised by handling conditions such as temperature, motion, or other transportation interferences. Temperature and handling extremes can adversely impact the integrity of the specimen. Patient: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Refrigerate specimen immediately after collection. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Rubber band patient specimen and control vial together. Patient: Specimen Type: Slides Container/Tube: Blood smears Specimen Volume: 2 Well-made peripheral blood smears Collection Instructions: 1. Prepare 2 peripheral blood smears from the EDTA tube collected from the patient. 2. Either stain the smear with Wright stain or fix the smear with absolute methanol prior to shipping. Normal Shipping Control: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Collect a shipping control specimen from a normal (healthy), unrelated, nonsmoking person at the same time as the patient. 2. Clearly hand write "normal control" on the outermost label. 3. Refrigerate specimen immediately after collection. 4. Send control specimen in original tube. Do not aliquot. 5. Rubber band patient specimen and control vial together. The control and patient specimens must be handled in the same manner from specimen collection to receipt in the testing laboratory.

Specimen Minimum Volume: Patient whole blood, shipping control: 2 mL; Slides: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Control	Refrigerated	72 hours	PURPLE OR PINK TOP/EDTA
Whole Blood EDTA	Refrigerated	72 hours	
Whole Blood Slide	Refrigerated	CARTRIDGE	

CPT Code Information: 85557-Osmotic fragility; 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 85060-Morphology review;

FRSE
57939

Red Snapper (*Lutjanus spp*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

SORR
82737

Red Sorrel, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

REDT
82901

Red Top, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

URED
607696

Reducing Substance, Feces

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz Random (T288)
Container/Tube: Fecal container Specimen Volume: 3 g Collection Instructions: 1. Collect a loose, unpreserved, random fecal specimen. 2. Freeze immediately. Additional Information: If additional tests are ordered, aliquot and separate sample prior to freezing to allow 1 container per test.

Specimen Minimum Volume: 2 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen	7 days

CPT Code Information: 84376

RBCS
36440

Relative B-Cell Subset Analysis Percentage, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: < or =14 years: 4 mL >14 years: 10 mL Collection Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood for RBCS. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: < or =14 years: 3 mL; >14 years: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x7

TFEBF
64973

Renal Cell Carcinoma, 6p21.1 (TFEB) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 4 Consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

RFAMA
113634

Renal Function Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	24 hours

CPT Code Information: KS: 84132; NAS: 84295; CL: 82435; HCO3: 82374; BUN: 84520; CRTS1: 82565; CA: 82310; GLURA: 82947; ALB: 82040; PHOS: 84100;

RPCWT
70591

Renal Pathology Consultation, Wet Tissue

Specimen Requirements: Specimen Type: Kidney biopsy Supplies: Renal Biopsy Kit (T231) Specimen Volume: Entire specimen Collection Instructions: Collect and prepare biopsy specimens per instructions in Renal Biopsy Preparation Instructions. Additional Information: On Saturdays and holidays, RUSH (same day as receipt) interpretation is available for clinically emergent cases (eg, acute kidney failure, rapidly progressive glomerulonephritis, acute kidney allograft dysfunction) but requires advanced notification and approval by a Mayo Clinic Renal Pathologist (507-284-5677). To request RUSH service outside of regular business hours, contact Mayo Clinic Laboratories at 800-533-1710.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Kidney Biopsy	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88305 (If appropriate); 88348 (If appropriate); 88313 (If appropriate); 88346 (If appropriate); 88350 (If appropriate);

RFCWT
620415

Renal Pathology Tissue Consultation, Wet Tissue

Specimen Requirements: Specimen Type: Tissue Supplies: Renal Biopsy Kit (T968) Source: Kidney Specimen Volume: Entire specimen Collection Instructions: Collect specimens according to the instructions in Renal Biopsy Preparation Instructions. Additional Information: Rush (same day as

receipt) interpretation is available on Saturday and holidays for clinically emergent cases (eg, acute kidney failure, rapidly progressive glomerulonephritis, acute kidney allograft dysfunction) but requires advanced notification and approval by a Mayo Clinic Renal Pathologist 904-956-3318. To request RUSH service outside regular business hours, call 800-533-1710.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Kidney Biopsy	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88305 (If appropriate); 88348 (If appropriate); 88313 (If appropriate); 88346 (If appropriate); 88350 (If appropriate);

PRA
8060

Renin Activity, Plasma

Specimen Requirements: Patient Preparation: For 4 to 6 weeks before specimen collection, spironolactone (Aldactone) should be discontinued, as plasma renin activity cannot be interpreted if the patient is being treated with spironolactone. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Chilled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: 1. Draw blood in a chilled syringe from a patient in a seated position; place specimen in a chilled, 3-mL lavender-top (EDTA) tube and mix well. Alternatively, draw blood directly in a chilled, EDTA tube. 2. Immediately place EDTA tube into an ice-water bath until thoroughly cooled. 3. Immediately centrifuge using a refrigerated centrifuge and aliquot plasma into a plastic vial. Note: If a refrigerated centrifuge is unavailable, chill the centrifuge carriers before use. Centrifuge specimen for 5 minutes or less, then promptly aliquot plasma into a plastic vial. 4. Immediately freeze plasma.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 84244

RTSC
602185

Reptilase Time, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85635

RP
609409

Respiratory Panel, PCR, Nasopharyngeal

Specimen Requirements: Specimen Type: Nasopharyngeal swab Supplies: -Culture Swab - Liquid Stuarts/Single Swab (NP Swab) (T515) -M4-RT (T605) -Nasopharyngeal Swab (Nylon Mini-Tip Swab) (T861) Collection Container/Tube: Swab. See Additional Information for acceptable swab. Submission Container/Tube: Transport medium. See Additional Information for acceptable media. Specimen Volume: Nasopharyngeal swab in minimum volume of 1 mL of transport media Collection Instructions: 1. Nasopharyngeal swab specimens should be collected according to standard technique and immediately placed into transport media and submitted for testing. 2. Submit swab in original container. Additional Information: If any nasopharyngeal swab or transport media not listed below is utilized, testing may be canceled. -Acceptable nasopharyngeal (NP) swabs are Copan Rayon Swabs, Copan Nylon Flocked Swabs, Copan Polyester Swabs, Puritan Calcium Alginate Swabs, SteriFlock NP Swab -Acceptable transport media are Remel M4, Remel M4-RT, Remel M5, Remel M6, BD Universal Viral Transport Media (VTM), Copan Universal Transport Media (UTM), PrimeStore Molecular Transport Medium (MTM) -Acceptable collection and transport systems are Sigma-Virocult Viral Collection and Transport System (Swab and transport medium), Copan ESwab Sample Collection and Delivery System (Swab and Liquid Amies Medium), and BD ESwab Collection Kit (Flocked swab and Liquid Amies Medium).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	72 hours
	Frozen	30 days
	Ambient	4 hours

CPT Code Information: 0202U

RPB
616389

Respiratory Panel, PCR, Varies

Specimen Requirements: Specimen Type: Respiratory fluid Sources: Bronchoalveolar lavage (BAL) or bronchial washing Collection Container/Tube: Sterile container Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	72 hours
	Frozen	30 days
	Ambient	4 hours

CPT Code Information: 0202U

RPR1
62046

Respiratory Profile, Region 1, North Atlantic (CT, MA, ME, NJ, NH, NY, PA, RI, VT), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785; 86003 x 25;

RPR10
62056

Respiratory Profile, Region 10, Southwestern Grasslands (OK, TX), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.55 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785; 86003 x 25 ;

RPR11
62057

Respiratory Profile, Region 11, Rocky Mountain (AZ [Mt]; CO; ID [Mt]; NM, UT [Mt]; WY), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 24-Each individual allergen;

RPR12
62058

Respiratory Profile, Region 12, Arid Southwest (Southern AZ Desert, Southern CA Desert), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR13
62059

Respiratory Profile, Region 13, Southern Coastal California, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 24-Each individual allergen;

RPR14
62060

Respiratory Profile, Region 14, Central California, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR15
62061

Respiratory Profile, Region 15, Intermountain West (Southern ID, NV), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge

and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR16
62062

Respiratory Profile, Region 16, Inland Northwest (OR, Central and Eastern WA), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 21-Each individual allergen;

RPR17
62063

Respiratory Profile, Region 17, Pacific Northwest (Northwestern CA, Western OR, WA), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR18 62064

Respiratory Profile, Region 18, Alaska, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 15-Each individual allergen;

RPR19 62065

Respiratory Profile, Region 19, Puerto Rico, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 21-Each individual allergen;

RPR2
62047

Respiratory Profile, Region 2, Mid-Atlantic (DC, DE, MD, NC, VA), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR3
62048

Respiratory Profile, Region 3, South Atlantic (GA, N.FA, SC), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR4
62049

Respiratory Profile, Region 4, Sub-tropic Florida (Florida S. of Orlando), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR5
62050

Respiratory Profile, Region 5, Ohio Valley (IN, KY, OH, TN, WV), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 26-Each individual allergen ;

RPR6
62051

Respiratory Profile, Region 6, South Central (AL, AR, LA, MS), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen ;

RPR7
62052

Respiratory Profile, Region 7, Northern Midwest (MI, MN, WI), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR8
62053

Respiratory Profile, Region 8, Central Midwest (IA, IL, MO), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.55 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 25-Each individual allergen ;

RPR9
62054

Respiratory Profile, Region 9, Great Plains (KS, ND, NE, SD), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RSVAB
601948

Respiratory Syncytial Virus (RSV) In Situ Hybridization, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -4 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88365-TC, Primary; 88364-TC, if additional ISH;

FRSVQ
75669

Respiratory Syncytial Virus (RSV) RNA, Qualitative Real-Time PCR

Specimen Requirements: Specimen Type: Bronchoalveolar lavage or bronchial wash Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect in a sterile

leak-proof container (no media or preservative). Ship refrigerated. Note: Specimen type is required.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 87634

**RET
616856**

Reticulocyte Profile, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	48 hours
	Ambient	24 hours

CPT Code Information: 85046

**RTIC
9108**

Reticulocytes, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	48 hours
	Ambient	24 hours

CPT Code Information: 85045

RB1
604028

Retinoblastoma Protein (Rb) Immunostain, Tech Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FRBP
75570

Retinol Binding Protein

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top/SST acceptable Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial. Required: Fasting for at least 12 hours.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	20 days
	Frozen	180 days

CPT Code Information: 83883

RB24
609449

Retinol-Binding Protein, 24 Hour, Urine

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL
Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Mix well before taking 5-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83883

RBR
610010

Retinol-Binding Protein, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83883-Retinol -Binding Protein, Random, U; 82570-Creatinine, Random, U;

RAPAN
616785

Rheumatoid Arthritis Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86200; 86431;

RFPN
621421

Rheumatoid Factor Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 86431 x2

RHUT
603415

Rheumatoid Factor, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 86431

RHNI
82856

Rhizopus nigricans, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FRDG
57959

Rhodotorula IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen
Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is
acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FRUB
57920

Rhubarb (Rheum raphonticum) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume:
0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

VITB2
42363

Riboflavin (Vitamin B2), Plasma

Specimen Requirements: Patient Preparation: Fasting-overnight (12-14 hours) (infants-collect specimen prior to next feeding) Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: Light-green top (sodium or lithium heparin plasma gel) Submission Container/Tube: Amber vial Specimen Volume: 2 mL Collection Instructions: Centrifuge within 2 hours of collection and aliquot plasma into amber vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Refrigerated (preferred)	28 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 84252

RIB
87837

Ribosome P Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

FRICE
57633

Rice IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

RICE
82709

Rice, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FRIFA
75628

Rifampin Level (PKRIF)

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	365 days

CPT Code Information: 80299

RISAP
621813

Risankizumab Quantitation with Antibodies, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. Within 2 hours of collection, centrifuge, and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80299; 82397;

RISA
621304

Risankizumab, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood immediately before the next scheduled dose (trough specimen). 2. Within 2 hours of collection, centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

ROMA2 46917

Risk Score, if Postmenopausal, Serum

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	84 days
	Refrigerated	48 hours

ROMA1 46916

Risk Score, if Premenopausal, Serum

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	84 days
	Refrigerated	48 hours

FRISP 91105

Risperidone (Risperdal) and 9-Hydroxyrisperidone

Specimen Requirements: Submit only 1 of the following specimens: Plasma Specimen Type: Plasma (Preferred) Container/Tube: Green-top (sodium heparin) tube(s). Specimen volume: 3 mL Collection Instructions: Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum

Specimen Type: Serum Container/Tube: Red-top tube, serum gel is not acceptable. Specimen volume: 3 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

RIVAR
65847

Rivaroxaban, Anti-Xa, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	42 days

CPT Code Information: 80299

RNAP
83397

RNA Polymerase III Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

RNP
81357

RNP Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235

ROPAN
615248

Ro52 and Ro60 Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	21 days

CPT Code Information: 86235 x 2

RO52
615246**Ro52 Antibody, IgG, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	21 days

CPT Code Information: 86235

RO60
615247**Ro60 Antibody, IgG, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	21 days

CPT Code Information: 86235

ROMA
62661**ROMA Score (Ovarian Malignancy Risk Algorithm), Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	84 days
	Refrigerated	48 hours

CPT Code Information: 86305-HE4, S; 86304-Cancer Ag 125 (CA 125), S;

FROPI
57171

Ropivacaine, Serum/Plasma

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL serum refrigerate in a plastic vial. Plasma Draw blood in a lavender-top (EDTA) or pink top tube(s). (Plasma gel tube is not acceptable.) Spin down and send 1 mL plasma refrigerate in plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	30 days
	Frozen	90 days
	Ambient	30 days

CPT Code Information: 80299

ROTA
8886

Rotavirus Antigen, Feces

Specimen Requirements: Specimen Type: Fresh unpreserved feces Supplies: Stool Collection Kit, Random (T635) Container/Tube: Preferred: Sterile fecal container Acceptable: Swab Specimen Volume: 5 to 10 grams Collection Instructions: Place specimen in a tightly sealed plastic bag.

Specimen Minimum Volume: 1 gram

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Frozen (preferred)	7 days
	Refrigerated	72 hours

CPT Code Information: 87425

MARS
82701

Rough Marsh Elder, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RRRP
82723

Rough Pigweed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RBPG
34938

Rubella Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Instructions: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86762

ROC
5194

Rubeola (Measles) Antibodies, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.25 mL Collection Instructions: Submit specimen from collection vial number 2 (preferred), 3, or 4.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86765 x 2

RUFI
63030

Rufinamide, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect blood immediately before next scheduled dose. 2. For sustained-release formulations ONLY, collect blood a minimum of 12 hours after last dose. 3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80210

T821Q
615905

RUNX1-RUNX1T1 Translocation (8;21), Minimal Residual Disease Monitoring, Quantitative, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow aspirate Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Peripheral blood: 8 mL Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	5 days
	Ambient	72 hours

CPT Code Information: 81401

RUSS
82681

Russian Thistle, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FRFYG**
57579**Rye Food IgG**

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
 Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001**RYEG**
82908**Rye Grass, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

RYE
82689

Rye, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

2SC
610031

S-(2-Succinyl)-Cysteine (2SC) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

S100
70547

S-100 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

F100B
57349

S-100B Protein, Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s). Serum gel tube is acceptable. Allow specimen to clot at room temperature. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days
	Ambient	24 hours

CPT Code Information: 86316

SSCTU
607001

S-Sulfocysteine Panel, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 3 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	90 days

CPT Code Information: 82542

SCERA
610002

Saccharomyces cerevisiae Antibody, IgA, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86671

SCERG
610003

Saccharomyces cerevisiae Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86671

FSFLE
57541

Safflower (*Carthamus tinctorius*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FSAG
57957

Sage (*Artemisia spp.*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

SALCA
37061

Salicylate, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80179

SALL4
71534

SALL4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSALG
57631

Salmon IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

SALM
82754

Salmon, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SALMC
606220

Salmonella Culture, Feces

Specimen Requirements: Patient Preparation: Patient should not use barium or bismuth for 7 to 10 days before specimen collection. Supplies: Culture and Sensitivity Stool Transport Vial (T058)
Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen
Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Salmonella Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 1-3-Serologic Agglut Method 1 Ident (if appropriate) ; 87077-Ident by MALDI-TOF mass spec (if appropriate);

HEXBZ
608026

Sandhoff Disease, HEXB Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

SARCP
606427

Sarcoma Targeted Gene Fusion/Rearrangement Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 10% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: FFPE Tissue Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Specimen Type: Cytology slide (direct smears or ThinPrep) Slide: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81456; 88381;

SARD
82818

Sardine (Pilchard), IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top

Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SATB2
607600

SATB2 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

C5B9
616921

SC5b-9 Level Terminal Complement Complex, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 86160

SCLE 82716

Scale, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SCALS 82259

Scallop, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SHUR
60451

Schistosoma Exam, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. Preferred time of collection between the hours of 12 noon and 3 p.m. but not required. A 24-hour urine collection is also acceptable. 2. No preservative.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated	7 days

CPT Code Information: 87210; 87015;

BILHA
65019

Schistosoma species Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86682

SCL70
80178

Scl 70 Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235

FSCPR
75625

Scleroderma Comprehensive Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL (volume does not allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 86038; 83516; 86235 x 5; 86256;

FSCN4
75263

SCN4A (Myotonia) DNA Sequencing Test

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube(s) and send 8 mL of whole blood. Ship Ambient. Note: Collection date and informed consent are required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Ambient (preferred)	10 days
	Refrigerated	10 days

CPT Code Information: 81406

SDH Genes Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81404; 81405 x2; 81406; 81479 (if appropriate for government payers);

SDHB Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SEAFP
31770

Seafood Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 5

SEAS
31766

Seasonal Inhalants Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge
and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 10

SECOS
8243

Secobarbital, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial
Specimen Volume: 1.5 mL Collection Instructions: 1. Collect specimen immediately before next
scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80299

FSHPU
58038

Sedative Hypnotic Panel, Urine

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80307

SEWB
65600

Selenium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 0.8 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 84255

SES
9765**Selenium, Serum****Specimen Requirements:**

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 84255

SEMA3
617055**Semaphorin 3B (SEMA3B) Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SEMB
60556

Semen Analysis with Strict Morphology, Semen

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Semen	Ambient	36 hours

CPT Code Information: 89310-Semen Analysis; 89398-Strict Criteria Sperm Morphology; If both components performed,; 89322-Semen Analysis with Strict Morphology;

FER
81641

Semen Analysis, Semen

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Semen	Ambient	

CPT Code Information: 89310

SMFL
82858

Seminal Fluid, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SP5CS 615869

Septin-5 Antibody, Cell Binding Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

SP5CC 615868

Septin-5 Antibody, Cell-Binding Assay, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid. Container/Tube: Sterile vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

SP5TS
616113

Septin-5 Antibody, Tissue Immunofluorescence Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

SP5TC
616114

Septin-5 Antibody, Tissue Immunofluorescence, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid. Container/Tube: Sterile vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

SP7CS
615873

Septin-7 Antibody, Cell-Binding Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -ENS2 /

Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

SP7CC
615872

Septin-7 Antibody, Cell-Binding Assay, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -ENC2 / Encephalopathy, Autoimmune /Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune /Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

SP7TS
616115

Septin-7 Antibody, Tissue Immunofluorescence Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: -ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum -MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum -MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

SP7TC
616116

Septin-7 Antibody, Tissue Immunofluorescence Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: -ENC2 / Encephalopathy, Autoimmune /Paraneoplastic Evaluation, Spinal Fluid -MDC2 / Movement Disorder, Autoimmune /Paraneoplastic Evaluation, Spinal Fluid -MAC1 / Autoimmune Myelopathy /Paraneoplastic Evaluation, Spinal Fluid Container/Tube: Sterile vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

SEP9Z
617714

SEPTIN9 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: None Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and

concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 µL at a concentration of 75 ng/µL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81479

FSERO
75621

SeroNeg RAdx3 Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	60 days
	Ambient	7 days

CPT Code Information: 83520; 83516 x2;

SRAU
616216

Serotonin Release Assay, Unfractionated Heparin, Mass Spectrometry, Serum

Specimen Requirements: Patient Preparation: 1. Specimen should be collected from a fasting (preferred, but not required) patient during an episode of suspected heparin-induced thrombocytopenia. 2. Patient should not be on ticagrelor (Brilinta) as this may interfere with the assay, yielding a false-negative result. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. After collection, specimen should sit at ambient temperature for a minimum of 1 hour in order to clot completely. 2. Centrifuge and aliquot serum into a plastic vial. Specimen Stability Information: Frozen (preferred) 2 years/Refrigerate 7 days

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	
	Refrigerated	7 days

CPT Code Information: 82542

SERU
87834

Serotonin, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Patients should not eat avocados, bananas, butternuts, cantaloupe, dates, eggplant, grapefruit, hickory nuts, honeydew melon, kiwifruit, melon, nuts, pecans, pineapple, plantains, plums, tomatoes, or walnuts, which are high in serotonin for 48 hours before and during collection. 2. Patient should discontinue medications that may elevate urine serotonin concentration including lithium, monoamine oxidase-inhibitors, methyldopa, morphine, and reserpine. Patient should also discontinue use of selective serotonin reuptake inhibitors (SSRI; eg, PROZAC) that can lead to depletion of platelet serotonin levels and result in false-negative urine serotonin tests. 3. Patient should avoid heavy nicotine consumption during the 24-hour collection period. Supplies: Urine Tubes, 10mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. 2. Collect urine for a full 24 hours (required) and record the total volume. 3. Refrigerate specimen during collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 84260

SERWB
84373

Serotonin, Blood

Specimen Requirements: Patient Preparation: 1. Patients should not eat avocados, bananas, butternuts, cantaloupe, dates, eggplant, grapefruit, hickory nuts, honeydew melon, kiwifruit, melon, nuts, pecans, pineapple, plantains, plums, tomatoes, or walnuts, which are high in serotonin for 48 hours before and during collection. 2. Patient should discontinue medications that may elevate urine serotonin concentration including lithium, monoamine oxidase inhibitors, methyldopa, morphine, and reserpine. Patient should also discontinue use of selective serotonin reuptake inhibitors (SSRI, eg, PROZAC), which can lead to depletion of platelet serotonin levels and result in false-negative serotonin results. Supplies: Serotonin Tube (T259) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Serotonin tube containing ascorbic acid Specimen Volume: 2.5 mL Collection Instructions: 1. Immediately after collection, transfer approximately 2.5 mL of whole blood to the serotonin tube and mix well (any volume of whole blood from 1.5-3 mL is acceptable). 2. Immediately freeze specimen (necessary to lyse the red blood cells).

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Frozen	90 days	SEROTONIN TUBE

CPT Code Information: 84260

SER
84395

Serotonin, Serum

Specimen Requirements: Patient Preparation: 1. Patients should not eat avocados, bananas, butternuts, cantaloupe, dates, eggplant, grapefruit, hickory nuts, honeydew melon, kiwifruit, melon, nuts, pecans, pineapple, plantains, plums, tomatoes, or walnuts, which are high in serotonin for 48 hours before and during collection. 2. Patient should discontinue medications that may elevate urine serotonin concentration including lithium, monoamine oxidase inhibitors, methyldopa, morphine, and reserpine. Patient should discontinue use of selective serotonin reuptake inhibitors (SSRI eg, PROZAC), which can lead to depletion of platelet serotonin levels and result in false-negative serotonin results. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge as soon as blood has clotted and aliquot serum into plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	90 days
	Ambient	4 days

CPT Code Information: 84260

SERPZ
63128

SERPINA1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	
	Frozen	

CPT Code Information: 81479

FSERT
91345

Sertraline (Zoloft) and Desmethylsertraline

Specimen Requirements: Submit only 1 of the following specimens: Plasma Specimen Type: Plasma Container/Tube: Green Top Specimen Volume: 2 mL Collection Instructions: Draw blood in a green-top (sodium heparin) tube, plasma gel tube is not acceptable. Spin down and send 2 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Specimen Type: Serum Container/Tube: Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube, serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80332**FSESG**
57682**Sesame Seed IgG**

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
 Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001**SESA**
82728**Sesame Seed, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SESPF
621157

Sesame Seed, IgE, with Reflex to Sesame Seed Component, IgE, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SCOF3
622027

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2) and Influenza Virus Type A and Type B RNA, Molecular Detection, PCR, Varies

Specimen Requirements: Preferred: Specimen Type: Nasopharyngeal swab Container/Tube: Sterile container with viral transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed into viral transport media (eg, M4-RT, M4 or M5), saline, or phosphate buffered saline (PBS). Media should not contain guanidine thiocyanate (GTC). Specimen Type: Bronchoalveolar lavage fluid Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media. Acceptable: Specimen Types: Oropharyngeal (throat) swab, nasal mid-turbinate, or nares/nasal swab Supplies: -Culturette (BBL Culture Swab) (T092) -Mid Turbinate (MT) Swab (FLOQSwab/COPAN) (T864) -Swab, Sterile Polyester (T507) Container/Tube: Sterile container with transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Preferred: BBL Culture Swab, COPAN Mid-turbinate Swab Acceptable: Dacron-tipped swab with plastic handle Collection Instructions: Swab must be placed into viral transport media (eg, M4-RT, M4, or M5), saline, or PBS. Media should not contain guanidine thiocyanate (GTC). Specimen Types: Bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional

Information: Do not aliquot into viral transport media.

Specimen Minimum Volume: Upper respiratory tract swab: See Specimen Required; lower respiratory specimens: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: 87636

SFRB
617492

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2), Influenza A and B, and Respiratory Syncytial Virus, Molecular Detection, Bronchoalveolar Lavage

Specimen Requirements: Source: Bronchoalveolar lavage (BAL) Container/Tube: Sterile container Specimen Volume: 1 mL Additional Information: Do not aliquot into viral transport medium.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Bronchoalveolar Lavage	Refrigerated (preferred)	72 hours
	Ambient	24 hours

CPT Code Information: 0241U

SCOF4
622031

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2), Influenza Virus Type A and Type B RNA, and Respiratory Syncytial Virus (RSV) Molecular Detection, PCR, Varies

Specimen Requirements: Preferred: Specimen Type: Nasopharyngeal swab Container/Tube: Sterile container with transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed into viral transport media (eg, M4-RT, M4 or M5), saline, or phosphate buffered saline (PBS). Media should not

contain guanidine thiocyanate (GTC). Specimen Type: Bronchoalveolar lavage fluid Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media. Acceptable: Specimen Type: Oropharyngeal (throat) swab, nasal mid-turbinate, or nares/nasal swab Supplies: -Culturette (BBL Culture Swab) (T092) -Mid Turbinate (MT) Swab (FLOQSwab/COPAN) (T864) -Swab, Sterile Polyester (T507) Container/Tube: Sterile container with transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Preferred: BBL Culture Swab, COPAN Mid-turbinate Swab Acceptable: Dacron-tipped swab with plastic handle Collection Instructions: Swab must be placed into viral transport media (eg, M4-RT, M4, or M5), saline, or PBS. Media should not contain guanidine thiocyanate (GTC). Specimen Type: Bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media.

Specimen Minimum Volume: Upper respiratory tract swab: See Specimen Required; lower respiratory specimens: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: 87637

HPCOV
614020

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2), Molecular Detection, Varies

Specimen Requirements: Preferred: Specimen Type: Nasopharyngeal swab Container/Tube: Sterile container with viral transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed into viral transport media (eg, M4-RT, M4 or M5), saline, or phosphate buffered saline (PBS). Media should not contain guanidine thiocyanate (GTC). Specimen Type: Bronchoalveolar lavage fluid Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media. Acceptable: Specimen Type: Oropharyngeal (throat) swab, nasal mid-turbinate, or nares/nasal swab Supplies: -Culturette (BBL Culture Swab) (T092) -Mid Turbinate (MT) Swab (FLOQSwab/COPAN) (T864) -Swab, Sterile Polyester (T507) Container/Tube: Sterile container with transport media Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Preferred: BBL Culture Swab, COPAN Mid-turbinate Swab Acceptable: Dacron-tipped swab with plastic handle Collection Instructions: Swab must be placed into viral transport media (eg, M4-RT, M4, or M5), saline, or PBS. Media should not contain guanidine thiocyanate (GTC). Specimen Type: Bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: 0.6 mL Additional Information: Do not aliquot into viral transport media.

Specimen Minimum Volume: Upper respiratory tract swab: See Specimen Required; lower respiratory specimens: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: 87635

RSARS
609414

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS CoV-2), Molecular Detection, Varies

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	72 hours

CPT Code Information: 87635

COVID
608874

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA Detection, PCR, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP ie, throat), nasal mid-turbinate, or nares/nasal swab (Endotracheal aspirate and sputum specimens are not acceptable) Supplies: -Swab, Sterile Polyester, 10 per package (T507) -Dacron-tipped swab with plastic shaft is acceptable Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5) Media should not contain guanidine thiocyanate (GTC). Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only one swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media. Specimen Type: Nasopharyngeal aspirate or nasal washings Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps. Specimen Type: Lower respiratory tract Sources: Bronchoalveolar lavage (BAL) fluid, bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: 87635

CVOOA
610435

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA Detection, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP; ie, throat).
Supplies: Swab, Sterile Polyester (T507) Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5) Media should not contain guanidine thiocyanate (GTC). For more information on acceptable transport media, see <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2>
Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media.
Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. For more information on OP swab specimen collection, see COVID-19 Oropharyngeal Collection Instructions in Special Instructions. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only one swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media.
Specimen Type: Lower respiratory tract Sources: Bronchoalveolar lavage (BAL) fluid, bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: Minimum of 2.2 mL Additional Information: Do not aliquot into viral transport media glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: 87635

COVTA
622465

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), Nucleocapsid, Total Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial

Specimen Volume: 0.6 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 86769

SCOV
610689

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), RNA Detection, ddPCR, Tissue

Specimen Requirements: Specimen Type: Formalin-fixed, paraffin-embedded tissue. Sources: Lung tissue, sputum (cell block), tracheal aspirate (cell block), bronchoalveolar fluid (cell block), cardiac tissue, brain tissue, kidney tissue, other Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 5 unstained Collection Instructions: Submit 5 unstained, non-baked slides with 10-micron thick sections of tissue, preferably along with an Hematoxylin and Eosin slide (not required). Acceptable: Specimen Type: Tissue Container/Tube: Scrolls Specimen Volume: 5 scrolls Collection Instructions: Submit 5 scrolls of FFPE tissue cut at 10 microns thick, preferably along with an H&E slide (not required).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87635

COVSQ
622462

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), Spike Antibody, Semi-Quantitative, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection

Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86769

SCIDP
620134

Severe Combined Immunodeficiency (SCID) Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate);

88240- Cryopreservation (if appropriate);

SCCNP
619872

Severe Congenital and Cyclic Neutropenia Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

SCTF
35843

Sex Chromosome Determination, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin (H and E)-stained slide.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

SHBG1 608102

Sex Hormone-Binding Globulin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 84270

SRYF 35301

Sex-Determining Region Y, Yp11.3 Deletion, FISH

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 to 25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. If ordering with CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, submit a minimum of 12 mL. 4. If ordering with CHRAF / Chromosome Analysis, Amniotic Fluid, submit a minimum of 12 mL. 5. If ordering with both CMAP and CHRAF, submit a minimum of 26 mL. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 4. Specimen cannot be frozen. Specimen Type: Autopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's

balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Whole blood Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 4 mL Collection Instructions 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Other anticoagulants are not recommended and are harmful to the viability of the cells. 4. Cord blood is acceptable Additional Information: 1. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 2. Specimen cannot be frozen. Specimen Type: Chorionic villus Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 to 25 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Fixed cell pellet Container/Tube: Sterile container with a 3:1 fixative (methanol:glacial acetic acid) Specimen Volume: Entire specimen Specimen Type: Products of conception or stillbirth Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 1 cm³ of placenta (including 20-mg of chorionic villi) and a 1-cm³ biopsy specimen of muscle/fascia from the thigh Collection Instructions: If a fetus cannot be specifically identified, collect villus material or tissue that appears to be of fetal origin. Additional Information: Do not send entire fetus. Specimen Type: Skin biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: Amniotic fluid: 5 mL; Autopsy, skin biopsy: 4 mm; Whole blood: 2 mL; Chorionic villi: 5 mg; Fixed cell pellet: 1 pellet

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution A or B)
Acceptable: Lavender top (EDTA), green top (sodium heparin) Specimen Volume: 6 mL Collection
Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88188-Flow Cytometry Interpretation, 9 to15 markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or more markers (if appropriate);

SZMON 64749

Sezary Monitoring Flow Cytometry, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution A or B)
Acceptable: Lavender top (EDTA), green top (sodium heparin) Specimen Volume: 6 mL Collection
Instructions: 1. Send whole blood specimen in original tube. Do not aliquot. 2. Label specimen as blood.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88188-Flow Cytometry Interpretation, 9 to15 markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or more markers (if appropriate);

SF1 72121

SF-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SHWL
82747

Sheep Wool, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

STFRP
35148

Shiga Toxin, Molecular Detection, PCR, Feces

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by shiga toxin DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Specimen Stability Information: Ambient (preferred) <7 days/Refrigerated <7 days Acceptable: Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz Random (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit representative sample in fecal container. Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies	7 days

CPT Code Information: 87798**SHIGC**
606221**Shigella Culture, Feces**

Specimen Requirements: Patient Preparation: The patient should not use antacids, barium, bismuth, antidiarrheal medication, or oily laxatives before specimen collection. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Shigella Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

SQTSG
617463**Short QT Syndrome Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81403; 81406 x 2; 81479;

SRW
82667

Short Ragweed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PSRCH
620808

Short Renal Clearance, Iohexol, Preparation

CPT Code Information: 36415 x2-Blood; 81050 x3-Urine; 96372-Injection; Q9961-Contrast dye;

FSHRG
57542

Shrimp IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

SHRI
82677

Shrimp, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SAU
620916

Sialic Acid, Free and Total, Random, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 1 mL Pediatric Volume: 0.5 mL Collection Instructions: Collect a random urine specimen (early morning preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	90 days
	Frozen	90 days

CPT Code Information: 84275

SDEX
9180

Sickle Solubility, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B), green top (heparin) Specimen Volume: 1 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in the original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	14 days

CPT Code Information: 85660

STAT6
70554

Signal Transducer and Activator of Transcription 6 (STAT6), Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSILS
75690

Silicon, Serum

Specimen Requirements: ***Must submit one specimen per orders. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Plastic Royal Blue top tube (Trace metal-free; No additive) Specimen Volume: 2 mL Collection Instructions: Draw blood in a plastic, trace metal free, royal blue top, no additive tube(s). (Serum gel tube is not acceptable.) Promptly centrifuge and separate 2 mL into an acid washed plastic screw capped vial (T619). Ship refrigerated.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	Acid Washed Plastic (MML Supply T619)
	Ambient	14 days	Acid Washed Plastic (MML Supply T619)
	Frozen	14 days	Acid Washed Plastic (MML Supply T619)

CPT Code Information: 84285

BIR
82674

Silver Birch, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FSINS
75400

Sinemet, Serum

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. 2. Centrifuge and send 1 mL of serum frozen in a preservative-free plastic vial. Specimen must be frozen immediately, or results will be compromised.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen	6 days

CPT Code Information: 80299

SIIRO
35144

Sirolimus, Whole Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Draw blood immediately before a scheduled dose. 2. Do not centrifuge. 3. Send whole blood specimen in original tube. Do not aliquot. Additional Information: Therapeutic range applies to trough specimen collected immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80195

SMAD4
613980

SMAD4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SDDL
619974

Small Dense Low Density Lipoprotein Cholesterol, Serum

Specimen Requirements: Patient Preparation: Fasting overnight (8-12 hours) required Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial. 2. Send frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	72 hours
	Ambient	8 hours

CPT Code Information: 83722

SLL
65884

Small Lymphocytic Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable Specimen Type: Tissue slides Slides:1 Hematoxylin and eosin-stained (H and E) stained and 10 unstained Collection Instructions: Submit 1 slide stained with H and E and 10 consecutive, unstained, positively charged, unbaked slides with 5-micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin-stained and 6 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377-if 1 probe set; 88377 x 2-if 2 probe sets; 88377 x 3-if 3 probe sets; 88377 x 4-if 4 probe sets; 88377 x 5-if 5 probe sets; 88377 x 6-if 6 probe sets; 88377 x 7-if 7 probe sets; 88377 x 8-if 8 probe sets;

SM
81358

Smith (Sm) Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top

Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235

DHCRZ
608025

Smith Lemli Opitz Syndrome, DHCR7 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen

per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

SLO
81595

Smith-Lemli-Opitz Screen, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: Lavender top (EDTA), pearl white top (EDTA plasma gel), yellow top (ACD solution A or B) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge and aliquot plasma into plastic vial. 2. Send plasma frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	92 days
	Refrigerated	28 days
	Ambient	14 days

CPT Code Information: 82542

SMN1Z
65941

SMN1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient

(preferred)/Refrigerated <24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Supplies: Fibroblast Biopsy Transport Media (T115) Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin.). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Specimen Type: Blood spot Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800)

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3 punches 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81336; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

SMAS
609515

Smooth Muscle Antibody Screen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.8 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86015

SMAT
608956

Smooth Muscle Antibody Titer, Serum

Specimen Requirements: Only orderable as part of a reflex. For more information see SMAS / Smooth Muscle Antibody Screen, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86015

SMOTH
70552

Smoothelin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

SNAIL
82344

Snail, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**SOD1Z**
617740**SOD1 Gene, Full Gene Analysis, Varies****Specimen Requirements:****Specimen Minimum Volume:** See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404**NAU**
610734**Sodium, 24 Hour, Urine**

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84300

RNAUR
610785

Sodium, Random, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84300

NAS
602353

Sodium, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Ambient	14 days

CPT Code Information: 84295

SOLEF
86310

Sole, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum

Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FSFM
58015

Soluble Fibrin Monomer

Specimen Requirements: Draw 4.5 mL 3.2% Sodium Citrated whole blood. Spin down and send 1.5 mL of platelet-poor plasma frozen in plastic vial. STRICT FROZEN-Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85366

SOLFM
602175

Soluble Fibrin Monomer, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85366

FSLAA Soluble Liver Antigen (SLA) Autoantibody

57735

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	8 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 83520

STFR Soluble Transferrin Receptor (sTfR), Serum

84283

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	90 days
	Refrigerated	7 days
	Ambient	72 hours

CPT Code Information: 84238

SLC1Q
610061

Solute Carrier Organic Anion Transporter Family Member 1B1 (SLCO1B1) Genotype, Statin, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81328

FSOM1
75906

Somatostatin (Somatotropin Release-Inhibiting Factor, SRIF)

Specimen Requirements: Patient Preparation: 1. Patient should be fasting 10 to 12 hours prior to collection. 2. Patient should not be on any medications that affect insulin secretion or intestinal motility, if possible, for at least 48 hours prior to collection. Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Special ISI GI preservative plasma tube (T125) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge as soon as possible and aliquot 3 mL of plasma into a plastic vial. 2. Freeze plasma immediately after separation and ship frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	180 days
	Refrigerated	7 days

CPT Code Information: 84307

SOMAT Somatostatin Immunostain, Technical Component Only

70553

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SSTR2 Somatostatin Receptor 2 (SSTR2), Immunostain, Technical Component Only

113597

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SORBU
614934**Sorbitol and Mannitol, Quantitative, Random, Urine**

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 82542

SORD
620920**Sorbitol and Xylitol, Quantitative, Random, Urine**

Specimen Requirements: Supplies: Urine Tubes, 10mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative needed.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 82542

FSOTA
91123**Sotalol (Betapace)**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80299

SOX10 70555

SOX10 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SOX11 70556

SOX11 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSOYG
57551

Soybean IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FSYG4
57574

Soybean IgG4

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

SOY
82886

Soybean, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

PBC2
620736

SP100 and GP210 Antibodies, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.0 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516 x 2

SP100
620725

SP100 Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 83516

SPAGR
113392

Special Red Cell Antigen Typing, Whole Blood

Specimen Requirements: Container/Tube: Preferred: Pink top (EDTA) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Pediatric Volume: 3 mL Blood in pink-top or lavender-top (EDTA) tube Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Ambient	72 hours

CPT Code Information: 86905-Each red cell antigen typing (if more than one ordered)

SGUR
606565

Specific Gravity, Random, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

FSPNG
57678

Spinach IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood
in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a
plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

SPIN
86312

Spinach, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SMNCS
65574

**Spinal Muscular Atrophy Carrier Screening,
Deletion/Duplication Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an
allogenic donor will interfere with testing. Call Mayo Clinic Laboratories for instructions for testing
patients who have received a bone marrow transplant. Submit only 1 of the following specimens:
Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD)
Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to
mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability

Information: Ambient (preferred)/Refrigerated Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter paper) T493 Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation Instructions. Additional Information: Muscle Biopsy Shipping Kits (T541) are available. Specimen Volume: 10-80 mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Tissue Biopsy: 200 mg

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81329; 88233 (if appropriate); 88240 (if appropriate);

SMNDX
65575

Spinal Muscular Atrophy Diagnostic Assay, Deletion/Duplication Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure a minimum DNA amount and

concentration, the preferred blood volume must be submitted. Testing may be canceled if the specimen supplied is inadequate. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Preferred: Screw-capped, sterile centrifuge tubes Acceptable: T-25 flasks of confluent cultured cells Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: Preferred: 15-mL tube containing 15 mL of transport media Acceptable: T-25 flasks of confluent cultured cells Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Specimen Type: Blood spot Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Perkin Elmer 226 (formerly Ahlstrom 226) filter paper, or Blood Spot Collection Card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is a finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Amniotic Fluid: 10 mL Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81329; 88235 (if appropriate); 88240 (if appropriate); 88233 (if appropriate); 88240 (if appropriate); 81265 (if appropriate);

SBULB
35542

Spinobulbar Muscular Atrophy (Kennedy Disease), Molecular Analysis, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81204-AR (androgen receptor)(eg, spinal and bulba muscular atrophy, Kennedy disease, X chromosome inactivation) gene analysis; characterization of alleles (eg, expanded

size or methylation status)

SCAP
609505

Spinocerebellar Ataxia Repeat Expansion Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81178; 81179; 81180; 81181; 81184; 81479 (if appropriate for government payers);

SCARA
609698

Spinocerebellar Ataxia Type 1, 2, 3, 6, or 7, Repeat Expansion Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information:

Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Amniotic fluid: 10 mL Blood: 0.5 mL Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 88233-Fibroblast Culture (if appropriate); 88235-Amniotic Fluid Culture (if appropriate); 88240-Cryopreservation (if appropriate); 81265-Maternal Cell Contamination (if appropriate); 81178 (if appropriate); 81179 (if appropriate); 81180 (if appropriate); 81181 (if appropriate); 81184 (if appropriate);

SPIRO
619428

Spirochete Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: Formalin-fixed, paraffin-embedded tissue block Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SFGP
83679

Spotted Fever Group Antibody, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86757 x 2

SPRU
82394

Spruce, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SCCA
610033

Squamous Cell Carcinoma Antigen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL
Collection Information: Centrifuge and aliquot serum into a plastic vial. Do not submit in original tube.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum SST	Frozen (preferred)	90 days
	Ambient	7 days
	Refrigerated	7 days

CPT Code Information: 86316

SQUA
82797

Squash, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SQUID
82631

Squid, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SSAB
82403

SS-A and SS-B Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235 x 2

SSA
81360

SS-A/Ro Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235

SSB
81359

SS-B/La Antibodies, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86235

STLPC
83916

St. Louis Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86653 x 2

STLP
83154

St. Louis Encephalitis Antibody, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86653 x 2

FSTAB
57891

Stachybotrys chartarum/atra IgE

Specimen Requirements: Collection Container/Tube: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL of serum Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003**STRC**
83316**Standard Renal Clearance, Plasma and Random Urine**

Specimen Requirements: Contact MLI for approval prior to ordering this test. Both plasma and urine are required. Specimen Type: Plasma Container/Tube: 6-mL Green top (sodium heparin) Specimen Volume: 3-4 mL Collection Instructions: Label specimen as plasma. Specimen Type: Urine Container/Tube: Sarstedt 5 mL Aliquot Tube (T914) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine collection. 2. No preservative. 3. Label specimen as urine.

Specimen Minimum Volume: 2 mL plasma/5 mL urine**Transport Temperature:**

Specimen Type	Temperature	Time
Plasma Na Heparin	Refrigerated (preferred)	7 days
	Frozen	7 days
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 82542 x 7**STEM**
82696**Stemphyllium, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

STER
82079

Sterols, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: Lavender top (EDTA), pearl white top (EDTA plasma gel), yellow top (ACD solution A or B) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge specimen and aliquot plasma into plastic vial. 2. Send plasma frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	92 days
	Refrigerated	28 days
	Ambient	14 days

CPT Code Information: 82542

SPPS
614599

Stiff-Person Spectrum Disorders Evaluation, including Progressive Encephalomyelitis with Rigidity and Myoclonus, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 2; 86341; 0431U; 84182 (if appropriate); 86256 (if appropriate); 86256 (if appropriate);

SPPC
614600

Stiff-Person Spectrum Disorders Evaluation, including Progressive Encephalomyelitis with Rigidity and Myoclonus, Spinal Fluid

Specimen Requirements:

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255 x 2; 86341; 0431U; 84182 (if appropriate) 86256 (if appropriate); 86256 (if appropriate);

SPPCI
614602

Stiff-Person Spectrum Disorders including Progressive Encephalomyelitis with Rigidity and Myoclonus, Interpretation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

SPPSI
614601

Stiff-Person Spectrum Disorders, including Progressive Encephalomyelitis with Rigidity and Myoclonus, Interpretation, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

INSEC
31765

Stinging Insects Allergen Profile, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003 x 5

FSJIN
75919

STRATIFY JCV DxSelect Antibody Inhibition Assay

Specimen Requirements: Only orderable as a reflex. For more information see FSJCV / STRATIFY JCV Antibody (with Index) with Reflex to Inhibition Assay

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 86711

FSTBG
57656

Strawberry IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

STBY
82676

Strawberry, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SABP
86537

Streptococcal Antibodies Profile, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum

gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 86060; 86215;

GAPCR
610254

Streptococcus Group A, Molecular Detection, PCR, Throat

Specimen Requirements: Patient Preparation: Do not collect throat swab specimens immediately after use of antiseptic mouthwash. Specimen Type: Throat swab Supplies: BD E-Swab (T853) Container/Tube: Preferred: BD Liquid Amies Elution Swab (ESwab) Acceptable: Copan Liquid Amies Elution Swab (ESwab) Specimen Volume: Entire collection/1 ESwab Collection Instructions: 1. Must be collected and transported using the ESwab collection kit. 2. Using a tongue blade to hold the tongue down, firmly rub the swab over the tonsils, posterior pharynx, and any areas of inflammation with exudate. Ensure that areas with exudate or inflammation are swabbed. 3. Avoid the tongue, teeth, and gums as the swab is withdrawn. 4. Insert the swab back into the ESwab transport tube and break the swab at the indicated score line. 5. Label specimen according to policy. 6. Send refrigerated. Do not freeze.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	6 days
	Ambient	48 hours

CPT Code Information: 87651

SPNEU
83150

Streptococcus pneumoniae Antigen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Excessively bloody or very turbid specimens containing protein, cells, or particulates will be canceled, as they can inhibit the function of the test. 4. Do not centrifuge to remove particulates. 5.

Specimens with any dyes or unnatural color are not acceptable and will be canceled.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	24 hours

CPT Code Information: 87899

SPNC
89971

Streptococcus pneumoniae Antigen, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Submit specimen collected in vial 2, if possible. If not possible, note the vial from which the aliquot was obtained.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87899

PN23M
619921

Streptococcus pneumoniae IgG Antibodies, 23 Serotypes, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86581

PNT0
608969

Streptococcus pneumoniae IgG Antibodies, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86317

PNTOR
608970

Streptococcus pneumoniae IgG Antibodies, Total, with Reflex, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86317; 86317 x 23 (if appropriate);

MSTC
80749

Strict Criteria Sperm Morphology for Infertility Diagnosis and Treatment, Semen

Specimen Requirements: Container/Tube: Semen Analysis Kit (T178) Collection Instructions: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Specimen Volume: Total ejaculate

Specimen Minimum Volume: A minimum count is needed. Lab will determine.

Transport Temperature:

Specimen Type	Temperature	Time
Semen	Ambient	

CPT Code Information: 89398

MSTC1
35184

Strict Criteria Sperm Morphology for Infertility Diagnosis and Treatment, Semen

Specimen Requirements: Patient Preparation: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Container/Tube: Slides Specimen Volume: 2 slides-10 microL of liquefied semen on each slide Collection Instructions: 1. If sperm concentration is <10 million/mL, centrifuge the specimen at 300 x G for 10 minutes before making slides. 2 Label 2 frosted slides in pencil with the patient's first and last name and the date of specimen collection. No adhesive labels. 3. Allow the semen to liquefy for 30 minutes. 4. Place 10 mcL of liquefied semen on the label end of each slide, and evenly smear the specimen using a plain slide (this process is the same as making a blood smear). 5. Allow the smears to air dry for 15 minutes before placing both slides into 1 slide holder for shipment.

Specimen Minimum Volume: A minimum count of sperm is needed; lab will determine

Transport Temperature:

Specimen Type	Temperature	Time
Semen	Ambient	

CPT Code Information: 89398

STRNG
63866

Strongyloides Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial

Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86682

FSTYR
91094

Styrene, Occupational Exposure, Blood

Specimen Requirements: Collect 2 tubes green-top (sodium heparin) whole blood. Send 20 mL sodium heparin whole blood refrigerated. Collect specimen at end of shift or prior to next shift. Tubes should be filled to prevent loss of volatile compound into headspace.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
WB Sodium Heparin	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 84600

SUAC
83635

Succinylacetone, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood Spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tube containing EDTA and dried on filter paper. Specimen Volume: 2 blood spots Collection Instructions: 1. At least 1 spot should be complete (ie, unpunched). 2. Do not expose specimen to heat or direct sunlight. 3. Do not stack wet specimens. 4. Keep specimen dry. 5. If collection of a new specimen is necessary, let blood dry on the Blood Spot Collection Card (T493) at ambient temperature in a horizontal position for a minimum of 3 hours. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerated 14 days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable Specimen Type: Whole

Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate 6 days

Specimen Minimum Volume: Blood Spot: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 84510; 82542; 82542 (if appropriate for government payers);

SUDC
606930

Sudden Cardiac Death Pathology Consultation

Specimen Requirements: 1. The heart specimen is required for testing. 2. Send whole blood in addition to heart specimen, if available. Specimen Type: Heart specimen Supplies: -Pathology Packaging Kit (T554) -Ambient Shipping Box, 5 lb (T970) Specimen Volume: Entire specimen Collection Instructions: 1. Fix entire specimen in formalin for a minimum of 24 hours. 2. Following fixation, lightly wrap specimen in formalin-soaked paper towel, place in a leak-proof sealable bag with a small amount of formalin, seal, and ship ambient in a sturdy shipping container. Additional Information: Paraffin block may be accepted. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen.

Specimen Minimum Volume: Heart specimen: See Specimen Required; Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
SUDC Study Specimen	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 88037

FSCNE
57543

Sugar Cane (Saccharum officinarum) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain re-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

SBSE
82382

Sugarbeet Seed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SFZ
8238

Sulfamethoxazole, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Red top (gel tubes/SST are not acceptable) Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collection Instructions: 1. Serum for a peak level should be collected 60
minutes after dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

SULFU
606479

Sulfate, 24 Hour, Urine

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 84392

FSUAB
75230

Sulfatide Autoantibody Test

Specimen Requirements: Collection Container/Tube: 5 mL Red/Serum gel tube is also acceptable. Submission Container/Tube: Plastic vial Collection Instructions: 1. Draw blood in a plain, red-top tube(s), serum gel tube is acceptable. 2. Centrifuge and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	365 days
	Ambient	72 hours

CPT Code Information: 83520 x2 Immunoassay, analyte, quant; not otherwise specified

FSLFU
57710

Sulfonylurea Screen, Urine

Specimen Requirements: Collection Container: Plastic urine container Specimen Volume: 5 mL
Collection Instructions: Collect 5 mL random urine without preservative. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80377

FSUNG
57681

Sunflower Seed IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel
Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

SUNFS
82813

Sunflower Seed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top

Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SUNF
82615

Sunflower, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SUP24
616180

Supersaturation Profile, 24 Hour, Urine

Specimen Requirements: Patient Preparation: X-ray dyes and contrast media will affect uric acid test results. -If a kidney X-ray with dye or computerized tomography (CT) scan with contrast has been performed, patient should wait a minimum of 1 day before starting collection. -If a cholangiography (bile duct X-ray) has performed, patient should wait 7 days before starting collection. -Urine must be collected before tablets have been taken for gallbladder X-ray, otherwise patient should wait 7 days before starting collection. Supplies: Diazolidinyl Urea (Germall) 5.0 mL (T822) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 35 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea as preservative at start of collection or refrigerate specimen during and after

collection. 2. Collect urine for 24 hours. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if diazolidinyl urea is added at the beginning of the collection or kept refrigerated during the entirety of the collection. Specimens with pH above 8 indicate bacterial contamination, and testing will be canceled. Do not attempt to adjust pH as it will adversely affect results. 4. If not using Germall, the specimen must be kept refrigerated during the entirety of the collection and sent frozen. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 82340-Calcium; 82436-Chloride; 82507-Citrate excretion; 82570-Creatinine; 83735-Magnesium; 83935-Osmolality; 83945-Oxalate; 83986-pH; 84105-Phosphorus; 84133-Potassium; 84300-Sodium; 84392-Sulfate; 84560-Uric acid; 82140-Ammonium; 84540-Urea Nitrogen;

SUPRA
616375

Supersaturation Profile, Random, Urine

Specimen Requirements: Supplies: -Urine Tubes, 10 mL (T068) -Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: 90 mL urine container Submission Container/Tube: 2 x 10 mL plastic urine tubes and 5 x 5 mL plastic urine tubes Specimen Volume: 40 mL Collection Instructions: 1. Collect a random urine specimen, mix collection container thoroughly and divide the urine into 7 plastic tubes (2 x 10 mL and 5 x 5 mL). 2. Refrigerate specimen after collection. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 indicate bacterial contamination, and testing will be canceled. Do not attempt to adjust pH as it will adversely affect results.

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 82310-Calcium; 82436-Chloride; 82507-Citrate excretion; 82570-Creatinine; 83735-Magnesium; 83935-Osmolality; 83945-Oxalate; 83986-pH; 84105-Phosphorus; 84133-Potassium; 84300-Sodium; 84392-Sulfate; 84560-Uric acid; 82140-Ammonium;

SSH24
616228

Supersaturation Profile, Self-Collect, 24 Hour, Urine

Specimen Requirements: Patient Preparation: X-ray dyes and contrast media will affect uric acid test results. -If a kidney X-ray with dye or computerized tomography (CT) scan with contrast has been performed, the patient should wait at least 24 hours before starting collection. -If a cholangiography (bile duct X-ray) has been performed, the patient should wait 7 days before starting collection. -If patient has taken tablets for a gallbladder X-ray, the patient should wait 7 days before starting collection. Supplies: SSH24 Home Collection Kit (T921) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 35 mL Collection Instructions: 1. Order test each time the patient is to collect a 24-hour urine specimen at home and mail the specimen directly to Mayo Clinic Laboratories. 2. Order should be placed a minimum of 3 days prior to desired date of collection. 3. Enter patient's address information for each order created, including street address, city, state abbreviation, zip code, country, and home phone number. 4. For each order, the SSH24 Home Collection kit will be mailed directly to the patient for self-collection. This kit contains instructions for how to properly collect and transport the specimen after collection.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 82340-Calcium; 82436-Chloride; 82507-Citrate excretion; 82570-Creatinine; 83735-Magnesium; 83935-Osmolality; 83945-Oxalate; 83986-pH; 84105-Phosphorus; 84133-Potassium; 84300-Sodium; 84392-Sulfate; 84560-Uric acid; 82140-Ammonium; 84540-Urea Nitrogen;

SNS
82594

Supplemental Newborn Screen, Blood Spot

Specimen Requirements: Patient must be older than 12 hours and less than 1 week of age. Supplies: Card-Blood Spot Collection Filter Paper (T493) Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, Munktell, PerkinElmer 226 filter paper, or local newborn screening card Specimen Volume: 3 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. Completely fill at least 3 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the Blood Spot Collection Card at ambient temperature in a horizontal position for 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	FILTER PAPER	
	Frozen	FILTER PAPER	
	Refrigerated	FILTER PAPER	

CPT Code Information: 83789

TBPZA
34549

Susceptibility, Mycobacterium tuberculosis Complex, Pyrazinamide, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87188-Susceptibility, Mycobacterium tuberculosis Complex, Pyrazinamide; 87153-Mtb PZA Confirmation, pncA Sequencing (if appropriate);

TB2LN
34550

Susceptibility, Mycobacterium tuberculosis Complex, Second Line, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87186-Susceptibility, Mtb Cx, 2nd Line

SV40
618827

SV40 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SGUM
82483

Sweet Gum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SPOT
82799

Sweet Potato, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

VERG
82909

Sweet Vernal Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SWORD
82346

Swordfish, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

SYNAP
70557

Synaptophysin (SYNAPTO) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SS18F
35303

Synovial Sarcoma (SS), 18q11.2 (SS18 or SYT) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

SSX18
610609

Synovial Sarcoma Panel, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCSC
75761

Synthetic Cannabinoid Metabolites Screen, Expanded, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 5 mL Collection Instructions: Collect 5 mL random urine specimen without preservative. Send specimen refrigerated in a plastic preservative-free urine container. Note: Known interference(s): FUBINACA 3,3-dimethylbutanoic acid: Quetiapine

Specimen Minimum Volume: 2.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	180 days
	Ambient	30 days

CPT Code Information: 80307

SGSU
81035

Synthetic Glucocorticoid Screen, Random, Urine

Specimen Requirements: Supplies: Urine tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	14 days

CPT Code Information: 80299

SGSS
81031

Synthetic Glucocorticoid Screen, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 80299

TPPA
61480

Syphilis Antibody, Treponema pallidum Particle Agglutination, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86780

NSYPH
616862

Syphilis IgG Enzyme Immunoassay, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86780

SYPH1
616860

Syphilis IgG with Reflex, Enzyme Immunoassay, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86780-Syphilis IgG Screen; 86592-Syphilis Rapid Plasma Reagin Screen

(if appropriate); 86593-Rapid Plasma Reagin Titer (if appropriate); 86780-Syphilis Antibody by TP-PA (if appropriate);

SYPH
603264

Syphilis Total Antibody with Reflex, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86780; 86780-Syphilis Antibody by TP-PA (if appropriate); 86593-Rapid Plasma Reagin Titer (if appropriate);

TBNY
82589

T, B and NK Lymphocyte Quantitation, New York, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	52 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355; 86357; 86359; 86360;

TBET
70559

T-Box Expressed in T Cells (TBET) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only

Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

COGTF
113529

**T-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL),
Children's Oncology Group Enrollment Testing, FISH, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. Acceptable Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x2, 88275 x1, 88291 x1- FISH Probe, Analysis, Interpretation; 1 probe set; 88271 x2, 88275x1 - FISH Probe, Analysis; each additional probe set (if appropriate);

TALAF
609557

**T-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), FISH,
Adult, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Bone marrow: 1 mL; Whole blood: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x20, 88275x10, 88291x1-FISH Probe, Analysis, Interpretation; 10 probe sets; 88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate);

TALPF
609567

T-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), FISH, Pediatric, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Bone marrow: 1 mL; Whole blood: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x18, 88275x9, 88291x1- FISH Probe, Analysis, Interpretation; 9 probe sets; 88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (if appropriate);

TALMF
614323

T-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or

lavender top (EDTA) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow specimen in original tube. Do not aliquot. Acceptable: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Bone marrow: 1 mL; Whole blood: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88275x1, 88291x1-FISH Probe, Analysis, Interpretation; 1 probe set; 88271x2, 88275x1 - FISH Probe, Analysis; each additional probe set (if appropriate);

BTIA1
605160

T-Cell Intracellular Antigen 1 (TIA-1) Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TIA1
70566

T-Cell Intracellular Antigen 1 (TIA-1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TCL1A
70561

T-Cell Leukemia/Lymphoma Protein 1A (TCL1A) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

TLPDF
614335

T-Cell Lymphoma, Diagnostic FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Bone marrow: 1 mL; Whole blood: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x6, 88275 x3, 88291 x1 - FISH Probe, Analysis, Interpretation; 3 probe set; 88271 x2, 88275 x1 - FISH Probe, Analysis; each additional probe set (if appropriate);

TLYM
65911

T-Cell Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results; provide fixation method used. Additional Information: 1. Paraffin embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 2 unstained?for each probe set Collection Instructions: 1. Include 1 hematoxylin and eosin-stained slide for the entire test order. 2. For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88377 (if 1 probe set); 88377 x 2 (if 2 probe sets); 88377 x 3 (if 3 probe sets); 88377 x 4 (if 4 probe sets); 88377 x 5 (if 5 probe sets); 88377 x 6 (if 6 probe sets); 88377 x 7 (if 7 probe sets); 88377 x 8 (if 8 probe sets);

TLPMF
614346

T-Cell Lymphoma, Specified FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 2-3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Send bone marrow in original tube. Do not aliquot. Acceptable Specimen Type: Whole Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (heparin) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Bone marrow: 1 mL; Whole blood: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88275 x1, 88291x1- FISH Probe, Analysis, Interpretation; 1 probe set; 88271x2, 88275 x1 - FISH Probe, Analysis; each additional probe set (if appropriate);

TCRF1
70560

T-Cell Receptor Beta (TCR Beta F1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TCRGD
70562

T-Cell Receptor Delta Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TRECS
610068

T-Cell Receptor Excision Circles Analysis, Blood

Specimen Requirements: For serial monitoring, it is recommended to perform specimen collection at the same time of day, if possible. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Lavender top (EDTA) Specimen Volume: Adults: 10 mL Pediatrics -Preferred volume for >1 year: 5 mL -Preferred volume for < or =1 year old: 3 mL Collection Instructions: 1. Do not collect specimen using a butterfly needle. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Adults: 10 mL Pediatrics: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81479-Unlisted molecular pathology procedure

TCGR
83122

T-Cell Receptor Gene Rearrangement, PCR, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, PCR); 81342-TCG (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCGBM
31139

T-Cell Receptor Gene Rearrangement, PCR, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Bone Marrow	Ambient (preferred)	7 days
	Refrigerated	7 days

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, PCR); 81342-TCG (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCGET 802124

T-Cell Receptor Gene Rearrangement, PCR, Tissue

Specimen Requirements: Specimen Type: Paraffin-embedded bone marrow aspirate clot or paraffin-embedded tissue Container/Tube: Paraffin block Specimen Volume: Minimum of 4 slides; 10 um preferred

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue, Paraffin	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, PCR); 81342-TCG (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCGRV 31140

T-Cell Receptor Gene Rearrangement, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: At least 5 mL Collection Instructions: 1. If the volume is large, pellet cells prior to sending. 2. Send less volume at ambient temperature or as a frozen cell pellet. Specimen Stability Information: Body fluid: Ambient 4 days/Refrigerated/Frozen Cell

pellet: Frozen Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection. Specimen Stability Information: Frozen Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue slides Container/Tube: Unstained tissue slides Specimen Volume: 10 slides Specimen Stability: Ambient Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 5 to 10 mL Specimen Stability Information: Ambient 4 days/Refrigerated Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of DNA Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label Specimen Stability Information: Refrigerated/Ambient

Specimen Minimum Volume: Body fluid or Spinal fluid: 1 mL Tissue: 50 mg Extracted DNA: 50 microliters at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s), using amplification methodology (eg, PCR); 81342-TCG (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCRB
610067

T-Cell Receptor V-Beta Repertoire Analysis, Spectratyping, Blood

Specimen Requirements: For serial monitoring, it is recommended to perform specimen collection at the same time of day, if possible. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: Adults: 10 mL Pediatrics: -Preferred volume for >1 year: 3 mL -Preferred volume for < or =1 year: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Adults: 5 mL Pediatrics: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81340-TRG (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, polymerase chain reaction)

TCP
89319

T-Cell Subsets, Naive, Memory, and Activated, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 7

TREGS
89318

T-Cell Subsets, Regulatory (Tregs), Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimens are collected at the same time of day.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86359; 86361;

CYTH1
622036

T-Helper Cell Type 1 Cytokine Panel, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	21 days

CPT Code Information: 83520 x5

TLBLF
65413

T-Lymphoblastic Leukemia/Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods will be attempted but are less favorable for successful results; provide fixation method used. Additional Information: 1. Paraffin embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable: Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 2 unstained for each probe set Collection Instructions: 1. Include 1 hematoxylin and eosin-stained slide for the entire test order. 2. For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TPIT
607889

T-PIT Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

T3FR
621321

T3 (Triiodothyronine), Free, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days

CPT Code Information: 84481

RT3
9405

T3 (Triiodothyronine), Reverse, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 84482

T3
8613

T3 (Triiodothyronine), Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 84480

FRT4D
8859

T4 (Thyroxine), Free, Dialysis, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.6 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Within 2 hours of collection, centrifuge, and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	21 days
	Ambient	7 days

CPT Code Information: 84439

FRT4
8725

T4 (Thyroxine), Free, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 84439

T4FT4
36108

T4 (Thyroxine), Total and Free, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.625 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 84436; 84439;

T4
8724

T4 (Thyroxine), Total Only, Serum

Specimen Requirements: Patient Preparation: For 4 to 6 weeks before specimen collection, patient should not be taking lipid-lowering medications containing dextrothyroxine. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 84436

FFT4F
91548

T4, Free, Direct Dialysis

Specimen Requirements: Patient Preparation: Fasting is preferred (8-16 hours) Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collections Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 1 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	35 days
	Ambient	4 days

CPT Code Information: 84439

TAKRO
35145

Tacrolimus, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Draw blood immediately before a schedule dose. 2. Do not centrifuge. 3. Send whole blood specimen in original tube. Do not aliquot. Additional Information: Therapeutic range applies to trough specimens collected immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80197

TACPK
88157

Tacrolimus, Peak, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Do not centrifuge. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: 80197

TAPEN
62594

Tapentadol and Metabolite, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: G0480; 80372 (if appropriate for select payers);

FIOCA
57944

Tapioca IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

TABSU
604267

Targeted Benzodiazepine Screen, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CSMPU / Controlled Substance Monitoring Panel, Random, Urine -ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMTU / Controlled Substance Monitoring Targeted Profile, 17 Drug Classes, Mass Spectrometry, Random, Urine -TBSU / Targeted Benzodiazepine Screen, Random, Urine Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80347; G0480 (if appropriate);

Targeted Benzodiazepine Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: G0480; 80347 (if appropriate for select payers);

Targeted Opioid Screen, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CSMPU / Controlled Substance Monitoring Panel, Random, Urine -ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMTU / Controlled Substance Monitoring Targeted Profile, 17 Drug Classes, Mass Spectrometry, Random, Urine -TOSU / Targeted Opioid Screen, Random, Urine Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80364 (G0481 if appropriate)

Targeted Opioid Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen
Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: G0480; 80364 (if appropriate for select payers);

TSTIM
610273

Targeted Stimulant Screen, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CSMPU / Controlled Substance Monitoring Panel, Random, Urine -ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine -CSMTU / Controlled Substance Monitoring Targeted Profile, 17 Drug Classes, Mass Spectrometry, Random, Urine -TSPU / Targeted Stimulant Screen, Random, Urine Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection
Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days

CPT Code Information: 80326; G0480 (if appropriate);

TSPU
610272

Targeted Stimulant Screen, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection
Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days

CPT Code Information: G0480; 80326 (if appropriate for select payers);

TARR
82486

Tarragon, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TRAP
70570

Tartrate-Resistant Acid Phosphatase (TRAP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TAU3 70628

TAU 3 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TAU4 70627

TAU 4 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TAUI 70558

TAU Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HEXAZ
35454

Tay-Sachs Disease, HEXA Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81406

FGTEA
57684

Tea IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

TEA
82625

Tea, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TELDP
619886

Telomere Biology Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated

(<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing, Chorionic Villi/Products of Conception/Tissue. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Whole blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233- Tissue culture, skin, solid tissue biopsy (if appropriate); 88240- Cryopreservation (if appropriate);

FFTEM
80763

Temazepam (Restoril), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate); ; ;

TDT
70563

Terminal Deoxynucleotidyl Transferase (TdT) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

TERTD
618208

TERT Promoter Mutation Analysis, Droplet Digital PCR, Tumor

Specimen Requirements: This assay requires at least 5% nuclei of tumor cells/cells of interest. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent nuclei of tumor cells/cells of interest. -Tissue fixation: 10% neutral buffered formalin, not decalcified -Cytology fixatives: Cytology smears fixed in alcohol and thin preps fixed with CytoLyt. Preferred: Specimen Type: Tissue block
Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable percent nuclei of tumor cells/cells of interest. Acceptable: Specimen Type: Tissue slides
Slides: 1 Hematoxylin and eosin stained and 10 unstained
Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections. Note: The total amount of required cell nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep)
Slides: 1 to 3 slides
Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 3000 nucleated cells or a minimum of at least 350 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 81345; 88381-Microdissection, manual;

TTBS
80065

Testosterone, Total and Bioavailable, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube: Red top (serum gel/SST are not acceptable)
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	60 days

CPT Code Information: 84403; 84410;

TGRP
8508

Testosterone, Total and Free, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	60 days

CPT Code Information: 84402; 84403;

TTFB
83686

Testosterone, Total, Bioavailable, and Free, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 3.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	60 days

CPT Code Information: 84402; 84403; 84410;

TTST
8533

Testosterone, Total, Mass Spectrometry, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.215 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	60 days

CPT Code Information: 84403

TTIGS
36667

Tetanus Toxoid IgG Antibody, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Frozen	30 days

CPT Code Information: 86317

FFTEN
57102

Tetrahydrobiopterin and Neopterin Profile (BH4, N)

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	CSF KIT	

CPT Code Information: 82542

TGOGF 621841 **TGFBR3 (1p22), OGA (10q24) Rearrangement, FISH, Tissue**

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Additional Information: 1. Paraffin-embedded specimens can be from any anatomic location (skin, soft tissue, lymph node, etc). 2. Bone specimens that have been decalcified will be attempted for testing, but the success rate is approximately 50%. Acceptable Specimen Type: Tissue slides Slides: 1 Hematoxylin and eosin stained and 6 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 6 consecutive unstained, positively charged, unbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Slides: 1 Hematoxylin and eosin stained and 2 unstained

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88271x2, 88291 DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

THEV1 608085 **Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum**

Specimen Requirements: Blood and serum are required. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 15 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Type: Serum Patient Preparation: For 12 hour before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Within 2 hours of collection, serum gel tubes should be centrifuged. 2.

Within 2 hours of collection, red-top tubes should be centrifuged and the serum aliquoted into a plastic vial. 3. Label specimen as serum.

Specimen Minimum Volume: Blood: 2.5 mL Serum: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated	7 days
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 83020-26-Hemoglobinopathy Interpretation; 83020-Hb Variant, A2 and F Quantitation; 83021; 82728; 82664 (if appropriate); 83068 (if appropriate); 83789 (if appropriate); 88184 (if appropriate);

THEV0
608092

Thalassemia Summary Interpretation, Blood

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	

TLU
8603

Thallium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium or iodine containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. Aliquot 10 mL into a plastic 10-mL urine tube (T068) or a clean, plastic aliquot container with no metal cap or glued insert. 4. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

TLB
8149

Thallium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) (T989) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) (T183) Specimen Volume: 1 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

TLUCR
615255

Thallium/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 83018; 82570;

FHCCF
75831

THC Confirmation, MS, SP

Specimen Requirements: Submit only 1 of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 5mL of serum refrigerated in plastic vial. Plasma: Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 80349; G0480 (if appropriate);

FMARX
75832

THC, MS, WB/SP Rfx

Specimen Requirements: Only orderable as a reflex from FMARI

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

THEO
8661

Theophylline, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80198

TDP
42356

Thiamine (Vitamin B1), Whole Blood

Specimen Requirements: Patient Preparation: 1. Patient should fast overnight (12-14 hours); infants should have specimen collected just before next feeding. Water can be taken as needed. 2. For 12 hours before specimen collection, patient should not take vitamin supplements. Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Amber vial Specimen Volume: 4 mL Collection Instructions: 1. Invert 8 to 10 times to mix blood. 2. Transfer whole blood into amber vial or tube and freeze within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Frozen	28 days	LIGHT PROTECTED

CPT Code Information: 84425

DTHPV
70336

ThinPrep Diagnostic with Human Papillomavirus (HPV) Reflex, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Papanicolaou smears should be collected near the middle of the menstrual cycle. No douching, lubricant use, and sexual

intercourse for 24 hours prior to specimen collection. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap Test, regardless of the volume of the aliquot (maximum aliquot volume=4 mL). Submit only 1 of the following specimens: Specimen Type: Cervical Supplies: Thin Prep Media with Broom Kit (T056) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Specimen Type: Ectocervix and endocervix Supplies: Thin Prep Media with Spatula and Brush Kit (T434) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatulas quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate one-quarter or one-half turn in 1 direction. Do not over rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial and on the bag.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	THIN PREP
	Refrigerated	42 days	THIN PREP

CPT Code Information: 88142; 88141(if appropriate);

TPRPD
70333

ThinPrep Diagnostic, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Pap smears should be collected near the middle of the menstrual cycle. Avoid douching, lubricant use, or sexual intercourse for 24 hours prior to specimen collection. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap test, regardless of the volume of the aliquot (maximum aliquot volume: 4 mL). Submit only 1 of the following specimens: Specimen Type: Cervical Supplies: Thin Prep Media with Broom Kit (T056) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm

water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Specimen Type: Ectocervix and endocervix Supplies: Thin Prep Media with Spatula and Brush Kit (T434) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatulas quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate one-quarter or one-half turn in on direction. Do not over-rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial and on the bag.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	THIN PREP
	Refrigerated	42 days	THIN PREP

CPT Code Information: 88142; 88141 (if appropriate);

STHPV
70335

ThinPrep Screen with Human Papillomavirus (HPV) Reflex, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Papanicolaou smears should be collected near the middle of the menstrual cycle. No douching, lubricant use, and sexual intercourse for 24 hours prior to specimen collection. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap Test, regardless of the volume of the aliquot (maximum aliquot volume: 4 mL). Submit only 1 of the following specimens: Supplies: Thin Prep Media with Broom Kit (T056) Specimen Type: Cervical Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times,

forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Supplies: Thin Prep Media with Spatula and Brush Kit (T434) Specimen Type: Ectocervix and endocervix Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatulas quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate one quarter or one half turn in 1 direction. Do not over rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	THIN PREP
	Refrigerated	42 days	THIN PREP

CPT Code Information: G0123; 88142; 88141 (if appropriate);

TPRPS
70332

ThinPrep Screen, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Pap smears should be collected near the middle of the menstrual cycle. Avoid douching, lubricant use, and sexual intercourse for 24 hours prior to specimen collection. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap test, regardless of the volume of the aliquot (maximum aliquot volume: 4 mL). Submit only 1 of the following specimens: Specimen Type: Cervical Supplies: Thin Prep Media with Broom Kit (T056) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm to warm water and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Specimen Type: Ectocervix and endocervix Supplies: Thin Prep Media

with Spatula and Brush Kit (T434) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm to warm water and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatulas quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate one-quarter or one-half turn in one direction. Do not over rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	THIN PREP
	Refrigerated	42 days	THIN PREP

CPT Code Information: G0123 (Government Payers); 88142 ; 88141-TPSPC (if appropriate); ;

DTPCO
70338

ThinPrep with Human Papillomavirus (HPV) Co-Test-Diagnostic, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Papanicolaou smears should be collected near the middle of the menstrual cycle. No douching, lubricant use, and sexual intercourse for 24 hours prior to specimen collection. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap Test, regardless of the volume of the aliquot (maximum aliquot volume: 4 mL). Submit only 1 of the following specimens: Specimen Type: Cervical Supplies: ThinPrep Media with Broom Kit (T056) Collection Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Specimen Type: Ectocervix and endocervix Supplies: ThinPrep Media with Spatula and Brush Kit (T434) Collection Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the

entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatulas quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate one-quarter or one-half turn in 1 direction. Do not over rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial and on the bag.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	THIN PREP
	Refrigerated	42 days	THIN PREP

CPT Code Information: 88142; 88141-TPDPC (if appropriate);

STPCO
70337

ThinPrep with Human Papillomavirus (HPV) Co-Test-Screen, Varies

Specimen Requirements: Patient Preparation: For optimal interpretation, Papanicolaou smears should be collected near the middle of the menstrual cycle. No douching, lubricant use, and sexual intercourse for 24 hours prior to specimen collection. Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap Test, regardless of the volume of the aliquot (maximum aliquot volume: 4 mL). Submit only 1 of the following specimens: Specimen Type: Cervical Supplies: Thin Prep Media with Broom Kit (T056) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Specimen Type: Ectocervix and endocervix Supplies: Thin Prep Media with Spatula and Brush Kit (T434) Container/Tube: ThinPrep Specimen Volume: 16 mL Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatulas quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate

one-quarter or one-half turn in 1 direction. Do not over rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial and on the bag.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	THIN PREP
	Refrigerated	42 days	THIN PREP

CPT Code Information: G0123 (Government Payers); 88142 ; 88141-TPSPC (if appropriate);

FFTIO
57708

Thiocyanate, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.50 mL Does not allow for repeat testing

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 84430

THIO
65381

Thiopurine Metabolites, Whole Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. Do not aliquot, centrifuge, or freeze.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	8 days
	Ambient	24 hours

CPT Code Information: 80299

TPNUQ
610062

Thiopurine Methyltransferase (TPMT) and Nudix Hydrolase (NUDT15) Genotyping, Varies

Specimen Requirements: Submit only 1 of the following specimens: Patient Preparation: A previous hematopoietic stem cell transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a hematopoietic stem cell transplant. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cord blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the requested volume must be submitted. Testing may be canceled if DNA requirements are inadequate. 3. While a properly collected cord blood sample may not be at risk for maternal cell contamination, unanticipated complications may occur during collection. Therefore, maternal cell contamination studies are recommended to ensure the test results reflect that of the patient tested and are available at an additional charge. 4. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional Information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1 mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure,

MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 0034U

TPMT3 65188

Thiopurine Methyltransferase Activity Profile, Erythrocytes

Specimen Requirements: Patient Preparation: Thiopurine methyltransferase (TPMT) enzyme activity can be inhibited by several drugs and may contribute to falsely low results. Patients should abstain from the following drugs for at least 48 hours prior to TPMT testing: naproxen (Aleve), ibuprofen (Advil, Motrin), ketoprofen (Orudis), furosemide (Lasix), sulfasalazine (Azulfidine), mesalamine (Asacol), olsalazine (Dipentum), mefenamic acid (Ponstel), trimethoprim (Proloprim), methotrexate, thiazide diuretics, and benzoic acid inhibitors. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin), dark blue top (metal free sodium heparin), or plasma gel tubes Specimen Volume: 5 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	6 days
	Ambient	6 days

CPT Code Information: 84433

FSULU 75890

Thiosulfate, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 4 mL Collection Instructions: Collect 4 mL random urine without preservative. Send specimen refrigerated in a plastic (preservative-free) urine container.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	30 days
	Frozen	14 days

CPT Code Information: 82542; 82570; 81002 (if appropriate);**FFTHI**
91126**Thiothixene (Navane)**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342**TTSC**
602184**Thrombin Time (Bovine), Plasma****Specimen Requirements:****Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85670

FFTAC
75672

Thrombin-Antithrombin Complex

Specimen Requirements: Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 2 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	180 days

CPT Code Information: 83520

AATHI
603184

Thrombophilia Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26 Special Coagulation Interpretation

AATHR
603304

Thrombophilia Profile, Plasma and Whole Blood

Specimen Requirements:

Specimen Minimum Volume: Plasma: 5 mL total, 5 plastic vials each containing 1 mL, Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days
Whole blood	Ambient (preferred)	14 days
	Frozen	14 days
	Refrigerated	14 days

CPT Code Information: 81240-F2 PTNT; 85300-ATTF; 85303-CFX; 85306-PSF; 85307-APCRV; 85379-DIMER; 85384-CLFIB; 85390-26-AATHI; 85610-PTSC; 85613-DRV1; 85670-TTSC; 85730-APTSC; 81241-F5 (coagulation factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant (if appropriate); 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85240-Factor VIII (if appropriate); 85250-Factor IX (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85301-Antithrombin antigen (if appropriate); 85302-Protein C antigen (if appropriate); 85305-Protein S antigen, total (if appropriate); 85306-Protein S activity (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Hex LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirmation (if appropriate); 85635-Reptilase (if appropriate); 85732 - APTT Mix 1:1 (if appropriate);

FFTPO 57822

Thrombopoietin (TPO)

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	30 days

CPT Code Information: 83520

GNTHR 619271

Thrombosis Disorders, Comprehensive Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443

THSIF
605244

Thrombospondin Type 1 Domain Containing 7A (THSD7A), Immunofluorescence

Specimen Requirements: Specimen Type: Kidney tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; paraffin sections 3 to 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) kidney tissue block

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 88346-Primary IF; 88350-If additional IF;

THSD7
607079

Thrombospondin Type-1 Domain-Containing 7A Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 1 mL Collection Information: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	8 hours

CPT Code Information: 86255

THYM
82606

Thyme, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TGAB
84382

Thyroglobulin Antibody, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Red top (gel tubes/SST are not acceptable) Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86800

TGABI
610071

Thyroglobulin Antibody, Serum

Specimen Requirements: Only orderable as part of profile. For more information see IETG / Interference Evaluation Heterophile, Thyroglobulin Tumor Marker, Serum. Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: None (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86800

THYR
70565

Thyroglobulin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

TGMS
62749

Thyroglobulin Mass Spectrometry, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: None (gel tubes/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.25 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	416 days
	Ambient	72 hours

CPT Code Information: 84432**TGII**
610072**Thyroglobulin, Interference Interpretation****Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

HTGR
62936**Thyroglobulin, Tumor Marker Reflex, Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: None (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 86800; 84432 (if appropriate);

Thyroglobulin, Tumor Marker, Fine-Needle Aspiration Biopsy Needle Wash

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. Needle wash specimens for analysis should be collected in conjunction with cytology specimens. 2. Have saline available prior to start of procedure. Saline is the only acceptable solution for needle washings. 3. After each fine-needle aspiration biopsy (FNAB) has been collected and the material in the needle has been expelled onto a slide for cytologic analysis, attach the used FNAB needle to an empty syringe. 4. Withdraw between 0.10 mL and 0.25 mL of saline up through the needle until the saline starts to fill the hub of the needle or end of the syringe. 5. Expel this fluid back through the needle into a separate plastic screw-top tube. This is the needle washing used for analysis. 6. Repeat steps 2 through 4 for each needle pass of the same biopsied site and empty into the same tube, accumulating a total of 0.5 mL to 1.5 mL of fluid to send to the laboratory. (If more than 1 site is biopsied, see Additional Information) 7. Inspect specimen for visible blood or tissue contamination: a. If bloody, centrifuge specimen and transfer supernatant to a new plastic aliquot tube (5-mL standard tube) prior to sending to laboratory. The supernatant, not the cellular material, is used for analysis. b. If specimen is clear, centrifugation is not necessary. Additional Information 1. If more than 1 site is biopsied, each washing material should be submitted on a separate tube and under a different order number. 2. A minimum of 0.5 mL is required for testing; however, the total collection volume should not exceed 1.5 mL. Specimen volumes outside these parameters may be rejected. 3. Do not send a saline control. This test has been validated to rule-out saline matrix effect.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fine Needle Wash	Frozen (preferred)	90 days
	Refrigerated	14 days
	Ambient	7 days

CPT Code Information: 84432

Thyroglobulin, Tumor Marker, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: None (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84432; 86800;

TGQN
610070

Thyroglobulin, Tumor Marker, Serum

Specimen Requirements: Only orderable as part of profile. For more information see IETG / Interference Evaluation Heterophile, Thyroglobulin Tumor Marker, Serum. Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7) Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Red top Acceptable: None (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	90 days
	Ambient	7 days

CPT Code Information: 84432

TAB
82041

Thyroid Autoantibodies Profile, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86376-Thyroperoxidase antibody; 86800-Thyroglobulin antibody ;

THSCM
83633

Thyroid Function Cascade, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	72 hours

CPT Code Information: 84443; 84439 (if appropriate); 84480 (if appropriate); 86376 (if appropriate);

TTF8G
70575

Thyroid Transcription Factor (8G7G3/1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TTFSP
70576

Thyroid Transcription Factor (SPT24) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded tissue block

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TTFK5
70489

Thyroid Transcription Factor 1 (TTF1) (SPT24) and Keratin 5 (KRT5) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

TSH
70574

Thyroid-Stimulating Hormone (TSH), Beta Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

STSH
8939

Thyroid-Stimulating Hormone-Sensitive (s-TSH), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84443

TSI
8634

Thyroid-Stimulating Immunoglobulin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	60 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 84445**TPO**
81765**Thyroperoxidase Antibodies, Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86376**THYRO**
81797**Thyrotropin Receptor Antibody, Serum**

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection. patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). 2. Patient should not be receiving heparin treatment. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.75 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 83520

TBGI
9263

Thyroxine-Binding Globulin (TBG), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 84442

T4BPE
38507

Thyroxine-Binding Protein Electrophoresis, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84436; 82664;

FGTIA
75019

Tiagabine (Gabitril), Serum

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80199

STICK
602733

Tick-Borne Antibodies, Modified 2-Tier, ELISA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.35 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	10 days
	Frozen	14 days

CPT Code Information: 86618; 86666 x 2; 86753; 86617 x 2 (if appropriate);

TICKS
83265

Tick-Borne Disease Antibodies Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	10 days
	Frozen	14 days

CPT Code Information: 86618; 86666 x 2; 86753; 86617 x 2-Lyme disease Western blot (if appropriate);

TIKLB
618311

Tick-Borne Panel, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL
Collection Instructions: 1. Invert several times to mix blood 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 87798 x4; 87469; 87468; 87484; 87478; 87999 (if appropriate for government payers);

BRBST
620148

Tickborne Bacterial, PCR and Sequencing, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL
Collection Instructions: If not submitting in original vial, mix well before transferring to a sterile vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 87801-Broad Range Bacterial PCR and Sequencing; 87798-Specimen Identification by PCR (if appropriate);

TILAP
619510

Tilapia, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TIMG
82891

Timothy Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FFTIB
91137

Tin, Blood

Specimen Requirements: Draw blood in a royal blue-top (metal free EDTA) tube. Send 2 mL metal free EDTA whole blood refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA - Metal Free (ERB)	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 83018

FFTIN
91101

Tin, Serum

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a metal free tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of metal free serum refrigerated in a plastic vial. Plasma Draw blood in an EDTA metal-free royal blue-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL metal-free EDTA plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 83018

TSTGP
83671

Tissue Transglutaminase Antibodies, IgA and IgG Profile, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86364 x 2

TTGA
82587

Tissue Transglutaminase Antibody, IgA, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86364

TTGG
83660

Tissue Transglutaminase Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86364

TIU24
614613

Titanium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert. Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Leave specimen ambient until received at the collection center. 3. Weigh urine for total volume. 4. Pour off aliquot, freeze, and send to laboratory frozen. 4. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	28 days

CPT Code Information: 83018

TIWB
614612

Titanium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to potentially interfere with most inductively coupled plasma mass spectrometry-based metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free EDTA 3 mL Tube (T989) -Metal Free B-D Tube (EDTA), 6 mL (T183) Collection Container/Tube: Preferred: Royal blue-top BD vacutainer with EDTA blood collection tube (3 mL) (BD catalog no. 367777) Acceptable: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (6 mL) (BD catalog no. 368381) Specimen Volume: 1.0 mL Collection Instructions: 1. See Metals Analysis Specimen Collection and Transport for complete instructions. 2. Send whole blood specimen in original collection tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83018

TIS
89367

Titanium, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free Specimen Vial (T173) -Metal Free B-D Tube (No Additive), 6 mL (T184) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 1.2 mL Collection Instructions: 1. Allow specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Frozen	28 days	METAL FREE
	Ambient	7 days	METAL FREE

CPT Code Information: 83018

TIUCR
614614

Titanium/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	28 days

CPT Code Information: 82570; 83018;

TICU
614615

Titanium/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see TIUCR / Titanium/Creatinine Ratio, Random, Urine. Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metal tests. If either gadolinium- or iodine-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen	28 days

CPT Code Information: 83018

TLE1
70567

TLE-1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TOBPA Tobramycin, Peak, Serum

37063

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80200

TOBRA Tobramycin, Random, Serum

37065

Specimen Requirements: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL
 Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80200

TOBTA
37064

Tobramycin, Trough, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood no more than 30 minutes before next scheduled dose. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80200

FHIPP
91121

Toluene as Hippuric Acid, Occupational Exposure, Urine

Specimen Requirements: 10 mL aliquot of random or spot urine collected at end of shift. Send specimen refrigerated. Tubes should be filled to prevent loss of volatile compound into headspace.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 83921/Organic acid, single, quantitative; 82570/Creatinine, other source;

FFTLB
91141

Toluene, Occupational Exposure, Blood

Specimen Requirements: Draw blood in 2 green top (sodium heparin) tubes. Tubes should be filled to prevent loss of volatile compound into headspace. Send 20 mL of sodium heparin whole blood refrigerated.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
WB Sodium Heparin	Refrigerated (preferred)	14 days
	Frozen	365 days

CPT Code Information: 84600

FMATG
57628

Tomato IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

TOMA
82695

Tomato, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TOPI
81546

Topiramate, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial; within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80201

TRCHG
61859

ToRCH Profile IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86644-CMV; 86695-Herpes simplex, type 1; 86696-Herpes simplex, type 2; 86762-Rubella; 86777-Toxoplasma;

TIBC
2501

Total Iron Binding Capacity, Serum

Specimen Requirements: Only orderable as part of profile. For more information see SFEC / Iron and Total Iron Binding Capacity, Serum Patient Preparation: 1. Fasting (12 hours) 2. For 24 hours before collection, patient should not take iron-containing supplements. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood before noon (preferred). 2. Within 2 hours of collection, serum gel tubes should be centrifuged. 3. Within 2 hours of collection, red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	365 days

CPT Code Information: 83550

TOXCG
616734

Toxocara Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	5 days

CPT Code Information: 86682

FGGMC
75519

Toxoplasma gondii Antibodies (IgG, IgM), ELISA, CSF

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Submit 1 mL of spinal fluid (CSF) in a sterile, plastic screw-cap vial. Refrigerate specimen after collection and ship at refrigerate temperature.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86777-IgG; 86778-IgM;

TOXGP
34972

Toxoplasma gondii Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86777

TXMGP
39857

Toxoplasma gondii Antibody, IgM and IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Aliquot tube Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86778-Toxoplasma IgM; 86777-Toxoplasma IgG;

TXM
39856

Toxoplasma gondii Antibody, IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86778

TOXB
62977

Toxoplasma gondii, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

PTOX
81795

Toxoplasma gondii, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Spinal fluid Supplies: Sarstedt Aliquot Tube 5 mL (T914) Container/Tube: Preferred: 12 x 75-mm screw cap vial Acceptable: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Fresh tissue Supplies: M4-RT (T605) Container/Tube: Preferred: Multi-microbe medium (eg, M4-RT) Acceptable: Sterile container with 1 to 2 mL of sterile saline Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in a sterile container containing 1 mL to 2 mL of sterile saline or multi-microbe medium (M4-RT, M4, or M5) Specimen Type: Ocular fluid Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container: 12 x 75-mm screw cap vial Specimen Volume: 0.3 mL Collection Instructions: 1. Aliquot collected fluid into screw-cap vial. Do not submit ocular fluid in syringe. 2. Do not centrifuge or dilute the specimen.

Specimen Minimum Volume: Amniotic Fluid, Ocular Fluid, Spinal Fluid: 0.3 mL Tissue: 2 x 2 mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

TOXO
70569

Toxoplasma Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CSP53
607599

TP53 Gene Somatic Mutation Pre-Analysis Cell Sorting, Varies

Specimen Requirements: Only orderable as a reflex. For more information see P53CA / Hematologic Neoplasms, TP53 Somatic Mutation, DNA Sequencing Exons 4-9, Varies. Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerate <10 days

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	10 days
	Refrigerated	10 days

CPT Code Information: 88184-Flow cytometry, first cell surface, cytoplasmic or nuclear marker; 88185 x 4-Each additional marker;

TP53
616496

TP53 Mutation Analysis, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 216 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides: approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slides Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Additional Information: Unused unstained slides will not be returned. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 1 to 3 Slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88381-Microdissection, manual; 81351;

TRAM
62595

Tramadol and Metabolite, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test. 3. Submitting less than 1 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Ambient	14 days
	Frozen	14 days

CPT Code Information: G0480; 80373 (if appropriate for select payers);

TFE3I
70564

Transcription Factor E3 (TFE3) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

TRSF
34623

Transferrin, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge the specimen. 2. For serum gel tubes, aliquot serum into a plastic vial prior to shipment. 3. For red-top tubes, aliquot the serum into a plastic vial immediately after centrifuging.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	7 days

CPT Code Information: 84466

FFTRZ
75024

Trazodone (Desyrel)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80338

FHEAV
57949

Tree of Heaven (Ailanthus spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume:

0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

TREE1 81886

Tree Panel #1, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TREE3 81704

Tree Panel #3, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TREE4
81705

Tree Panel #4, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FHAL
90119

Triazolam (Halcion)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate);

TRCNG
616733

Trichinella Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	30 days
	Refrigerated	5 days

CPT Code Information: 86784

FFTRU
91099

Trichloroacetic Acid, Urine

Specimen Requirements: Submit a 10 mL aliquot from a random or spot urine collected at end
of shift, end of exposure, or end of workweek. Send specimen refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	180 days

CPT Code Information: 83921-Organic acid, single, quantitative; 82570-Creatine, other source;

TRVI
82853

Trichoderma viride, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**MTRNA**
61756**Trichomonas vaginalis, Nucleic Acid Amplification, Varies**

Specimen Requirements: This test should only be performed in men. Submit only 1 of the following specimens: Specimen Type: Post-prostatic massage fluid (VBIII) Supplies: Aptima Urine Transport Tube (T582) Container/Tube: Aptima Urine Specimen Transport Tube Specimen Volume: 15 to 20 mL Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to specimen collection. 2. Patient should void a small amount of urine prior to prostatic massage. Pre-massage urine can be discarded or submitted for other testing as applicable. 3. Patient then ceases voiding and a prostatic massage is performed by the urologist or other health care professional. 4. Collect post-massage fluid into a sterile, plastic, preservative-free container. 5. Transfer 2 mL of post-massage fluid specimen into the Aptima urine specimen transport tube using the disposable pipette provided within 24 hours of collection. The correct volume of fluid has been added when the fluid level is between the black fill lines on the Aptima urine transport tube. Specimen Type: Urethral (male only) Supplies: Aptima Unisex Swab Collection Kit (T583) Container/Tube: Aptima Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Urethral specimens must be collected using an Aptima Unisex Swab Collection kit. 2. Patient should not have urinated for at least 1 hour prior to collection. 3. With a rotating movement, insert swab (blue shaft) 2 to 4 cm into urethra. 4. Once inserted, rotate blue swab gently at least 1 full rotation using sufficient pressure to ensure swab comes into contact with all urethral surfaces. Allow blue swab to remain inserted for 2 to 3 seconds. 5. Place blue swab in the Aptima transport tube provided in collection kit. 6. Snap off blue swab at score line so it fits into closed tube. 7. Cap tube securely and label tube with patient's entire name and collection date and time.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	APTIMA VIAL
	Ambient	30 days	APTIMA VIAL

CPT Code Information: 87661**TVRNA**
61755**Trichomonas vaginalis, Nucleic Acid Amplification, Varies****Specimen Requirements:**

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	APTIMA VIAL	
	Frozen	180 days	APTIMA VIAL
	Ambient	APTIMA VIAL	

CPT Code Information: 87661

FFTMV
75554

Trichophyton Mentagrophytes (var interdigitale) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

TCPT
82720

Trichophyton rubrum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TRPS1
616890

Trichorhinophalangeal syndrome type 1 (TRPS1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TGLBF
606918

Triglycerides, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, Jackson Pratt [JP] drain) -Pericardial Fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen (preferred)	30 days
	Refrigerated	7 days
	Ambient	24 hours

CPT Code Information: 84478

TRIGC
606879

Triglycerides, CDC, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see LMPP / Lipoprotein Metabolism Profile, Serum. Patient Preparation: 1. Patient should fast overnight (12-14 hours) before specimen collection. 2. Patient must not consume any alcohol for 24 hours before specimen collection. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	60 days

CPT Code Information: 84478

TRIG1
616665

Triglycerides, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred but not required unless directed by the ordering provider. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Container/Tube: Plastic vial Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 84478

TMP
80146

Trimethoprim, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (gel tubes/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum for a peak level should be collected at least 60 minutes after a dose. 2. Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80299

TRMP
64269

Trimipramine, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into a plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	7 days

CPT Code Information: 80299

TPIC
608424

Triosephosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657**TPI1**
607458**Triosephosphate Isomerase Enzyme Activity, Blood**

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Whole Blood ACD-B	Refrigerated	20 days

CPT Code Information: 82657**T46CS**
616449**Tripartite Motif-Containing Protein 46 (TRIM46) IgG, Cell Binding Assay, Serum**

Specimen Requirements: Only orderable as a reflex. For more information see: ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

T46CC
616450

Tripartite Motif-Containing Protein 46 (TRIM46) IgG, Cell Binding Assay, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

T46TS
616447

Tripartite Motif-Containing Protein 46 (TRIM46) IgG, Tissue Immunofluorescence Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see: ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

T46TC
616448

Tripartite Motif-Containing Protein 46 (TRIM46) IgG, Tissue

Immunofluorescence Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see: ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid EPC2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86256

T46IS
616445

Tripartite Motif-Containing Protein 46 (TRIM46) IgG, Tissue Immunofluorescence, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum MAS1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Serum

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

T46IC
616446

Tripartite Motif-Containing Protein 46 (TRIM46) IgG, Tissue Immunofluorescence, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see: ENC2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid DMC2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid EPC2 / Epilepsy, Autoimmune/Paraneoplastic

Evaluation, Spinal Fluid MDC2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid MAC1 / Myelopathy, Autoimmune/Paraneoplastic Evaluation, Spinal Fluid

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86255

FFTRP
91774

Trofile Co-Receptor Tropism Assay

Specimen Requirements:

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	14 days

CPT Code Information: 87999

FFTRO
57159

Trofile DNA Co-Receptor Tropism Assay

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender-top (EDTA)
Specimen Volume: 4 mL Collection Instructions: Draw 4 mL blood in a lavender-top (EDTA) tube(s), (Do not centrifuge.) Freeze and ship frozen. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested. Note: Trofile DNA is recommended for patients with undetectable viral loads.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Frozen	14 days

CPT Code Information: 87999

WHIPB
87974

Tropheryma whipplei, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Tropheryma whipplei DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send whole blood specimen in original tube (preferred)

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Ambient	7 days
	Frozen	7 days

CPT Code Information: 87798

TWRP
80909

Tropheryma whipplei, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Tropheryma whipplei DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Small intestine (duodenum, ileum, or jejunum), lymph node, bone, joint, synovial, liver, pancreas, spleen, lung, heart valve (and other heart tissues), or brain Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue. 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Small intestine (duodenum, ileum, or jejunum), lymph node, bone, joint, synovial, liver, pancreas, spleen, lung, heart valve (and other heart tissues), or brain Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Small intestine (duodenum, ileum, or jejunum), lymph node, bone, joint, synovial, liver, pancreas, spleen, lung, heart valve (and other heart tissues), or brain Container/Tube: Sterile container for each individual cut section

(scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Fluid Sources: Cerebrospinal or ocular (eg, vitreous humor) Container/Tube: Sterile vial Specimen Volume: 0.5 mL Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days

Specimen Minimum Volume: Fluid: 0.5 mL Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87798

TROP2
621064

Trophoblast Antigen 2 (TROP2) Immunostain, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554) Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, positively-charged slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time
Special	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88360

TRK
603300

Tropomyosin Receptor Kinase (TRK) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-

fixed, paraffin-embedded tissue block

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HSTNI
614422

Troponin I, High Sensitivity, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Mint green top (lithium heparin gel) Acceptable: Green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Plasma gel tube should be centrifuged within 2 hours of collection. 2. Green-top tube should be centrifuged, and the plasma aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen (preferred)	180 days
	Refrigerated	48 hours
	Ambient	4 hours

CPT Code Information: 84484

TRPS
65832

Troponin T, 5th Generation, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Light-green top (lithium heparin gel) Acceptable: Green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Lithium heparin gel tubes should be centrifuged within 2 hours of collection. 2. Plasma from lithium heparin tubes should be centrifuged and aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Li Heparin	Frozen (preferred)	365 days
	Ambient	24 hours
	Refrigerated	24 hours

CPT Code Information: 84484

TROT
82788

Trout, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CRUZI
621062

Trypanosoma cruzi (Chagas) Antibody Panel, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86753 x2

CHAGL
622447

Trypanosoma cruzi IgG, Lateral Flow Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see CRUZI / Trypanosoma cruzi (Chagas) Antibody Panel, Serum. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.10 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86753

CHAGS
615244

Trypanosoma cruzi Total Antibody, Enzyme-Linked Immunosorbent Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see CRUZI / Trypanosoma cruzi (Chagas) Antibody Panel, Serum. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

CPT Code Information: 86753

CHAGI
622448

Trypanosoma cruzi, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see CRUZI / Trypanosoma cruzi (Chagas) Antibody Panel, Serum.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen	14 days

TRYPN
70572**Trypsin Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TRPTS
70573**Tryptase Immunostain, Technical Component Only**

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TRYP A
32283**Tryptase, Autopsy, Serum**

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection

Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.
Additional Information: Tryptase degenerates very quickly when left in the presence of red blood cells.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	7 days

CPT Code Information: 83520

TRYPT 81608

Tryptase, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial
Additional Information: Tryptase degenerates very quickly when left in the presence of red blood cells.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	14 days
	Refrigerated	7 days

CPT Code Information: 83520

TRYPP 82955

Tryptophan, Plasma

Specimen Requirements: Patient Preparation: Patient should fast a minimum of 4 hours; infants should have specimen collected before next feeding (2-3 hours without total parenteral nutrition if possible). Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collect specimen and place on wet ice. Note: Thrombin-activated tubes should not be used for collection. 2. Centrifuge immediately or within 4 hours of collection if the specimen is kept at refrigerated temperature. 3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma	Frozen	14 days

CPT Code Information: 82131

TRYP
83823

Tryptophan, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Frozen (preferred)	70 days
	Refrigerated	14 days

CPT Code Information: 82131

TTF40
602647

TTF41 (SPT24) + p40 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88344-TC

TTR Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin): Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for specimens received after 4 days, and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Saliva specimens are acceptable but not recommended. Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Cultured fibroblasts Source: Skin Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Tissue biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5 to 3 cm(3) or larger Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Extracted DNA Container/Tube: Preferred: Screw Cap Micro Tube, 2 mL with skirted conical base Acceptable: Matrix tube, 1mL Collection Instructions: 1. The preferred volume is at least 100 mcL at a concentration of 75 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year /Ambient/Refrigerated Additional Information: DNA must be extracted in a CLIA-certified laboratory or equivalent and must be extracted from a specimen type listed as acceptable for this test (including applicable anticoagulants). Our laboratory has experience with Chemagic, Puregene, Autopure, MagnaPure, and EZ1 extraction platforms and cannot guarantee that all extraction methods are compatible with this test. If testing fails, one repeat will be attempted, and if unsuccessful, the test will be reported as failed and a charge will be applied. If applicable, specific gene regions that were unable to be interrogated due to DNA quality will be noted in the report Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 filter paper or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect a Dried Blood Spot Sample. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Blood spot specimens are acceptable but not recommended. Multiple extractions will be required to obtain

sufficient yield for supplemental analysis, and there is significant risk for test failure due to insufficient DNA. 2. Due to lower concentration of DNA yielded from blood spot, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. 3. For collection instructions, see Blood Spot Collection Instructions 4. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 5. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Prenatal cultured fibroblasts (eg, products of conception), amniocytes, or other confluent cultured cells. This does not include cultured chorionic villi. Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 Full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours Additional Information: 1. Specimens are preferred to be received within 24 hours of collection. Culture and extraction will be attempted for specimens received after 24 hours and will be evaluated to determine if testing may proceed. 2. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 3. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

TSCP
616537

Tuberous Sclerosis Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an

allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filtration Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card (T493) Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing. Specimen Stability Information: Ambient 30 days Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406; 81407; 81265-Maternal cell contamination (if appropriate) 88233-Tissue culture, skin, solid tissue biopsy (if appropriate) 88235-Amniotic Fluid culture (if appropriate) 88240-Cryopreservation (if appropriate) 81479 (if appropriate for government payers);

RTRP2
614047

Tubular Reabsorption of Phosphorus, Random Urine and Serum

Specimen Requirements: Both serum and urine are required. Specimen Type: Serum Patient Preparation: Fasting Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge and aliquot serum into a plastic vial. 2. Label specimen as serum. Specimen Type: Urine Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Label specimen as urine.

Specimen Minimum Volume: Urine: 1 mL; Serum: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	7 days
	Refrigerated	7 days
Urine	Refrigerated (preferred)	30 days
	Frozen	14 days
	Ambient	7 days

CPT Code Information: 82565; 82570; 84100; 84105;

TUNA
82547

Tuna, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TURKF
82824

Turkey Feathers, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FGORG
57641

Turkey IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

TURK
82702

Turkey, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FCTUR
57544

Turmeric (Curcuma longa) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL
Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

TRYPI
82848

Tyrophagus putrescentiae, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

TYROS
70577

Tyrosinase (TYROS) Immunostain, Technical Component Only

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TYRGP
608033

Tyrosine Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient

(preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406; 81479; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 81479 (if appropriate for government payers);

TYRBS
607550

Tyrosinemia Follow Up Panel, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, PerkinElmer 226 filter paper, Munktell filter paper, or blood collected in tubes containing EDTA and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. At least 2 spots should be complete (ie, unpunched). 3. Let blood dry on filter paper at room temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerated 14 days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Acceptable: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 2 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Refrigerate 6 days

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Varies	

CPT Code Information: 84510; 84030; 82542; 80299; 82542 only (if appropriate for government payers);

TYRSC
610495

Tyrosinemia Follow-Up Panel, Self-Collect, Blood Spot

Specimen Requirements: Supplies: Blood Spot Collection-Self Collect (T858) Container/Tube: Blood Spot Self Collection Card Specimen Volume: 2 Blood spots Additional Information: 1. Order test each time the patient is to collect a dried blood specimen at home and mail the specimen directly to Mayo Clinic Laboratories. 2. Order should be placed a minimum of 3 days prior to desired date of collection. 3. Enter patient's address information for each order created, including street address (post-office [PO] boxes are not acceptable delivery locations), city, state abbreviation, zip code, country, and home phone number. 4. For each order, the Blood Spot Collection-Self Collect kit will be mailed directly to the patient for self-collection (delivery to a PO box will not occur). 5. For more information on how to collect blood spots, see the following -How to Collect Dried Blood Spot Samples via fingerstick. -Blood Spot Collection Instructions-Fingerstick -Blood Spot Collection Instructions-Fingerstick-Spanish

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	14 days	FILTER PAPER

CPT Code Information: 0383U

FSABI
58004

Tysabri (Natalizumab) Immunogenicity

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 1.0 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 1.0 mL of serum into a plastic vial. 3 Send frozen.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Frozen (preferred)	
	Refrigerated	14 days

CPT Code Information: 83516

UBA1Q
620900

UBA1 Mutation Quantitative Detection, VEXAS syndrome, Droplet Digital PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD-B) or green top (heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability: Refrigerated 7 days/Ambient 7 days Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD-B) or green top (heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send bone marrow specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability: Refrigerated 7 days/Ambient 7 days Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of DNA Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label. The required volume of DNA is at least 50 mcL at a concentration of 50 ng/mcL Specimen Stability: Frozen (preferred)/Refrigerated

Specimen Minimum Volume: Whole blood: 4 mL Bone marrow: 2 mL Extracted DNA: 50 mcL at 50 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 81403

UBIQ
70578

Ubiquitin (UBIQ) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

UGTFZ
610064

UDP-Glucuronosyltransferase 1A1 (UGT1A1), Full Gene Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous liver transplant, bone marrow transplant from an allogenic donor, or a recent (ie, <6 weeks from time of sample collection) heterologous blood transfusion will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Adults: Lavender top (EDTA) Pediatrics: Purple microtube Specimen Volume: Adults: 3 mL Pediatrics: 1 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Container/Tube: Saliva Swab Collection Kit Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 0.45 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404

ULCH
82546

Ulocladium chartarum, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

UNIPD
35566

Uniparental Disomy, Varies

Specimen Requirements: Specimens from both parents and the child or fetus are recommended for optimal interpretation of results. Each specimen must have a separate order for this test. Only the proband specimen will be charged. Testing can be performed if only one parent specimen is submitted, however, biparental inheritance and some types of uniparental disomy (UPD) cannot be definitively established in the absence of one parent. Additionally, there is a higher likelihood for uninformative or inconclusive results. If all required specimens are not received within one month of ordering, testing will be canceled. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: If amniotic fluid or culture amniotic fluid is received, CULAF / Culture for Genetic Testing, Amniotic Fluid will be added at an additional charge. Specimen Type: Chorionic villi (CVS) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: If CVS or cultured CVS is received, CULFB / Fibroblast Culture for Biochemical or Molecular Testing will be added at an additional charge. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours)

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information:

Uranium, Urine

Specimen Requirements: ***Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Submission Container/Tube: Acid washed or trace metal free plastic container (T619). Specimen Volume: 1 mL Collection Instructions: Collect urine in acid washed or trace metal free plastic container (T619). Submit 1 mL of urine refrigerated.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	16 days	Acid Washed Plastic (MML Supply T619)
	Frozen	30 days	Acid Washed Plastic (MML Supply T619)
	Ambient	9 days	Acid Washed Plastic (MML Supply T619)

CPT Code Information: 83018

Urea Cycle Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4.

Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800). Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

UEBF
606598

Urea Nitrogen, Body Fluid

Specimen Requirements: Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, Jackson Pratt [JP] drain) -Peritoneal dialysate (dialysis fluid) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 84520

URAU
607234

Urea, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic, urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Mix well before taking aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84540

URCON
614061

Urea, Random, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Container/Tube: Plastic tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84540

URBRP
65133

Ureaplasma species, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Ureaplasma DNA is not likely. Container/Tube: Preferred Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume:

1 mL Collection Instructions: Send whole blood specimen in original tube (preferred)

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798 x 2; 87999 (if appropriate for government payers);

URPRP
65135

Ureaplasma species, Molecular Detection, PCR, Plasma

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Ureaplasma DNA is unlikely. Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798 x 2; 87999 (if appropriate for government payers);

URRP
60758

Ureaplasma species, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Ureaplasma DNA is not likely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -M4-RT (T605) Sources: Vaginal, cervix, urethra, urogenital, chest/mediastinal; bronchus or lung (donor swab), or upper respiratory sources (only infants <3 months: nasopharynx, nose, throat) Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Swab in transport media: M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: 1 swab Collection Instructions: Vaginal: 1. Collect specimen by swabbing back and

forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder.

Urethra or cervical: 1. Collect specimen by inserting swab 1 to 3 cm and rotating 360 degrees. 2. Place swab back into swab cylinder. Wound: 1. Collect specimen by swabbing back and forth over wound surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Sources: Pelvic, peritoneal, amniotic, prostatic secretions, semen, reproductive drainage or fluid, pleural/chest, chest tube, pericardial Container/Tube: Sterile container Specimen Volume: 1 to 2 mL Specimen Type: Respiratory Sources: Sputum, tracheal secretions, bronchial washings, bronchoalveolar lavage, lung; or nasal washings (Note: Nasal washings may only be submitted for infants <3 months of age) Container/Tube: Sterile container Specimen Volume: 1 to 2 mL Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red top (no anticoagulant), or sterile container Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube. Specimen Type: Urine-first void, kidney/bladder stone, or ureter Container/Tube: Sterile container Specimen Volume: 10 mL or entire specimen Collection instructions: Urine first void: Specimen can be collected at any time during the day. The patient should not have urinated for at least 1 hour prior to specimen collection. The first voided portion is the initial 20 to 30 mL of the urine stream obtained without cleaning the external urethra. Specimen Type: Tissue Sources: Placenta, products of conception, urogenital, respiratory, bronchus, chest/mediastinal, bone, spine, or joint Container/Tube: Sterile container Specimen Volume: 5 mm(3) Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit fresh tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen.

Specimen Minimum Volume: Fluid: 1 mL Urine-first void: 2 mL Swab: 1 swab Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798 x 2; 87999 (if appropriate for government payers);

URCU
614044

Uric Acid, 24 Hour, Urine

Specimen Requirements: Supplies: Sarstedt 5 mL Aliquot Tube (T914) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84560

FUABF Uric Acid, Body Fluid

75099

Specimen Requirements: Acceptable specimens: Drain, Peritoneal/Ascites, Pleural or Synovial Fluid. Collect 1 mL body fluid, centrifuge and separate to remove cellular material. Send frozen in plastic container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Body Fluid	Frozen (preferred)	180 days
	Refrigerated	5 days
	Ambient	24 hours

CPT Code Information: 84560

URIC Uric Acid, Serum

8440

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	180 days

CPT Code Information: 84550

RURC1
621395

Uric Acid/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 84560; 82570;

U1A1Q
610063

Uridine Diphosphate (UDP) Glucuronosyltransferase 1A1 TA Repeat Genotype, UGT1A1, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81350-UGT1A1 (UDP glucuronosyltransferase 1 family, polypeptide A1) (eg, irinotecan metabolism), gene analysis, common variants (eg, *28, *36, *37)

GALE
64372

Uridine Diphosphate-Galactose 4' Epimerase, Blood

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. For a list of tests that can be ordered together, see Galactosemia-Related Test List. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) or yellow top (ACD) Specimen Volume: 5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated (preferred)	14 days
	Ambient	6 days

CPT Code Information: 82542

UPII
610490

Uroplakin II Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

UPGDW
31892

Uroporphyrinogen Decarboxylase, Washed Erythrocytes

Specimen Requirements:

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time
Washed RBC	Frozen (preferred)	14 days
	Refrigerated	14 days
	Ambient	4 days

CPT Code Information: 82657

UPGD
8599

Uroporphyrinogen Decarboxylase, Whole Blood

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection. This is essential as alcohol suppresses enzyme activity for 24 hours after ingestion. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Ambient	7 days

CPT Code Information: 82657

UPGC
80288

Uroporphyrinogen III Synthase (Co-Synthase), Erythrocytes

Specimen Requirements: All porphyrin tests on erythrocytes can be performed on one collection tube. Patient Preparation: Patient must not consume any alcohol for 24 hours before specimen collection. Container/Tube: Green top (sodium or lithium heparin) Specimen Volume: 4 mL Collection Instructions: Immediately place specimen on wet ice.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
WB Heparin	Refrigerated	7 days

CPT Code Information: 82657

FUROC
35328

UroVysion for Detection of Bladder Cancer, Urine

Specimen Requirements: Specimen Type: Urine Sources: Voided urine, catheterized urine, bladder washings, stoma collections, ureteral brushings or washings, renal pelvic brushings or washings Supplies: FISH for Urothelial Carcinoma Urine Collection Kit (T509) Container/Tube: Preferred: FISH for Urothelial Carcinoma in Urocyte Urine Collection Kit Acceptable: 70% ethanol, PreservCyt,

CytoLyt, ThinPrep UroCyt (UroCyt PreservCyt Solution) Specimen Volume: 30 mL Collection Instructions: 1. Follow instructions included with Urocyte Urine Collection Kit. 2. If kit is not used, submit a random urine specimen with an equal volume of 70% ethanol, PreservCyt, or CytoLyt.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	
	Ambient	

CPT Code Information: 88120

USPF
58104

USP6 (17p13), Aneurysmal Bone Cyst and Nodular Fasciitis, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Collection Instructions: Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used Acceptable: Slides Specimen Volume: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Ambient (preferred)	
	Refrigerated	

CPT Code Information:

USTEK
609476

Ustekinumab Quantitation with Antibodies, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood immediately before the next dose of drug administration (trough level). 2. Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 80299; 83520;

USNU
82388

Ustilago nuda, Mold Grain Rust, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FNSVG
75140

Vaginitis (VG), NuSwab

Specimen Requirements: Collection Container/Tube: APTIMA Multitest, vaginal, or unisex swab Specimen Volume: One swab Collection Instructions: Collect vaginal fluid sample using the Gen-Probe Aptima swab by contacting the swab to the lower third of the vaginal wall and rotating the swab for 10 to 30 seconds to absorb fluid. Immediately place the swab into the transport tube and carefully break the swab shaft against the side of the tube. Tightly screw on the cap. Submit one vaginal swab in APTIMA Multitest, vaginal, or unisex swab. Ship refrigerate.

Specimen Minimum Volume: One swab

Transport Temperature:

Specimen Type	Temperature	Time
Swab	Refrigerated (preferred)	30 days
	Ambient	30 days

CPT Code Information: 87801; 87798 x 3; 87661;

VALPG 37067

Valproic Acid, Free and Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: VALPA-80164; VALPF-80165;

VALPF 37068

Valproic Acid, Free, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80165

VALPA
37066

Valproic Acid, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 80164

VANPA
37069

Vancomycin, Peak, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum for a peak level should be drawn 1 hour after completion of dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	48 hours

CPT Code Information: 80202

VANRA
37071

Vancomycin, Random, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	48 hours

CPT Code Information: 80202

VANTA
37070

Vancomycin, Trough, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw specimen immediately prior to the next dose (within 30 minutes). 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	14 days
	Frozen	365 days
	Ambient	48 hours

CPT Code Information: 80202

VRERP
84406

Vancomycin-Resistant Enterococcus, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by vancomycin-resistant Enterococcus DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Perianal, perirectal, rectal, anal Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Specimen Stability Information:

Refrigerated (preferred)/Frozen Acceptable: Specimen Type: Preserved feces Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair, Para-Pak C and S vial) Specimen Volume: Representative portion of feces Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Within 2 hours of collection, place feces in preservative. Specimen Stability Information: Ambient (preferred)/ Refrigerated Specimen Type: Unpreserved feces Supplies: -Stool Container, Small (Random), 4 oz Random (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit representative sample in fecal container. Specimen Stability Information: Refrigerated (preferred)/Frozen

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87500

FVANG
57669

Vanilla IgG

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. 2. Centrifuge and aliquot 0.5 mL of serum into a plastic vial. 3. Send refrigerate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

VANIL
82621

Vanilla, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top

Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

VH
9254

Vanillylmandelic Acid and Homovanillic Acid, Random, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase homovanillic acid and vanillylmandelic acid results. For 24 hours prior to specimen collection, the patient should not take L-dopa. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Adjust the urine pH to a level between 1 and 5 by adding 50% acetic acid or hydrochloric acid dropwise and checking the pH.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	180 days

CPT Code Information: 83150-HVA; 84585-VMA;

VMA
9454

Vanillylmandelic Acid, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase vanillylmandelic acid results. For 24 hours prior to specimen collection, the patient should not take L-dopa. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at the start of collection. Use 15 mL of 50% acetic acid for children younger than 5 years. If specimen is refrigerated during collection, preservative may be added up to 12 hours after collection. This preservative is intended to achieve a pH of between

approximately 1 and 5. 2. Collect a 24-hour urine specimen. 3. If necessary, adjust urine pH to a level between 1 and 5 by adding 50% acetic acid or hydrochloric acid dropwise and checking the pH. Additional Information: For multiple collections see Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	180 days

CPT Code Information: 84585

VMAR
60274

Vanillylmandelic Acid, Random, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase vanillylmandelic acid results. For 24 hours prior to specimen collection, the patient should not take L-dopa. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Adjust the random urine pH to a level between 1 and 5 by adding 50% acetic acid or hydrochloric acid dropwise and checking the pH.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	180 days

CPT Code Information: 84585

VZV
70581

Varicella Zoster Virus (VZV) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

VZPG
34944

Varicella-Zoster Antibody, IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86787

VZGM
61856

Varicella-Zoster Antibody, IgM and IgG, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86787 x2

VZM
80964

Varicella-Zoster Virus (VZV) Antibody, IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86787

FVZGC
58045

Varicella-Zoster Virus Antibody, IgG, CSF

Specimen Requirements: Specimen Type: Spinal fluid (CSF) Container/Tube: Sterile plastic container Specimen Volume: 0.5 mL Collection Instructions: 1. Collect 0.5 mL CSF in sterile plastic container. 2. Ship refrigerated.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	365 days

CPT Code Information: 86787

LVZV
800168

Varicella-Zoster Virus, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Sources: Spinal, pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Swab Sources: Miscellaneous; dermal, eye, nasal, or throat Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Container/Tube: Multimicrobe

media (M4-RT) and ESwabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5). Specimen Type: Genital swab Sources: Cervix, vagina, urethra, anal/rectal, or other genital sources Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) Container/Tube: Multimicrobe media (M4-RT) (T605) and ESwabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5). Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Supplies: M4-RT (T605) Container/Tube: Preferred: Multimicrobe media (M4-RT) Acceptable: Sterile container with 1 to 2 mL of sterile saline Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in a sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5)

Specimen Minimum Volume: Body Fluid, Ocular Fluid, or Spinal Fluid: 0.3 mL Respiratory Specimens: 1 mL Tissue: 2 x 2-mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

VZVPV
618309

Varicella-Zoster Virus, Molecular Detection, PCR, Varies

Specimen Requirements:

Specimen Minimum Volume: Ocular Fluid and Spinal Fluid: 0.3 mL Body Fluid (pleural, peritoneal, ascites, and pericardial): See Specimen Required Respiratory Specimens: 1 mL Tissue: 2 x 2 mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

VEGF
63019

Vascular Endothelial Growth Factor, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen (preferred)	21 days
	Refrigerated	24 hours

CPT Code Information: 83520

VIP
8150

Vasoactive Intestinal Polypeptide, Plasma

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial. Freeze immediately.

Specimen Minimum Volume: 0.55 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Frozen	90 days

CPT Code Information: 84586

VIPI
70580

Vasoactive Intestine Polypeptide (VIP), Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;

VDSFQ
65036

VDRL Titer, Spinal Fluid

Specimen Requirements: Only orderable as a reflex. For more information see VDSF / VDRL, Spinal Fluid. Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Submit specimen collected in vial 2 if possible. If not, note which vial from which the aliquot was obtained.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 86593

VDSF
9028

VDRL, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Submit specimen collected in vial 2, if possible. If not, note which vial from which the aliquot was obtained.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 86592

VEDOZ
603025

Vedolizumab Quantitation with Antibodies, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Nivolumab (Opdivo) must be discontinued at least 4 weeks prior to testing for vedolizumab quantitation in serum. Collection Container/Tube: Preferred: Red

top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL
Collection Instructions: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80280; 82397;

VEDOL
602807

Vedolizumab Quantitation with Reflex to Antibodies, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7). 2. Nivolumab (Opdivo) must be discontinued at least 4 weeks prior to testing for vedolizumab quantitation in serum. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days

CPT Code Information: 80280; 82397 (if appropriate);

VELV
82917

Velvet Leaf, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FVENE**
75577**Venison IgE**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain re-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003**FBMBL**
57975**Venom Bumble Bee (*Bombus terrestris*) IgE**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FHOBG
57714

Venom Honey Bee IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FWFHG
57799

Venom W-F Hornet IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

VLCZ
35571

Very Long Chain Acyl-CoA Dehydrogenase Deficiency, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred:

Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406-ACADV (acyl-CoA dehydrogenase, very long chain) (eg, very long chain acyl-coenzyme A dehydrogenase deficiency), full gene sequence

VHLE
37839

VHL Gene, Erythrocytosis, Mutation Analysis, Varies

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations. This test is only available as a reflex from the HEMP / Hereditary Erythrocytosis Mutations. VHLE is not a single orderable test.

Specimen Minimum Volume: Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81404-VHL (von Hippel-Lindau tumor suppressor) (eg, von Hippel-Lindau familial cancer syndrome), full gene sequence

Vibrio Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: Culture and Sensitivity Stool Transport Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Vibrio culture, stool; 87077-Identification by MALDI-TOF mass spec (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate);

Vigabatrin (Sabril)

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80339

Vimentin Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, Primary; 88341-TC, If additional IHC;



Viral Susceptibility, Defects in Intrinsic and Innate Immunity, Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB /Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB /Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Skin biopsy or cultured fibroblasts: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81443; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate);

88240-Cryopreservation (if appropriate);

SVISC
610406

Viscosity, Serum

Specimen Requirements:

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 85810

VITAE
605267

Vitamin A and Vitamin E, Serum

Specimen Requirements: Patient Preparation: Patient should fast overnight (12-14 hours); infants should have specimen collected before next feeding. Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into light protected plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 84446; 84590;

VITA
42357

Vitamin A, Serum

Specimen Requirements: Patient Preparation: Patient should fast overnight (12-14 hours); infants should have specimen collected before next feeding. Collection Container/Tube: Preferred: Red

top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial. Serum must be removed from the red blood cells within 2 hours.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 84590

VITAP
605124

Vitamin A, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see VITAE / Vitamin A and Vitamin E, Serum. Patient Preparation: Patient should fast overnight (12-14 hours); infants should have specimen collected before next feeding. Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into light protected plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 84590

FB12
9156

Vitamin B12 and Folate, Serum

Specimen Requirements: Patient Preparation: 1. Patient should be fasting for 8 hours. 2. Do not order on patients who have recently received methotrexate or other folic acid antagonists. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82607-Vitamin B12; 82746-Folate;

B12
9154

Vitamin B12 Assay, Serum

Specimen Requirements: Patient Preparation: This test should not be performed on patients who have received a vitamin B12 injection or radiolabeled vitamin B12 injection within the previous 2 weeks. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged, and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82607

VITB3
604987

Vitamin B3 and Metabolites, Plasma

Specimen Requirements: Patient Preparation: Fasting 4 to 8 hours preferred Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Lavender top (K2 EDTA) Acceptable: K3 EDTA Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	21 days

CPT Code Information: 84591

FPAB
57394

Vitamin B5 (Pantothenic Acid) Bioassay

Specimen Requirements: Specimen Type: Serum Container/Tube: SST Specimen Volume: 2 mL
Collection Instructions: Draw blood in SST (serum separator tube). Allow sample to clot for 30 minutes at room temperature. Spin down and send 1 mL serum frozen in an amber vial (T915) to protect from light.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	21 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 84591

B6PRO
42360

Vitamin B6 Profile (Pyridoxal 5-Phosphate and Pyridoxic Acid), Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen	29 days	LIGHT PROTECTED

CPT Code Information: 82542; 84207;

FBIOT
91902

Vitamin B7, H (Biotin)

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red Top or SST Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood in a plain red-top tube(s) or serum gel tube(s). 2. Centrifuge and send 2 mL serum frozen in amber vial (T915) to protect from light.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 84591

VITE
42358

Vitamin E, Serum

Specimen Requirements: Patient Preparation: Patient should fast overnight (12-14 hours); infants should have specimen collected before next feeding. Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into light protected plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	44 days	LIGHT PROTECTED
	Frozen	44 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 84446

VITK1
42364

Vitamin K1, Serum

Specimen Requirements: Patient Preparation: Patient should fast overnight (12-14 hours); infants should have specimen collected before next feeding. Supplies: Amber Frosted Tube, 5 mL (T915) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 2 mL Collection Instructions: 1. Within 2 hours of

collection, centrifuge the specimen. 2. For red top tubes, immediately aliquot serum into an amber vial (preferred). Serum may sit on whole blood cells up to a maximum of two hours before aliquoting. 3. For serum gel tubes, immediately aliquot serum into an amber vial (preferred). Serum may sit on gel at ambient temperature for a maximum of 24 hours or refrigerated for a maximum of 7 days before aliquoting.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	30 days

CPT Code Information: 84597

VLTB
89190

Volatile Screen, Blood

Specimen Requirements: Container/Tube: Preferred: Gray top (potassium oxalate/sodium fluoride) Acceptable: Lavendar top (EDTA) or green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: Do not use alcohol to clean arm. Use alternatives such as Betadine to cleanse arm before collecting any specimen for volatile testing.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: G0480; 80320 (if appropriate for select payers);

VLTBX
62745

Volatile Screen, Chain of Custody, Blood

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen container seals and documentation required. Preferred: Gray top (potassium oxalate/sodium fluoride) Acceptable: Lavender top (EDTA) or green top (sodium heparin) Specimen Volume: 2 mL Collection Instructions: 1. Do not use alcohol to clean arm. Use alternative such as Betadine to cleanse arm before collecting any specimen for volatile testing. 2. Specimen must be sent

in original tube. Collect specimen, seal, and submit with the associated documentation to satisfy the legal requirements for chain of custody testing.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: 80320; G0480 (if appropriate);

VLTX
62746

Volatile Screen, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect a random urine specimen using the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain of custody testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: 80320; G0480 (if appropriate);

VLTX
8826

Volatile Screen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative is required.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: G0480; 80320 (if appropriate for select payers);

VLTS
8632

Volatile Screen, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial for serum collected in red-top tubes only. Specimen Volume: Full tube Collection Instructions: 1. Do not use alcohol to clean arm. Use alternative such as Betadine to cleanse arm before collecting any specimen for volatile testing. 2. Avoid exposure of specimen to atmosphere. 3. Centrifuge serum gel tubes with 2 hours of collection but do not aliquot. 4. Centrifuge red-top tubes and aliquot serum in plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: G0480; 80320 (if appropriate for select payers);

VHLZZ
614589

Von Hippel Lindau Syndrome, VHL, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (Sodium heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient 4 days/Refrigerated 4 days/Frozen 4 days Additional Information: 1. Specimens are preferred to be received within 4 days of collection. Extraction will be attempted for samples received after 4 days and DNA yield will be evaluated to determine if testing may proceed. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information:

Ambient (preferred) 30 days/Refrigerated 30 days Additional information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as on DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing.

Specimen Minimum Volume: Whole blood: 1 mL; Saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81404

VWD8B
605011

von Willebrand Disease 2N (Subtype Normandy), Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	56 days

CPT Code Information: 85246

AVWPQ
603186

von Willebrand Disease Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390-26 Special Coagulation Interpretation

AVWPI
603551**von Willebrand Disease Profile Technical Interpretation**

Specimen Requirements: Only orderable as part of a profile. For more information see AVWPR / von Willebrand Disease Profile, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85390

AVWPR
603550**von Willebrand Disease Profile, Plasma**

Specimen Requirements:

Specimen Minimum Volume: 2 Plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85240-Coagulation factor VIII assay; 85246-von Willebrand factor antigen; 85397-von Willebrand factor activity; 85390-Technical interpretation; 85245-von Willebrand factor ristocetin cofactor activity (if appropriate); 85247-von Willebrand factor multimer (if appropriate); 85335-Bethesda titer (if appropriate) ; 85335-Coagulation factor VIII inhibitor screen (if appropriate); 85390-26-Special coagulation interpretation (if appropriate);

GNVWD
619201**von Willebrand Disease, VWF and GP1BA Genes, Next-Generation Sequencing, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information:

Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 1 mL; Amniotic fluid: 10 mL; Other specimen types: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81408; 81479; 81479 (if appropriate for government payers); 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Amniotic fluid culture (if appropriate); 81265-Maternal cell contamination (if appropriate);

VWACT
602170

von Willebrand Factor Activity, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85397

VWAG
9051

von Willebrand Factor Antigen, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	14 days

CPT Code Information: 85246

VWFMP
604411

von Willebrand Factor Multimer Analysis, Plasma

Specimen Requirements: Only orderable as part of a coagulation reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AVWPR / von Willebrand Disease Profile, Plasma For more information see Coagulation Guidelines for Specimen Handling and Processing.

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	42 days

CPT Code Information: 85247

VWFMS
603851

von Willebrand Factor Multimer Analysis, Plasma

Specimen Requirements:

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma Na Cit	Frozen	42 days

CPT Code Information: 85247

FVOST
75888

Voriconazole Susceptibility Testing

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen volume: Organism in pure culture Complete and submit with specimen: 1.Fungus Testing Lab request form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in a large infectious container (T146) and label as etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	

CPT Code Information: 87999-Unlisted Microbiology Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen organism.); 87188 x 4 for mould MIC microdilution or agar dilution (if appropriate); 87186 x 4 for yeast MIC microdilution or agar dilution (if appropriate);

VORI
88698

Voriconazole, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80285

FWALP
57561

Wall Eyed Pike (Sander vitreus)(Stizostedium vitreum) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FWCR1
75573

Walnut Component rJug r 1

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86008

FFWNC
75584

Walnut Component rJug r 3

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	84 days
	Ambient	28 days

CPT Code Information: 86008

FWALG
57640

Walnut Food (*Juglans spp*) IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

WALN
82732

Walnut Tree, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BLWX
618850

Walnut-Food Components, IgE, Serum

Specimen Requirements: Only orderable as a reflex. For more information see BLWRF / Walnut-Food, IgE, with Reflex to Walnut-Food Components, IgE, Serum. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum**Volume:** 0.6mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86008 x2**BLW**
82898**Walnut-Food, IgE, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**BLWRF**
618849**Walnut-Food, IgE, with Reflex to Walnut-Food Components, IgE, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.**Specimen Minimum Volume:** 0.6 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WARSQ Warfarin Response Genotype, Varies

610065

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 0030U

FWARP Warfarin, Plasma

75517

Specimen Requirements: **Must submit one specimen per order. Specimens cannot be shared between multiple orders.*** Collection Container/Tube: EDTA (lavender top) or pink top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood in EDTA (lavender top) or pink top tube(s). Plasma gel tube is not acceptable. 2. Centrifuge and send 1 mL of plasma refrigerate in preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Plasma EDTA	Refrigerated (preferred)	30 days
	Ambient	30 days
	Frozen	

CPT Code Information: 80375

WSPV
82659

Wasp Venom, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FWATG
57677

Watermelon IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

WMEL
86304

Watermelon, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WEED1
81882

Weed Panel # 1, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WEED2
81883

Weed Panel # 2, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WEED3
81884 **Weed Panel # 3, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WEED4
81885 **Weed Panel # 4, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WNVCI
36779

West Nile CSF Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	30 days

WNVSI
36778

West Nile Serum Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

WNS
36769

West Nile Virus Antibody, IgG and IgM, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: IgG-86789; IgM-86788;

WNC
36772

West Nile Virus Antibody, IgG and IgM, Spinal Fluid

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Submit specimen from collection vial 2, 3, or 4

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86789; 86788;

WNGS
36771

West Nile Virus Antibody, IgG, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see WNS / West Nile Virus Antibody, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86789

WNGC
36774

West Nile Virus Antibody, IgG, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see WNC / West Nile Virus Antibody, IgG and IgM, Spinal Fluid. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Submit specimen from collection vial 2, 3, or 4

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86789

WNMS
36770

West Nile Virus Antibody, IgM, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see WNS / West Nile Virus Antibody, IgG and IgM, Serum. Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86788

WNMC
36773

West Nile Virus Antibody, IgM, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see WNC / West Nile Virus Antibody, IgG and IgM, Spinal Fluid. Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Submit specimen from collection vial 2, 3, or 4

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	30 days

CPT Code Information: 86788

WNVBL
608438

West Nile Virus, RNA, PCR, Molecular Detection, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood EDTA	Refrigerated	7 days

CPT Code Information: 87798

WNVUR
608437

West Nile Virus, RNA, PCR, Molecular Detection, Random, Urine

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

WNVS
608436

West Nile Virus, RNA, PCR, Molecular Detection, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection centrifuge and aliquot serum into a sterile container. 2. Serum specimens not aliquoted

from the serum gel collection tube into a sterile container will be rejected.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

WNCSF
608435

West Nile Virus, RNA, PCR, Molecular Detection, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Preferred: Vial number 2 Acceptable: Any vial number Submission Container/Tube: Sterile screw cap vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge or heat inactivate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

FONS
75448

Western blot for anti-optic nerve autoantibodies in the serum

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	7 days

CPT Code Information: 84181

WEEPC **Western Equine Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid**
83918

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.8 mL Collection Instructions: Submit specimen from collection vial number 2 (preferred), 3, or 4.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time
CSF	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86654 x 2

WEEP **Western Equine Encephalitis Antibody, IgG and IgM, Serum**
83156

Specimen Requirements: Supplies: Sarstedt Aliquot Tube 5 mL (T914) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86654 x 2

WRW
82666

Western Ragweed, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FWHTG
57553

Wheat IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume:
0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

FWHG4
57570

Wheat IgG4

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume:
0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001**WHT**
82686**Wheat, IgE, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
 Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
 Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003**FWHGY**
57577**Whey IgG**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume:
 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
 Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

WHEY
82622

Whey, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ASHW
82730

White Ash, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BENW
82726

White Bean, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WFHV
82658

White Faced Hornet Venom, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WHIC
82719

White Hickory, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WPIN
82729

White Pine, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

POTA
82710

White Potato, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FWHFE Whitefish IgE 57545

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

SC018 Whole Blood 619408

Specimen Requirements: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or light-blue top (3.2% sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot.

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	14 days
	Frozen	14 days
	Refrigerated	14 days

Whole Egg, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

Whole Exome and Mitochondrial Genome Sequencing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: If a cord blood specimen is received, MATCC / Maternal Cell Contamination, Molecular Analysis, Varies will be performed at an additional charge. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filtration Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection

instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81415-Patient only; 81415, 81416-Patient and one family member comparator sample (duo) (as appropriate); 81415, 81416 x 2-Patient and two family member comparator samples (trio or non-traditional trio) (as appropriate); 81415, 81416 x 3-Patient and three family member comparator samples (quad) (as appropriate); 81460-Whole Mitochondrial Genome; 81465-Whole Mitochondrial Genome Large Deletion Analysis; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

WESDX
616068

Whole Exome Sequencing for Hereditary Disorders, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: If a cord blood specimen is received, MATCC / Maternal Cell Contamination, Molecular Analysis, Varies will be performed at an additional charge. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filtration Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional

specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81415-Patient only; 81415, 81416-Patient and one family member comparator sample (duo) (as appropriate); 81415, 81416 x 2-Patient and two family member comparator samples (trio or non-traditional trio) (as appropriate); 81415, 81416 x 3-Patient and three family member comparator samples (quad) (as appropriate);

WESR
616070

Whole Exome Sequencing Reanalysis, Varies

Specimen Requirements: For most patients, a new specimen submission will not be required. Testing can be performed using stored DNA from the original whole exome sequencing test. To order testing on the stored specimen, see Additional Testing Requirements. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filtration Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper or blood spot collection card Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How

to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: The first reanalysis: No charge; For all subsequent reanalysis requests: 81417;

WGSDX
614363

Whole Genome Sequencing for Hereditary Disorders, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens for each family member. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. If a cord blood specimen is received, MATCC / Maternal Cell Contamination, Molecular Analysis, Varies will be performed at an additional charge; maternal blood sample is required. 2. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type:

Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower quantity/quality of DNA yielded from saliva, some aspects of the test may not perform as well as DNA extracted from a whole blood sample. When applicable, specific gene regions that were unable to be interrogated will be noted in the report. Alternatively, additional specimen may be required to complete testing. Specimen Type: Muscle tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation Instructions. Specimen Volume: 10 to 80 mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81425-Patient only; 81425, 81426-Patient and one family member comparator sample (duo) (as appropriate); 81425, 81426 x 2-Patient and two family member comparator samples (trio or non-traditional trio) (as appropriate); 81425, 81426 x 3-Patient and three family member comparator samples (quad) (as appropriate); 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

WGSR
614664

Whole Genome Sequencing Reanalysis, Varies

Specimen Requirements:

Specimen Minimum Volume: Whole blood: 1 mL; Other specimen types: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: First reanalysis: No charge; 81427-For all subsequent reanalysis requests;

WRGR
82830

Wild Rye Grass, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WILL
82731

Willow, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WT11
70582

Wilms Tumor (WT-1) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only
Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

WNDZ
619409

Wilson Disease, ATP7B Full Gene Sequencing with Deletion/Duplication, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Additional Information: Due to lower concentration of DNA yielded from saliva, it is possible that additional specimen may be required to complete testing. Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours) Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL; Blood spots: 2 spots; Skin biopsy, cultured fibroblasts, or saliva: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81406

FWING Wingscale (Atriplex Canescens) IgE

57955

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

WORM Wormwood, IgE, Serum

82680

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

X-Linked Adrenoleukodystrophy, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Supplies: Fibroblast Biopsy Transport Media (T115) Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, or blood spot collection card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is a fingerstick. For detailed instructions, see How to Collect Dried Blood Spot Samples. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. Due to lower concentration of DNA yielded from blood spot, it is possible that additional specimen may be required to complete testing. 2. For collection instructions, see Blood Spot Collection Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777). 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800).

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81405-ABCD1 (ATP-binding cassette, sub-family D [ALD] member 1) (eg, adrenoleukodystrophy) full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

X-Linked Hyper IgM Syndrome, Blood

Specimen Requirements: Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: Send whole blood specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, it is recommended that specimen collection be performed at the

same time of day.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	72 hours	GREEN TOP/HEP

CPT Code Information: 88184-Flow cytometry, cell surface, cytoplasmic; 88185 x 6-Each additional marker;

FCDX3
75843

Xylazine Confirmation (Qualitative), Umbilical Cord, Tissue

Specimen Requirements: Only orderable as a reflex test.

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80375

YMCRO
35576

Y Chromosome Microdeletions, Molecular Detection, Varies

Specimen Requirements:

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Frozen	
	Refrigerated	

CPT Code Information: 81403-DAZ/SRY (deleted in azoospermia and sex determining region Y)

(eg, male infertility), common deletions (eg, AZFa, AZFb, AZFc, AZFd)

YFHV 82657

Yellow Faced Hornet Venom, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

YJV 82661

Yellow Jacket Venom, IgE, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL for every 5 allergens requested
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

YERSC 606222

Yersinia Culture, Feces

Specimen Requirements: Patient Preparation: Patient should not use barium or bismuth for 7 to 10 days before specimen collection. Supplies: Culture and Sensitivity Stool Transport Vial (T058)
Container/Tube: Commercially available transport system specific for recovery of enteric pathogens

from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen
Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Ambient (preferred)	4 days
	Refrigerated	4 days

CPT Code Information: 87046-Yersinia Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

YAP1
70583

Yes-Associated Protein (YAP) Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: -Formalin-fixed, paraffin-embedded tissue block OR -2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: None

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FYOG
57915

Yogurt (Lactobacillus bulgaricus) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003**BTB46**
605254**ZBTB46 Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded tissue block

Transport Temperature:

Specimen Type	Temperature	Time
TECHONLY	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**VZIKM**
618559**Zika Virus, IgM Antibody Capture ELISA, Serum****Specimen Requirements:****Specimen Minimum Volume:** 0.8 mL**Transport Temperature:**

Specimen Type	Temperature	Time
Serum	Frozen	30 days

CPT Code Information: 86794

VZIKU
619431

Zika Virus, PCR, Molecular Detection, Random, Urine

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect random urine in a sterile container. 2. Label specimen as urine.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87662

VZIKS
619432

Zika Virus, PCR, Molecular Detection, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Within 2 hours of collection, centrifuge and aliquot the serum into a sterile container. 2. Serum specimens not aliquoted from the serum gel collection tube into a sterile container will be rejected.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87662

EZNT8
64926

Zinc Transporter 8 (ZnT8) Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86341

ZNU
8591

Zinc, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with this test. If barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Metals Analysis Specimen Collection and Transport for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens for multiple collections.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 84630

ZN_S
7735

Zinc, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metal tests. If gadolinium-, iodine, or barium-containing contrast media has been administered, the specimen should not be collected for 96 hours. Supplies: -Metal Free Specimen Vial (T173) -Metal Free B-D Tube (No Additive), 6 mL (T184) Collection Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 0.8 mL Collection Instructions: 1. This specimen must always be drawn first. 2. Do not collect specimen from a line. 3. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. Serum must be removed from cellular fraction within 4 hours of specimen collection. Avoid hemolysis. 4. Remove the stopper. Carefully pour specimen into a Mayo

metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 5. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 84630

ZNUCR
615259

Zinc/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with this test. If barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	14 days

CPT Code Information: 84630; 82570;

ZNCU
615260

Zinc/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ZNUCR / Zinc/Creatinine Ratio, Random, Urine. Patient Preparation: High concentrations of barium are known to interfere with most metal tests. If barium-containing contrast media has been administered, the specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection

Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert
Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert
Specimen Volume: 3 mL
Collection Instructions: 1. Collect a random urine specimen. 2. See Metals Analysis Specimen Collection and Transport for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Urine	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 84630

FZIP
57107

Ziprasidone (Geodone, Zeldox)

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

FZOLP
57738

Zolpidem (Ambien), serum or plasma

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80368

FCDUD
75787

Zolpidem, Umbilical Cord Tissue

Specimen Requirements: Only orderable as part of a profile-see FCDSU

Transport Temperature:

Specimen Type	Temperature	Time
Tissue	Refrigerated (preferred)	7 days
	Frozen	14 days

ZONI
83685

Zonisamide, Serum

Specimen Requirements: Supplies: Sarstedt Aliquot Tube, 5 mL (T914) Collection Container/Tube: Red top (serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 2 hours of collection, centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 80203

FZCCE
57562

Zucchini (*Cucurbita* spp) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

MULT
35577

Zygoty Testing (Multiple Births), Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. For instructions for testing patients who have received a bone marrow transplant, call 800-533-1710. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Due to its complexity, consultation with the laboratory is required for all prenatal testing; call 800-533-1710 to speak to a genetic counselor. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: 1. A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. ? Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Additional Information: 1. A separate culture charge will be assessed under CULFB / Fibroblast Culture for Biochemical or Molecular Testing. An additional 3 to 4 weeks is required to culture fibroblasts before genetic testing can occur. 2. All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Acceptable: Specimen Type: Confluent cultured amniocytes Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured amniocytes from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: All prenatal specimens must be accompanied by a maternal blood specimen; order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen.

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells; ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); 81266-Each additional specimen (eg additional cord blood donor, additional fetal samples from different cultures, or additional zygosity in multiple birth pregnancies) (as needed);

P2PHI
608462

[-2]Pro Prostate-Specific Antigen with Prostate Health Index, Serum

Specimen Requirements: Patient Preparation: 1. Specimens for testing should be collected prior to prostate manipulations such as digital rectal examination (DRE), prostatic massage, transrectal ultrasound (TRUS), and prostatic biopsy. 2. A 6-week waiting period between needle biopsy and specimen collection is recommended. 3. Specimens should not be collected from patients receiving therapy with high biotin (vitamin B7) doses (ie, >5 mg/day) until at least 8 hours following the last biotin administration. Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Within 3 hours of collection, centrifuge, aliquot serum into a plastic vial, and refrigerate. Freeze sample within 24 hours of collection and send frozen.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time
Serum Red	Frozen (preferred)	150 days
	Ambient	24 hours
	Refrigerated	24 hours

CPT Code Information: 84153-Total PSA; 84154-Free PSA; 86316-[-2]ProPSA;