Welcome to Willamette Valley Medical Center. Our laboratory provides the testing you need to provide your patient amazing care every time. Whether you use our laboratory for your physician office testing and/or during inpatient hospitalization, our goal is quality results when you need them.

Our laboratory was recognized in 2012 as first-runner up Laboratory of the Year by Medical Laboratory Observer, a national peer-reviewed publication. Over the past few years, we have reduced turnaround time significantly, offering you the best service possible. When time and quality are important, I hope you’ll look to us for results.

Willamette Valley Laboratory Services is accredited by the College of American Pathologists. While many tests are offered here in our laboratory, we also utilize a network of reference laboratories to supply additional testing for our patients. Our primary reference laboratory is Laboratory Corporation of America, located in Seattle, Washington. We also routinely refer specimens to Salem Health Laboratories, Oregon Health Science University, and ARUP Laboratories.

We operate two patient service centers to meet the needs and schedules of outpatients and we also provide specimen couriers in the McMinnville area twice a day.

Anatomic pathology services are provided by Pacific Pathology Associates, located in Salem, Oregon. Their direct telephone number is 503-561-5350.

If you have any questions or concerns about laboratory services, we are here to help. You can reach laboratory client services by calling the main laboratory at 503-435-6490.

You may also contact me directly, at 503-435-6491. I look forward to the opportunity to meet your laboratory needs.

Sincerely,

Karl E. Kamper, MT(ASCP), FACHE
Director of Laboratory Services

You Matter. Amazing Care Every Time.
<table>
<thead>
<tr>
<th>Tube Color</th>
<th>Additive</th>
<th>Inversions (For Proper Mixing)</th>
<th>General Uses</th>
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<tbody>
<tr>
<td>Gold Top Serum Separator Tube (SST)</td>
<td>Clot activator and gel for serum separation</td>
<td>5</td>
<td>For serum determinations in chemistry. May be used in diagnostic testing of serum for infectious disease. Tube inversions ensure mixing of clot activator with blood. Blood clotting time: 30 minutes.</td>
</tr>
<tr>
<td>Mint Green Plasma Separator Tube (PST)</td>
<td>Lithium heparin and gel for plasma separation</td>
<td>8</td>
<td>For plasma determinations in chemistry. Tube inversions ensure mixing of anticoagulant (heparin) with blood to prevent clotting. APPROVED FOR HOSPITAL USE ONLY</td>
</tr>
<tr>
<td>Red Top Tube</td>
<td>Clot activator, Silicone coated (plastic)</td>
<td>5</td>
<td>For serum determinations in chemistry. May be used for routine blood recipient screening and diagnostic testing of serum for infectious disease. Tube inversions ensure mixing of clot activator with blood. Blood clotting time: 60 minutes.</td>
</tr>
<tr>
<td>Royal Blue (EDTA) Trace Metals tube</td>
<td>Clot activator (plastic serum) K2EDTA (plastic)</td>
<td>8</td>
<td>For trace-element, toxicology, and nutritional-chemistry determinations. Special stopper formulation provides low levels of trace elements (see package insert). Tube inversions ensure mixing of either clot activator or anticoagulant (EDTA) with blood.</td>
</tr>
<tr>
<td>Green</td>
<td>Sodium heparin Lithium heparin</td>
<td>8</td>
<td>For plasma determinations in chemistry. Tube inversions ensure mixing of anticoagulant (heparin) with blood to prevent clotting. APPROVED FOR HOSPITAL USE ONLY</td>
</tr>
<tr>
<td>Grey</td>
<td>Potassium oxalate/ sodium fluoride Sodium fluoride/Na2 EDTA Sodium fluoride (serum tube)</td>
<td>8</td>
<td>For glucose determinations. Oxalate and EDTA anticoagulants will give plasma samples. Sodium fluoride is the antilycolytic agent. Tube inversions ensure proper mixing of additive with blood.</td>
</tr>
<tr>
<td>Yellow ACD Tube</td>
<td>Acid citrate dextrose additives (ACD):</td>
<td>8</td>
<td>ACD for use in blood bank studies, HLA phenotyping, and DNA and paternity testing.</td>
</tr>
<tr>
<td>Lavender Top (EDTA) Tube</td>
<td>Spray-coated K2EDTA (plastic)</td>
<td>8</td>
<td>K2EDTA and K3EDTA for whole blood hematology determinations. K2EDTA may be used for routine immunohematology testing, and blood donor screening. Tube inversions ensure mixing of anticoagulant (EDTA) with blood to prevent clotting.</td>
</tr>
<tr>
<td>Pink top (EDTA) Tube</td>
<td>Spray-coated K2EDTA (plastic)</td>
<td>8</td>
<td>Used for routine blood bank or immunohematology testing and blood donor screening. Tube inversions prevent clotting. To be used for transfusion testing/crossmatch, the tube must be appropriately labeled with the transfusion armband.</td>
</tr>
<tr>
<td>Light Blue, Citrated (3.2%) Tube</td>
<td>Buffered sodium citrate 0.109 M (3.2%) plastic</td>
<td>3-4</td>
<td>For coagulation determinations, selected platelet function assays and routine coagulation determination. Tube inversions ensure mixing of anticoagulant (citrate) to prevent clotting. Ensure proper fill volume by comparing fill level to the frosted fill-line on the tube.</td>
</tr>
</tbody>
</table>
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Revised 2/5/13
General Information

Mission
Our mission is to provide quality healthcare through outstanding customer service, commitment to safety and dedication to clinical excellence.

Customer Service
The laboratory at Willamette Valley Medical Center provides the testing you need to give your patients the best care possible. Whether you use our laboratory during inpatient hospitalization and/or for your physician office testing, we are committed to providing the highest quality results when you need them. All laboratory departments are staffed with certified medical technologists and medical laboratory technicians. Board certified pathologists provide pathology services and are available for laboratory consultations.

Our managers meet regularly to discuss the needs of physicians and patients. These meetings allow us the opportunity to make changes in a dynamic environment. We are committed to providing the services you expect from a laboratory partner. Our focus is always on what will provide the best care for the patient and how we can enhance your ability to provide that care.

This directory has been designed to give you the proper information so that patient specimens can be tested promptly and results reported in an efficient and accurate manner.

Laboratory Customer Service can be reached at (503) 435-6490.

Quality Assurance
We actively monitor quality performance indicators for the entire process of laboratory services, from specimen submission to laboratory performance, reporting and billing. Performance is measured through customer surveys, employee surveys, audits and process measures. These indicators are used to identify quality improvement opportunities. All indicators and activities are monitored by the management team. Our team is responsive to your needs as we partner with you to obtain the clinical excellence your patients expect.

Accreditation
Willamette Valley Laboratory Services is accredited by the College of American Pathologists. We are licensed with the State of Oregon Health Division with CLIA certification. Our transfusion service is also registered with the Food and Drug Administration.
Laboratory Hours and Outpatient Service Centers

The laboratory is staffed, 24 hours/day, 365 days of the year for inpatient testing. We have two outpatient service centers that provide specimen collection services.

<table>
<thead>
<tr>
<th>WVMC Hospital Outpatient Laboratory</th>
<th>Altimus Plaza Draw Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>2700 SE Stratus Avenue, McMinnville</td>
<td>375 NE Norton Lane, McMinnville</td>
</tr>
<tr>
<td>Monday to Friday, 8:00 am to 5:00 pm</td>
<td>Mon, Wed and Fri, 8:00am to 1:00 pm</td>
</tr>
<tr>
<td>Express Registration: 8:00 am to 4:30 pm</td>
<td>Tues and Thur, 8:00am to 5:00 pm</td>
</tr>
<tr>
<td>Fax Orders to: (503) 435-6493</td>
<td>Fax Orders to: (503) 472-2894</td>
</tr>
</tbody>
</table>

Courier Services

The laboratory provides courier services Monday – Friday, excluding holidays. Couriers pick up specimens in the McMinnville area each morning from 10:30am and 11:30 am. The courier picks up specimens from McMinnville, and surrounding communities in the evenings from 5:00pm to 7:00pm. Lockboxes are available for after-hours pick up at no cost to your clinic.

Supplies

To order supplies and test request forms call the laboratory at (503) 435-6490 or fax a supply order form to (503) 435-6493.
Testing Policies

Requesting Tests
Willamette Valley Medical Center will only perform tests that have been requested by an authorized clinician. Requests to perform tests should be made on a clinical laboratory requisition form, or another appropriate form that contains the following information:

- Patient Name
- Patient Date of birth
- Street Address, City, State, Zip code
- Telephone number, including the area code
- Sex
- Referring clinician name and telephone number
- International Classification of Diseases (ICD-9) code by specificity or narrative diagnosis
- Responsible party’s name and relationship to patient, ID or policy number and group number.

Requisitions for clinical laboratory tests must be signed by the ordering clinician.

Cancellations
Tests may be cancelled without charge while specimens are in transit. Once the specimen has been received in the laboratory and testing has been initiated, it can not be cancelled. Testing can not be cancelled after results have been issued to the clinician. For cancellation requests, please contact the laboratory at (503) 435-6490.

Billing
Unless otherwise marked on the requisition when testing is submitted, Willamette Valley Medical Center will bill patients or their insurance for laboratory testing.

Patient and Insurance Billing
If requested, or as required by law, Willamette Valley Medical Center will bill patients directly within the United States. The same information that is required for third party and contract billing is required when submitting testing for direct patient billing.

The patient’s full name and address must appear on the test request form. Many patients subsequently request insurance billing for those plans with which Willamette Valley Medical Center participates. In those cases, diagnosis information will be required in order to file a claim. We are unable to accept a diagnosis from a patient. For this reason, diagnosis must be provided with all patient billed testing.
You must provide:

- Patient Name
- Patient Date of birth
- Street Address, City, State, Zip code
- Telephone number, including the area code
- Sex
- Referring clinician name and telephone number
- International Classification of Diseases (ICD-9) code by specificity or narrative diagnosis
- Responsible party’s name and relationship to patient, ID or policy number and group number.

It is helpful to attach a copy of the patient’s insurance card or information to the request. If the required information is not provided, the client may be billed for payment. We participate with a variety of traditional insurance plans and manager care organizations (HMOs and PPOs). For a listing of insurance carriers contracted by Willamette Valley Medical Center please contact your service representative.

If you fail to provide complete information, Willamette Valley Medical Center is unable to bill the patient, and will contact your office to obtain the required information. We can not accept diagnosis information from the patient directly.

**Client Billing**

Willamette Valley Medical Center can bill tests directly to the physician office or care facility. We will bill your account at the end of the month. The following information may be provided if submitted with the order:

- Patient Name
- Patient Date of Birth
- Patient Sex
- Date of Service
- Testing Performed
- Test Price
- Referring Physician Name/Number

Payment is due upon receipt. Late payments may result in additional charges.
**Medicare and Medicaid**

Willamette Valley Medical Center may bill Medicare and various Medicaid programs directly for clients.

When ordering tests for patients under Medicare, physicians or authorized individuals should only order tests that are medically necessary for the diagnosis and treatment of a patient, rather than for screening purposes. The Office of the Inspector General takes the position that a physician who orders medically unnecessary testing may be subject to civil penalties.

The Centers for Medicare and Medicaid Services (CMS) has implemented uniform National Coverage and Administrative Policies for clinical laboratory services that ensure the medical necessity of certain services rendered to Medicare beneficiaries. In addition to the National Coverage Policies subject to National Coverage Determinations (NCD), CMS allows Medicare Contractors to develop their own Local Coverage Determinations policies (LCD), which vary depending on your region. Laboratory tests that are subject to NCDs or LCDs are often referred to as Limited Coverage Tests. Willamette Valley Medical Center has identified Medicare Limited Coverage tests with an asterisk prior to the suggested CPT Code on the laboratory requisition.

Medicare contractors require medical necessity documentation in order to determine coverage for limited coverage tests. Coverage may be denied for a limited coverage test when it is submitted without specific diagnosis information that supports the medical necessity for the testing.

Whenever you order a test that is considered Limited Coverage an ICD-9 code or narrative diagnosis must be provided on the laboratory requisition. The ICD-9 code should indicate the medical necessity that you believe is appropriate for the test. Please provide the ICD-9 code that most accurately describes the patient’s condition. Do not choose a code merely to secure claim payment. ICD-9 codes must be provided in valid format, including 4th and 5th digit specificity when required. The ICD-9 code that you provide must appear in the patient’s medical records in order to support the necessity of the testing in the event of a post-payment review.

**Advance Beneficiary Notice**

In the event that a test is determined by Willamette Valley Medical Center’s Medicare carrier to be medically unnecessary, the laboratory may only bill the patient if an Advanced Beneficiary Notice (ABN) has been completed and signed by the patient prior to the time that the specimen was collected.

**Willamette Valley Medical Center has identified Medicare Limited Coverage tests with an asterisk prior to the suggested CPT Code on the laboratory requisition.** Anytime you believe that a test may be considered medically unnecessary by Medicare, the patient should be asked to sign a completed ABN. When ordering testing that is indicated as Medicare Limited Coverage, the physician must collect an Advanced Beneficiary Notice prior to submitting the specimen for testing. A new ABN must be collected each time testing is submitted.
For patients that present at the Outpatient Laboratory, Willamette Valley Medical Center will collect an ABN prior to performing testing when Medicare Limited Coverage tests have been requested and the provided ICD-9 code does not meet the requirement of medical necessity as determined by Medicare. The patient will be given the opportunity to pay for the testing or to refuse testing.

The ABN ensures that the patient understands that he/she will be responsible to pay for any services requested on the form that Medicare does not cover for one of the following reasons:

- The test is subject to NCD or LCD and the diagnosis for which the test is ordered is not considered to be indicative of medical necessity by Medicare.
- The test is ordered more frequently than Medicare considers medically necessary.
- The test is for research of investigational use only and is not approved by the Food and Drug Administration.

All of the information on the ABN must be completed. The test name must be clearly marked or written on the ABN. Please use the test name as it appears on the laboratory requisition. Do not use synonyms or abbreviations. Be sure that the patient reads, understands, and signs the ABN prior to the specimen being collected. The form must be dated and the date should correspond to the date on which the specimen is collected.

For questions related to billing, please contact the Business Office at 503-435-6535.

**Reference Ranges**

Willamette Valley Laboratory Services establishes reference ranges for tests according to the patient population found in our service area. Reference ranges are updated as necessary with changes in the patient population or test methodologies. The current reference range is always included with the patient’s laboratory report.

**Specimen Retention**

After testing is completed, samples are kept for a short period of time in compliance with regulatory requirements and then discarded. Urine samples are retained for 24 hours, serum samples for 7 days and whole blood for 3 days.

When requesting additional testing, specimen appropriateness is determined by many factors including the storage temperature of the specimen and the stability of the requested analyte post collection. Please call the laboratory at (503) 435-6490 to determine whether a previously submitted specimen is still available and appropriate for additional testing.

All add-on testing must be accompanied by a requisition.
Specimen Collection

Introduction
The quality of any laboratory test begins at the time of collection. Care, skill and knowledge when preparing the patient and specimen are essential to the provision of the highest quality standards for testing and services. The patient must be properly prepared or be given adequate instructions so that the best possible specimen can be collected. The specimen must be collected, and then properly processed, packaged and transported to the laboratory in a timely manner and under environmental conditions that will not compromise the integrity of the specimen. After all of these activities take place, analysis can occur. The specimen collection and handling process can be completed by you and your staff, or by referring your patient to one of our collection sites.

General Guidelines
Specific specimen requirements for each test are listed in the General Test Listing section of the directory. Specimen requirements generally include the requested volume, storage and transport temperature, and any special handling notes. If additional information is needed for the interpretation of the test results or there are specific instructions for patient preparation, they are listed along with specimen requirements.

Specimen Volumes
It is critical that an adequate specimen volume is submitted for analysis. Vacutainer® tubes should always be filled, completely exhausting the vacuum when submitting them for testing. The volume requested in this directory is enough for initial analysis as well as for any confirmatory testing that must be performed. If inadequate specimen is submitted, we may be unable to perform the initial test or required confirmatory procedures. If repeat or confirmatory testing cannot be performed, the report will indicate that the specimen quantity submitted was “QNS” (Quantity Not Sufficient) for additional testing. When submitting a serum or plasma for testing, it is typically necessary to collect a volume of whole blood that is 2.5 times the amount of serum or plasma required. For example, if a test requires 4 mL of serum or plasma, 8 to 10 mL of whole blood must be collected.

Patient Preparation
Many tests require that the patient be prepared in a specific way to ensure clinically useful results. An example of this is a fasting glucose value. Other tests have special collection instructions that the patients need to follow to provide the best results, like a 24 hour urine specimen. Special requirements for patient preparation or specimen collection can be found in the General Test Listing, or by calling the laboratory prior to specimen collection.
Fasting Requirements
For the majority of tests performed on serum, plasma or whole blood, as fasting specimen is preferred. Non-fasting specimens often contain fat particles that can interfere with specimen analysis. During the fasting period the patient can continue to drink water, and take any medications, unless otherwise indicated by the clinician. They should refrain from food and liquids other than water, such as coffee, tea, milk, juice, etc.

Patient Identification
Proper patient and sample identification is essential to providing quality laboratory results. Patient identification must include the use of two identifiers, and may involve the patient, family member, caregiver, or the nursing staff in the identification process.

Labeling Specimens
The laboratory cannot accept any specimen for processing which is not properly labeled. Specimens must be labeled with two identifiers. All specimen labels must have a minimum of:

- Patient’s First and Last Name, and a
- Second identifier (preferably the patient’s date of birth.)

The date, time and initials of the person collecting the sample should be recorded on the specimen label or on the requisition that will accompany the specimen to the laboratory.

Specimen labels should be placed on the blood collection tube, parallel and covering the manufacturer pre-printed label. See example below.

Specimen labels should not be wrapped around the specimen in a barber pole fashion. This makes it difficult to leave the original identification visible when attaching an LIS label to the specimen.
Do not place identification labels on lids of containers. The specimen is unlabeled once the lid is removed.

Sputum specimens collected in the sputum collection containers must be submitted only in the inner container.

Culture specimens must have the label on the tube, not on the outer paper envelope, paper bag, etc.

Specimens submitted for fluid or microbiology testing must have the source listed on the label. Labeling must be completed before leaving the patient bedside, or before the patient leaves the collection area.

Labeling information must match the information contained on orders or requisitions accompanying the specimen.

Specimens that are unlabeled or incompletely labeled are unacceptable for analysis.

**Serum, Plasma or Whole Blood Collection**

Draw blood in the color-coded Vacutainer tube indicated in the alphabetical test listing. For serum or plasma, draw approximately a volume of whole blood that is 2.5 times the amount of serum or plasma required. For example, if a test requires 4 mL of serum or plasma, 8 to 10 mL of whole blood must be collected. Completely fill the vacutainer whenever possible to eliminate dilution from the anticoagulant or preservative and immediately mix the blood by gently and thoroughly inverting the tube five to ten times. Most blood specimens can be collected by venipuncture, unless otherwise indicated in the General Test Requirements.

**Specimen Collection by Venipuncture**

Supplies needed: tourniquet, alcohol pad, venipuncture needle or a winged collection set needle, holder or syringe, vacutainer tubes, gauze or cotton ball, adhesive bandage or tape, pen, gloves, and a sharps disposal container.

Position the patient.

Check potential venipuncture sites.

- Inspect both arms for good veins. When selecting a venipuncture site feel for the median cubital vein first; it is usually bigger, better anchored, and bruises less than other veins. The cephalic vein is the second choice because it does not bruise or roll as easily. The basilic vein is the third choice. Think “middle, out, in, down” for vein selection.

- When this is not possible, other sites include the back of the hand. Veins on the underside of the wrist are not recommended for use.

- Do not perform venipuncture from an arm with a fistula, from the same side as a mastectomy, or above an IV site.
Apply the tourniquet. Stretch the tourniquet so that it is tight around the arm, but not painful. Tie with a partial loop to make removal of the tourniquet easy. Avoid leaving the tourniquet on for more than one minute. The tourniquet should not be left on for more than 2 minutes.

Choose an appropriate vein.

Put gloves on.

Apply antiseptic. (70% alcohol or iodine). Allow to air dry. Do not touch the cleansed site until after the venipuncture.

Perform the venipuncture.

Grasp the patients arm firmly, but gently.

Use your thumb to draw the skin taut.

Enter the vein with the bevel of the needle upward. The angle of insertion should be 30° or less.

Fill vacutainer tubes in appropriate order: Blood Culture, Blue, Red, Gold, Green, Lavender, Grey.

While keeping the holder in place, depress and evacuated tube into the holder. Fill the tube completely until the vacuum is exhausted, and blood ceases to flow. Remove the tube from the holder, and mix tube well. (Invert 5-8 times). Use additional tubes as necessary.

For syringe draws, fill the syringe by pulling back gently on the plunger, keeping the end of the plunger approximately 1 cc ahead of the blood. After step 17, fill the vacutainer tubes in appropriate order from the syringe, using a safety transfer device if applicable. Never use the plunger to force blood from the syringe into the vacutainer tube.

Release and remove the tourniquet.

Withdraw the needle. Activate the safety device, and discard in sharps container. Do not recap the needle.

Apply pressure to the venipuncture site.

Discard the tourniquet.

Apply pressure bandage and check patient for signs of syncope. See Procedure LAB.SC.0005 for handling adverse reactions to phlebotomy.

In the presence of the patient, label tubes with the LIS label, or other appropriate label per Procedure LAB.SC.0001. Record the initials of collector on the label, and on the LIS requisition label.

Instruct patient to leave the pressure dressing on for at least 5 minutes.

When mixing the anticoagulant and blood in a tube, gentle inversion will avoid hemolysis. Never shake a tube of blood.

Adverse reactions may occur during phlebotomy. If the patient reports feeling numbness, tingling, or electric shock-like sensation, terminate the venipuncture immediately and provide appropriate aid and assistance.
Blood Cultures

Supplies needed: Blood culture vials; BACTEC Plus Aerobic/F vials (blue), BACTEC Lytic/10 Anaerobic/F vials (purple), BACTEC Peds Plus/F (pink). Venipuncture supplies, Betadine or 2% Tincture of Iodine or ChloraPrep, Alcohol prep.

Select site for venipuncture. Mark skin with surgical marker if vein is difficult to locate.

Thoroughly cleanse the skin with 70% alcohol.

With a sterile applicator, apply 2% tincture of iodine or 10% povidone-iodine solution (Betadine) to the venipuncture site, starting at the center and moving outward in a circular motion. Allow to completely air dry before collecting blood. Do no blot or wipe away.

Note: Do not remove iodine or Betadine from skin before collecting blood.

For an alternate cleaning method to steps 2 and 3, ChloraPrep may be used. CAUTION: ChloraPrep may not be used on infants less than 2 months old.

Pinch the wings on the applicator to break the ampule and release the antiseptic. Do not touch the sponge.

Wet the sponge by repeatedly pressing and releasing the sponge against the treatment area until liquid is visible on the skin.

Use repeated back-and forth strokes of the applicator for approximately 30 seconds. Completely wet the venipuncture site with antiseptic.

Allow the area to air dry for approximately 30 seconds. Do no blot or wipe away.

Prepare blood culture vials. Examine each vial for evidence of contamination (cloudiness, bulging or depressed septum, leakage) and damage or deterioration (turbidity, contamination, discoloration or darkening). DO NOT USE a vial if any defect is detected. After removing the cap, wipe the rubber diaphragm with a sterile sponge soaked in 70% alcohol and allow to air dry. DO NOT USE IODINE to wipe off the vial top, as iodine will disintegrate the vial septum.

Apply a tourniquet and visually locate the vein to be punctured but DO NOT TOUCH the cleansed site. See procedure notes.

Collect the specimen using one of the following methods:

**Syringe Draw**

Use largest gauge needle that the patient’s vein will allow.

Note: Draw blood cultures separate from other tests. If it is necessary to draw with other tests, inoculate blood culture vials first to reduce likelihood of contamination.

Remove needle completely before touching the cotton to the puncture site. Transfer blood from the syringe into upright blood culture vials using a transfer device. Allow vacuum in vial to draw the blood in.

Note: DO NOT FORCE blood into vial. Do not overfill.

Refer to table below for fill volumes.

Monitor the volume being drawn into the vials by the graduated marks on the syringe.
**Butterfly Needle**

Attach butterfly to the barrel. Place the barrel over end of *upright* blood culture vials.

Carefully observe the direction of blood flow when starting sample collection. The vacuum in the vial will usually exceed 10mL, so the user should monitor the volume collected by means of the 5 mL graduated marks on the vial label. Do not overfill.

Refer to table below for fill volumes.

When the desired amount has been drawn, remove the needle from the vial. See procedure notes.

Inoculate the aerobic bottle before inoculating the anaerobic vial.

**OPTIMAL VOLUMES FOR BLOOD CULTURE VIALS**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Plus Aerobic/F</th>
<th>Lytic/10 Anaerobic/F vials</th>
<th>Peds Plus/F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonate to 1 year</td>
<td>Use Peds Vial</td>
<td>Use Peds Vial</td>
<td>1 – 3 mL</td>
</tr>
<tr>
<td>1 to 6 years</td>
<td>Use Peds Vial</td>
<td>Use Peds Vial</td>
<td>1 – 3 mL</td>
</tr>
<tr>
<td>Adolescent to Adult</td>
<td>8 – 10 mL</td>
<td>8 – 10 mL</td>
<td>Do Not Use</td>
</tr>
</tbody>
</table>

Note: For suboptimal specimen volumes <8mL, place the entire specimen in the aerobic vial.

Remove Betadine or iodine from the skin using alcohol.

Label vials according to procedure LAB.SC.0001, including the collection date, time, and site of collection (e.g., “left arm”, “right hand”, “subclavian line red port”, etc.) DO NOT COVER VIAL BARCODE LABEL.

Transport the specimen promptly to the laboratory.

Notes:

Contamination rates are higher with line draws than with venipuncture, so blood cultures should not be collected through lines except to test for an infected line.

Optimum recovery of isolates will be achieved by adding maximum amounts of blood. Use of lower volumes may adversely affect recovery and/or time to detection of organisms.
Stool collection

Random Stool Collection
Collect the stool sample into a clean, dry container. **Do not** contaminate the specimen with urine, water or toilet paper. A specipan may be used to cover the toilet for specimen collection.

Using a tongue blade/spoon provided, transfer a portion of the specimen into a clean container for transport to the laboratory. If there is any blood, mucous or pus with the stool, be sure to include these areas with the specimen for transport to the laboratory.

Label the specimen container with your name and birth date and the date and time of the collection.

The specimen must be delivered as soon as possible to the laboratory. If transport is delayed, refrigerate the specimen.

Specimen Collection for Ova and Parasite Analysis
Additional steps are necessary for ova and parasite exams. You will be given two vials.
Transfer stool into each vial until the preservative liquid reaches the fill line on the vial label.
Be sure to mash the specimen in the vial so that it will mix with the preservative.
Once the vial lid is on tight, shake the vial to create a soup like mixture.

**If the specimen is for ova and parasite testing, do not refrigerate the specimen**

Timed Stool Collection
Collect the entire first stool sample of the timed period. Use a clean, dry container. All stools after this one should be collected in the same container.

Once the time period is over (24, 48, or 72 hours) send the entire collection to the laboratory.
The specimen may be refrigerated during the collection period.
Urine Collection

Men
Wash your hands with soap and water before beginning specimen collection.
Use towelette to wash the end of the penis. If uncircumcised, retract the foreskin and wash with towelette.
Open the urine container. Do not touch the inside of the container or lid. Place the lid face up on a clean surface.
Begin to urinate into the toilet. When the urine stream is well established, place the container under the stream and fill approximately ½ full. Finish urinating into the toilet.
Replace the lid on the container and ensure that it is sealed tightly.

Women
Wash your hands with soap and water before beginning specimen collection.
Open the urine container. Do not touch the inside of the container or lid. Place the lid face up on a clean surface
Find a stable position over the toilet.
Use several towelettes to clean the urinary area by separating the vaginal folds. Wipe from front to back with the towelettes before beginning collection. Repeat at least two times.
Keeping the skin apart, begin to urinate into the toilet. When the urine stream is well established, place the container under the stream and fill approximately ½ full. Finish urinating into the toilet.
Replace the lid on the container and ensure that it is sealed tightly.

24 Hour Urine Collection
Patients may eat and drink as usual during the day of collection unless the specimen requirements indicate otherwise.
WARNING: Some of the 24 hour urine specimens require preservatives. Often this preservative is a strong acid. If this preservative should accidentally spill, carefully and thoroughly wash the area with water. To avoid skin contact with the preservative, collect the urine specimen in a cup, and pour the contents into the 24 hour urine storage container.

It is best to start specimen collection in the morning. Begin the test by urinating into the toilet. Do not save this urine. Begin specimen collection with an empty bladder.
Write the date and time on the storage container.
For the next 24 hours, save all urine in this container. Urinate into a specimen collection
container, and pour the contents into the storage container.

Keep the storage container refrigerated between collections.

Exactly 24 hours after beginning the test, urinate one last time into the container, being sure to empty the bladder. Add this specimen to the storage container and bring the entire specimen to the laboratory for testing.

Record the date and time that the last urine specimen was added to the container.

The specimen must be delivered as soon as possible to the laboratory.

Most of the tests requiring 24 hour urine collection are relatively expensive. Their accuracy depends largely on the completeness of the specimen. If any portion of the urine sample is lost (for example at the time of bowel movement), the collection is not accurate and must be started again. If the urine become contaminated with stool the sample is unsatisfactory and collection must be started again.
Specimen Processing

Whole Blood

Collect whole blood according to instructions provided for the individual test. Evacuated tubes used to collect whole blood specimens contain anticoagulant. Thoroughly mix the blood with the additives by gently inverting the tube. Blood that is properly mixed with anticoagulant will not clot. Maintain the specimen at the correct temperature according to the individual test instructions. Never freeze whole blood, unless specifically instructed in the specimen requirements. To minimize the risk of freezing and hemolysis, never place whole blood specimens directly against cool packs.

Plasma

Plasma is the liquid portion of the blood that remains when separated from red blood cells. Plasma contains fibrinogen and other clotting factors. Evacuated tubes used to collect plasma specimens contain anticoagulant and, frequently, a preservative. The additive in each tube is specified on the label and tube stoppers are color coded according to the additive present. Consult the individual test specimen requirements to determine the correct additive tube to use during specimen collection.

To prepare plasma from whole blood, the specimen must be centrifuged. Plasma should be separated from the cells immediately following centrifugation when a gel separator tube is not used. Centrifuge for at least 15 minutes at 3000 RPM. Pipette the plasma into a clean plastic screw-cap vial and attach a specimen label to the aliquot tube. Do not transfer red cells to the aliquot tube. Label the tube as PLASMA.

Serum

Serum is the liquid portion of the blood that remains when separated from red blood cells after the clotting process has occurred. Serum does not contain fibrinogen and other clotting factors. Evacuated tubes used to collect serum specimens often contain a gel barrier, known as an SST (Serum Separator Tube). Occasionally serum separator tubes can not be used for specimen collection. Consult the individual test specimen requirements to determine if a plain red top tube is required.

To prepare serum from whole blood, the specimen must be allowed to clot and then centrifuged. The specimens should be allowed to clot for at least 30 minutes prior to centrifugation. Specimens must be centrifuged within one hour of collection, or test results will be affected. Serum should be separated from the cells immediately following centrifugation when a gel separator tube is not used. Centrifuge for at least 15 minutes at 3000 RPM. Pipette the plasma into a clean plastic screw-cap vial and attach a specimen label to the aliquot tube. Do not transfer red cells to the aliquot tube.

Frozen Serum or Plasma Specimens

Serum or plasma specimens need to be frozen only if specifically stated in the specimen requirement. When a frozen specimen is required, it is essential to freeze the specimen as soon
after collection and separation from the red blood cells as possible. Always freeze specimens in a plastic aliquot tube, unless otherwise indicated. Do not freeze glass tubes or plastic serum separator tubes.

Specimen Transport

Different tests have different temperature requirements during transportation and storage. Failure to provide the appropriate conditions can render a specimen unsuitable for testing. The following considerations apply:

Frozen: -10° C or colder:

When ordering multiple tests on a patient, prepare a separate aliquot for each test requiring a frozen specimen. Pour off serum or plasma into a plastic tube before freezing. The serum or plasma should be separated from the red blood cells prior to being frozen. Do not freeze whole blood unless specifically indicated by the specimen requirements. To prevent injury and exposure to potentially infectious material, do not ship frozen specimens in glass tubes or SST gel barrier tubes (glass or plastic). Do not package frozen specimens with non-frozen specimens. Specimens must remain frozen during shipment. Package in an appropriate shipping container with enough dry ice to keep the specimen frozen. Insulate the specimen by wrapping the sample in paper towels to ensure that it does not come in direct contact with the dry ice. Dry ice requirements: 5 lbs. = 8-10 hours; 10 lbs. = 24 hours.

Refrigerated 2-8° C:

Package specimen in an appropriate shipping container with a frozen coolant pack. Insulate the specimen by placing a barrier (ie: Paper towels) to ensure that it does not come in direct contact with the coolant pack. One pack cools for 8-10 hours; 2 packs cool for 24 hours if the shipping container remains unopened. Pack cools for 8-10 hours; 2 packs cool for 24 hours if the shipping container remains unopened.

Room Temperature (Ambient) 15-30° C:

Room temperature specimens need not be packaged with coolant; however, extreme weather conditions could affect specimen quality. Take weather conditions into consideration when leaving specimens in locked boxes for couriers. Storage and transport temperature is specified as room temperature (15 to 30°C), refrigerated (2 to 8°C) or frozen (-10°C or colder). When temperature is not indicated, the sample may be stored and shipped in the most convenient manner for the client.
Rejection of Specimens

The accuracy and quality of a laboratory test is dependent on the quality of the specimen received. When the integrity of the specimen is in question, a decision has to be made about acceptance or rejection. Specimens that are delivered in a condition that is dangerous to lab personnel, including specimens in syringes with needles, will be rejected. The ordering clinician or office will be contacted and advised of the problem.

The following represent some reasons for specimen rejection or test cancellation:

- Improper/incomplete specimen labeling.
- Incomplete or incorrect laboratory requisition.
- Insufficient (QNS) or incorrect quantity in container.
- Specimens collected in sodium citrate tubes that have not completely filled.
- Incorrect or inappropriate specimen container (sterile, separation gel, anticoagulant or other additive, transport media).
- Incorrect specimen type (urine vs. serum vs. plasma vs. CSF).
- Incorrect storage conditions (room temperature, refrigerated, frozen).
- Specimen has gone beyond the time limit criteria. Accurate testing requires that some tests be completed within specified time limits after collection.
- Patient preparation incorrect or incomplete (fasting or diet restrictions).
- Specimen collected at the incorrect time of day.
- Specimen not allowed to clot completely at room temperature for 30 minutes before centrifuging.
- Failure to mix specimen thoroughly with additive immediately after collection resulting in clot formation.
- Techniques or procedures that cause red cell damage (refer to Hemolysis section).
- Specimen has leaked in transit.
- Specimen has been sent in expired transport media.

Urine specimens:
- Not refrigerated
- Wrong container type (i.e. gray vacutainer tube for urinalysis testing is not acceptable)
- Incomplete 24-hour collection (or other timed collection)
- Non-sterile container (for culture)
- Not a clean-catch, midstream specimen (for culture)
Stool specimens:
Testing for H. Pylori Stool Antigen cannot be performed on “watery” stools. Formed (solid) stool specimens will be rejected for the following tests:
- Culture
- WBC’s
- Electrolytes
- Clostridium difficile testing.

Hemolysis
Hemolysis usually occurs at the time of the venipuncture but can only be detected after centrifugation, when the liquid portion of the blood has been separated from the cells. It occurs when the red blood cell wall is damaged and hemoglobin is released. The liquid portion of the blood will appear pink to red, reflecting the amount of released hemoglobin. Hemoglobin interferes with many laboratory tests. Some causes of and ways to prevent hemolysis are:

Collection of Blood.
- Avoid prolonged application of the tourniquet (no more than two minutes).
- Avoid a probing, traumatic venipuncture.
- Avoid using a needle that is too small (less than 22 gauge). A 20-21 gauge needle is recommended.
- Avoid drawing from a hematoma.
- Make sure alcohol preparation of draw site is dry. (residual alcohol may cause RBC lysis).
- If the tube is filling very slowly, adjust the needle position to obtain a steady flow. Allow 1-2 mL of blood to flow into the tube, then discard that tube (as waste) and replace with a fresh tube.
- Avoid drawing the plunger back too forcefully if using a needle and syringe. Alternating gentle pressure with a short release will yield best results.
- Immediately after the tube has been filled with blood, gently invert the tube several times. Do not shake or vigorously mix the tube.

Transfer of Blood.
- When transferring a specimen from a syringe through the transfer device, allow the tube to fill at its normal speed. Do not apply pressure to the plunger.
- Position the transfer device so the blood flows down the side of the tube rather than splashing to the bottom.
- Immediately after the tube has been filled with blood, gently invert the tube several times. Do not shake or vigorously mix the tube.
Extreme temperatures.

Do not expose the specimen to extreme temperatures (heating or freezing) or direct sunlight.

Specimen Processing

Centrifuge (spin down) specimens according to the centrifuge manufacturer’s specifications, a minimum of 15 minutes at 3000 rpm.
## Critical Values

<table>
<thead>
<tr>
<th>Test</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hematology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hematocrit</td>
<td>≤ 18%</td>
<td>Adult Male: &gt;60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adult Female: &gt;55%</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>≤ 6 gm/dl</td>
<td></td>
</tr>
<tr>
<td>White Blood Cell Count</td>
<td>≤ 2,000/mm³</td>
<td>≥50,000/mm³</td>
</tr>
<tr>
<td>Platelet Count</td>
<td>≤ 30,000/mm³</td>
<td></td>
</tr>
<tr>
<td><strong>Coagulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INR</td>
<td></td>
<td>&gt; 5.0</td>
</tr>
<tr>
<td>aPTT</td>
<td></td>
<td>&gt; 120 seconds</td>
</tr>
<tr>
<td><strong>Blood Gas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>≤ 7.25</td>
<td>≥ 7.59</td>
</tr>
<tr>
<td>pCO₂</td>
<td>≤ 19 mmHg</td>
<td>≥ 67 mmHg</td>
</tr>
<tr>
<td>pO₂</td>
<td>≤ 43 mmHg</td>
<td></td>
</tr>
<tr>
<td>HCO₃</td>
<td>≤ 12 mmol/l</td>
<td>≥ 45 mmol/l</td>
</tr>
<tr>
<td>tCO₂</td>
<td>≤ 12 mmol/l</td>
<td>≥ 45 mmol/l</td>
</tr>
<tr>
<td><strong>Chemistry</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>≤ 6 mg/dl</td>
<td>≥ 12 mg/dl</td>
</tr>
<tr>
<td>Bilirubin – Newborn</td>
<td></td>
<td>≥ 18 mg/dl</td>
</tr>
<tr>
<td>Glucose – Adult</td>
<td>≤ 60 mg/dl</td>
<td>≥ 500 mg/dl</td>
</tr>
<tr>
<td>Glucose – Newborn</td>
<td>≤ 30 mg/dl</td>
<td>≥ 180 mg/dl</td>
</tr>
<tr>
<td>Lactic Acid</td>
<td></td>
<td>≥ 4.0 mmol/L</td>
</tr>
<tr>
<td>Magnesium</td>
<td>≤ 1.2 mg/dl</td>
<td>≥ 5.0 mg/dl</td>
</tr>
<tr>
<td>Phosphorous</td>
<td>≤ 1.0 mg/dl</td>
<td></td>
</tr>
<tr>
<td>Potassium</td>
<td>≤ 3.0 mEq/l</td>
<td>≥ 6.0 mEq/l</td>
</tr>
<tr>
<td>Sodium</td>
<td>≤ 120 mEq/l</td>
<td>≥ 160 mEq/l</td>
</tr>
<tr>
<td>Bicarbonate HCO₃</td>
<td>≤ 12 mEq/l</td>
<td>≥ 45 mEq/l</td>
</tr>
<tr>
<td>TCO₂</td>
<td>≤ 12 mmol/l</td>
<td>≥ 45 mmol/l</td>
</tr>
<tr>
<td><strong>Drug Levels</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetaminophen</td>
<td></td>
<td>≥ 300 mcg/dl</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td></td>
<td>≥ 15 mcg/dl</td>
</tr>
<tr>
<td>Digoxin</td>
<td></td>
<td>≥ 2.0 mcg/dl</td>
</tr>
<tr>
<td>Phenobarbitol</td>
<td></td>
<td>≥ 40 mcg/dl</td>
</tr>
<tr>
<td>Phenytoin</td>
<td></td>
<td>≥ 30 mcg/dl</td>
</tr>
<tr>
<td>Salicylate/ASA</td>
<td></td>
<td>≥ 700 mcg/dl</td>
</tr>
<tr>
<td>Theophylline</td>
<td></td>
<td>≥ 30 mcg/dl</td>
</tr>
<tr>
<td>Valproic Acid</td>
<td></td>
<td>≥ 100 mcg/dl</td>
</tr>
<tr>
<td>Gentamicin Peak</td>
<td></td>
<td>≥ 25 mcg/dl</td>
</tr>
<tr>
<td>Gentamicin Trough</td>
<td></td>
<td>≥ 1 mcg/dl</td>
</tr>
<tr>
<td>Vancomycin Peak</td>
<td></td>
<td>≥ 60 mcg/dl</td>
</tr>
<tr>
<td>Vancomycin Trough</td>
<td></td>
<td>≥ 25 mcg/dl</td>
</tr>
<tr>
<td><strong>Microbiology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSF</td>
<td>Positive Gram Stain or Culture</td>
<td></td>
</tr>
<tr>
<td>Joint Fluid/Aspirate</td>
<td>Positive Gram Stain or Culture</td>
<td></td>
</tr>
<tr>
<td>Blood</td>
<td>Positive Blood Culture</td>
<td></td>
</tr>
<tr>
<td><strong>Transfusion Medicine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAT</td>
<td>Positive in neonate &lt;2 weeks of age.</td>
<td></td>
</tr>
</tbody>
</table>
Willamette Valley Medical Center has partnered with Pacific Pathology Associates, Inc. of Salem, Oregon to provide pathology services for your patients. Pacific Pathology Associates, Inc. is a private practice group of 8 Pathologists and 2 Pathologists’ Assistants. We interpret biopsies, Pap tests, and other specimens that come from 5 hospitals and over 225 private physicians’ offices in 17 cities in the Mid-Willamette Valley Region of Oregon.

**Pacific Pathology Associates, Inc. offers the following services:**

- Surgical Pathology
- Cytopathology
- Hematopathology
- Immunohistochemistry
- Flow Cytometry
- Fine Needle Aspiration
- Bone Marrow Aspiration and Biopsy
- Archival Tissue Storage

Specialized testing and referral to outside labs is available if needed.

Pap test processing can include 4 tests out of the Sure Path or Thin Prep vials: Pap, HPV, Gonorrhea and Chlamydia. Pacific Pathology Associates, Inc offers conventional slide processing and interpretation.

Pathologists can be reached 24 hours a day.

Pathology Consultation and Report Requests: Phone (503) 561-5350, Fax (503) 561-4781

Billing Office: 1-866-587-6731

Mailing address: P.O. Box 2209, Salem, OR, 97308

Physical address: Pathology Dept., 665 Winter St. SE, Salem, OR 97301

Current pathology collection instructions and procedures are located at:

**5 HIAA Urine 24h**

Specimen Requirements: Urine 24 Hour  
Collection Container: 24 Hour Urine Collection Container, Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 5HIAA24UP

**5'-Nucleotidase**

5' nucleotidase is used to investigate the origin of increased serum alkaline phosphatase. It is a liver-related enzyme used to work up cholestatic/biliary obstruction.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST), Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83915

**ABO Rh**

Specimen Requirements: 
Collection Container: Pink Top (K2 EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code: ABORH

**Abscess Culture + Gram Stain**

Specimen Requirements: 
Collection Container: See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code: ABS
**Acetaminophen Level**

Useful for the measurement of acetaminophen. Results are used in the diagnosis and treatment of acetaminophen overdose.

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology  
CPT Code: 82003

**Acetone Qual**

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology  
CPT Code: 

**Acetylcholine Receptor Bind Ab**

Myasthenia gravis (MG) is a neuromuscular disorder characterized by muscle weakness, most commonly due to autoantibody-mediated loss of functional acetylcholine receptors (AChR) in the neuromuscular junction. This assay aids in the differential diagnosis of MG-like muscle weakness, in differentiating between generalized MG and ocular MG, and in monitoring therapeutic response. If binding antibodies are negative, assays for blocking and modulating antibodies should be considered.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83519

**Actin Smooth Muscle Ab IgG**

Actin is the major antigen to which smooth muscle antibodies react in autoimmune hepatitis. F-Actin IgG antibodies are found in 52-85% of patients with autoimmune hepatitis (AIH) or chronic active hepatitis and in 22% of patients with primary biliary cirrhosis (PBC). Anti-actin antibodies have been reported in 3-18% of sera from normal health controls.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83516
Activated Protein C Resistance

Screening test for the Factor V Leiden gene mutation and other causes of activated protein C resistance.

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 85307

Adenovirus Group Ab Quant

Serologic diagnosis of adenovirus infection. At least 12 types of adenovirus have been associated with illnesses such as noninfluenzal acute respiratory disease, pneumonia, epidemic keratoconjunctivitis, acute febrile pharyngitis, and acute hemorrhagic cystitis. Asymptomatic infections can make serologic responses difficult to interpret.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86603

Adrenocorticotropic Hormone

Determination of ACTH is useful in differentiating between primary and secondary adrenocortical hypo-and hyperfunctional disorders: Addison's disease, Cushing's syndrome, adrenal carcinoma, ectopic ACTH syndrome, and nodular hyperplasia.

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube
Frozen, separate plasma from cells
ACTH should be drawn between 7 AM and 10 AM. Collect into iced plastic or siliconized glass lavender-top (EDTA) tube, noting time of collection. After venipuncture, immediately immerse the tubes in an ice bath. Separate plasma from cells by centrifugation

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82024
AFB Culture + Smear

Specimen Requirements:
Collection Container:

Performed at: Laboratory Corporation of America, AFB  
CPT Code:

Alanine Aminotrans ALT (SGPT)

ALT is present in high activity in liver, kidney, heart and skeletal muscle. It is increased in many liver conditions, extensive trauma to skeletal muscle and some cardiac inflammation.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)
Draw blood in an SST tube. Spin down and submit 1.0 mL of serum. Avoid hemolysis.

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 84460

Albumin

Albumin is the most abundant protein in the body and is known as the carrier protein because of its ability to bind and transport ligands. Useful for evaluating hydration status, malnutrition and malabsorption.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)
Draw blood in an SST tube. Spin down and submit 1.0 mL of serum.

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 82040

Albumin Fluid

Albumin is the most abundant protein in the body and is known as the carrier protein because of its ability to bind and transport ligands. Useful for evaluating hydration status, malnutrition and malabsorption.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container
Draw blood in an SST tube. Spin down and submit 1.0 mL of serum.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 82040
**Alcohol Ethanol Blood**

Useful for the measurement of ethanol. Results are used in the medical evaluation of alcohol intoxication and poisoning. This test is not to be used for legal purposes.

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Serum 1.0 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Red Top (No Additive) Tube</td>
</tr>
<tr>
<td></td>
<td>Do not prepare venipuncture site with alcohol or remove stopper from tube. Use betadine to clean the venipuncture site.</td>
</tr>
</tbody>
</table>

Performed at: Willamette Valley Laboratory Services, Toxicology  
CPT Code: 82055

**Aldolase**

Aids in the diagnosis of primary disease of skeletal muscle; myocardial infarction and viral hepatitis.

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Serum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Gold Top Serum Separator Tube (SST)</td>
</tr>
<tr>
<td></td>
<td>Refrigerated, separate serum from cells</td>
</tr>
<tr>
<td></td>
<td>Hemolyzed specimens are not acceptable.</td>
</tr>
</tbody>
</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82085

**Aldosterone**

The principal use of aldosterone measurement is in the diagnosis of primary hyperaldosteronism, which is most commonly caused by a specific type of adrenal adenoma, Conn syndrome. Secondary aldosteronism is more common. Work-up is especially indicated in younger patient with hypertension and hypokalemia not induced by diuretic agents. Secondary aldosteronism may occur in congestive heart failure, cirrhosis with ascites, nephrosis, potassium loading, sodium-depleted diet, toxemia of pregnancy and other states of contraction of plasma volume, and Bartter syndrome.

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Serum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Gold Top Serum Separator Tube (SST)</td>
</tr>
<tr>
<td></td>
<td>Refrigerated, separate serum from cells</td>
</tr>
<tr>
<td></td>
<td>No isotopes administered 24 hours prior to venipuncture. In order to facilitate interpretation of test results, the patient should be taken off medications for at least three weeks prior to sample collection, Dietary sodium levels during the period prior</td>
</tr>
</tbody>
</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82088
Alkaline Phosphatase Bone Spec  

When the Total Alkaline Phosphatase activity is increased, the isoenzyme may be useful in determining the source of the increased activity.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Frozen, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84080

Alkaline Phosphatase Isoenzyme  

When the Total Alkaline Phosphatase activity is increased, the isoenzyme may be useful in determining the source of the increased activity.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84080

Alkaline Phosphatase Total  

Alkaline phosphatase is present mainly in bone, liver, kidney, intestine, placenta and ling. It may be increased during bone metabolism.

Specimen Requirements: Serum 1.0 mL  
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 84075

Allergen Aspergillus fumiga Ab  

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86003
<table>
<thead>
<tr>
<th>Allergen Crab Ab</th>
<th>RASTCRAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Requirements: Serum</td>
<td></td>
</tr>
<tr>
<td>Collection Container: Gold Top Serum Separator Tube (SST)</td>
<td></td>
</tr>
<tr>
<td>Refrigerated, separate serum from cells</td>
<td></td>
</tr>
<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
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</tr>
<tr>
<td>CPT Code: 86003</td>
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</table>

<table>
<thead>
<tr>
<th>Allergen Milk Cow Ab</th>
<th>RASTMILKC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Requirements: Serum</td>
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</tr>
<tr>
<td>Collection Container: Gold Top Serum Separator Tube (SST)</td>
<td></td>
</tr>
<tr>
<td>Refrigerated, separate serum from cells</td>
<td></td>
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<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td></td>
</tr>
<tr>
<td>CPT Code: 86003</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allergen Prof Region Zone 14</th>
<th>RASTZONE14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Requirements: Serum</td>
<td></td>
</tr>
<tr>
<td>Collection Container: Gold Top Serum Separator Tube (SST)</td>
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<tr>
<td>Refrigerated, separate serum from cells</td>
<td></td>
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<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td></td>
</tr>
<tr>
<td>CPT Code:</td>
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<table>
<thead>
<tr>
<th>Allergen Prof Region Zone 17</th>
<th>RASTZON17</th>
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<tbody>
<tr>
<td>Specimen Requirements: Serum</td>
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<tr>
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<table>
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<tr>
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<td>CPT Code:</td>
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### Allergen Profile Whole Egg

**RASTEGG**

<table>
<thead>
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<tbody>
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<td></td>
<td>Refrigerated, separate serum from cells</td>
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</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86003

### Allergen Soybean Ab

**RASTSOYB**

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
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<tbody>
<tr>
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<td></td>
<td>Refrigerated, separate serum from cells</td>
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Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86003

### Allergen Wheat Ab

**RASTWH**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
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<tr>
<td></td>
<td>Refrigerated, separate serum from cells</td>
</tr>
</tbody>
</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86003

### Alpha 2-Antiplasmin

**A2PLASM**

The most important inhibitor to plasmin, α2-antiplasmin prevents plasmin action on fibrin during fibrinolysis. Decreased levels may lead to easy bruising, epistaxis, hematuria, menorrhagia, hemarthrosis, and bleeding after trauma or surgery.

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Plasma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Light Blue Top (3.2% Sodium Citrate) Tube</td>
</tr>
<tr>
<td></td>
<td>Frozen, separate plasma from cells</td>
</tr>
</tbody>
</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85410
**Alpha Fetoprotein Tumor Marker**

Screening test for open neural tube defects. Detects 80% of open spina bifida and 90% of anencephaly. Please note that this test does not provide screening for Down syndrome or trisomy 18.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
The following information must be provided: gestational age, date on which the patient was stated gestation age, how gestational age was determined (LMP, EDD, US), patient's weight, patient's date of birth, patient's race (white, black, other), and in

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82105

**Alpha-1 Antitrypsin**

Alpha-1 Antitrypsin level may be increased in normal pregnancy and in several diseases including chronic pulmonary disease, hereditary angioedema, Renal, gastric, liver and pancreatic diseases, diabetes, carcinomas and Rheumatoid diseases. Alpha-1 Antitrypsin may be decreased in emphysema, hepatic cirrhosis, Respiratory distress syndrome of the newborn, nephrosis, malnutrition and cachexia.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82103

**Alpha-1 Antitrypsin Phenotype**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 
Aluminum Level

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube
Room temperature, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82108

Aminolevulinic Acid Urine 24h

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container, Preserved with Glacial Acetic Acid
Frozen

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

Amiodarone Level

Amiodarone is a class III antiarrhythmic agent approved for the treatment of life-threatening ventricular tachyarrhythmias. Because of potential toxicity the serum level of this drug should be monitored. Its major elimination is by hepatic excretion. Negligible renal excretion occurs. Use of the drug is restricted because of its many side effects, including pulmonary fibrosis, neuromuscular weakness, exacerbation of congestive heart failure, tremor, thyroid dysfunction, and interaction with other drugs. Potassium or magnesium deficiency should be corrected. AST and ALT should be monitored.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells
Do not use Gold Top (SST) Serum Separator Tube to collect this test.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82491
Ammonia

Ammonia is a waste product of protein catabolism, which is potentially toxic to the central nervous system. Increased ammonia levels are found in patients with impaired hepatic function.

Specimen Requirements: Plasma 1.0 mL
Collection Container: Green Top (Sodium Heparin) Tube
On ice
Draw blood in a green-top (lithium heparin or sodium heparin) tube. Immediately place specimen on ice. Spin down and remove plasma from cells within 15 minutes of draw. Send 1.0 mL of plasma refrigerated. Plasma that is not removed from the cells with

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82140

Amphetamines Ur by GCMS

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82145

Amylase

Amylase is a digestive product produced by the salivary glands and the exocrine pancreas. Increased amylase occurs with many pancreatic conditions.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82150

Amylase Fluid

Amylase is a digestive product produced by the salivary glands and the exocrine pancreas. Increased amylase occurs with many pancreatic conditions.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 82150
Amylase Peritoneal

Amylase is a digestive product produced by the salivary glands and the exocrine pancreas. Increased amylase occurs with many pancreatic conditions.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 82150

Amylase Pleural

Amylase is a digestive product produced by the salivary glands and the exocrine pancreas. Increased amylase occurs with many pancreatic conditions.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 82150

Amylase Urine

Urine amylase is an enzyme often found elevated in pancreatic disorders.

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container Refrigerated
Submit 10mL from a timed urine collection. No preservative. Starting and ending times of collection and total volume are required on request form for processing.

Performed at: Willamette Valley Laboratory Services, Urine CPT Code: 82150

Amylase Urine 24h

Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine CPT Code:
ANA (IFA) + Reflex Pattern

Detect antibodies to nuclear antigens.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86038

Anaerobic Culture

Specimen Requirements:
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:

Angiotensin-I Converting Enz

ACE is increased in arcoidosis, Gaucher's disease and lymphangiomyomatosis.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
Centrifuge within 1 hour of collection.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82164

Antibody Identification

Specimen Requirements:
Collection Container:

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine
CPT Code:

Antibody Screen

Specimen Requirements:
Collection Container: Pink Top (K2 EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine
CPT Code: 86850
Antibody Titer

Specimen Requirements: Serum
Collection Container: RED

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code:

Anticardiolipin Profile G+A+M

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

Anticardiolipin Profile G+M

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

Antidiuretic Hormo Vasopressin

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84588

Antigen Typing

Specimen Requirements: Whole Blood
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code:
Anti-Hu Antibodies

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86256

Antinuclear Ab Screen

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

Antinuclear Ab(ANA Direct)Qual

Detect antibodies to nuclear antigens.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86038

Antistreptolysin O Ab

Document exposure to streptococcal streptolysin O. A marked rise in titer or a persistently elevated titer indicates that a Streptococcus infection or poststreptococcal sequelae are present

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86060
**Antithrombin III**  
AT3

Confirmation and characterization of acquired or congenital AT deficiency

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85300

**Antithrombin III Immunologic**  
AT3IMM

Confirmation and characterization of congenital AT deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85301

**Anti-Yo Ab**  
YOABS

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

**Apolipoprotein A-1**  
APOA1

Apo A-1 comprises 60% to 70% of the protein content of HDL. Apo A-1 serves as an activator of LCAT which is involved in the transport of cholesterol from peripheral tissues to the liver where it is degraded. Decreased serum HDL cholesterol levels have been reported to correlate with increased risk of coronary artery disease (CAD); however, Apo A-1 has been suggested as a better discrimination of CAD than HDL. Apo A-1 levels also correlate with survival rates or risk factors for patients with myocardial infarction and peripheral vascular disease. Measurement of Apo A-1 may also aid in the diagnosis of Tangier disease (absence of alpha-lipoprotein).

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82172
Arterial Blood Gas

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas  
CPT Code: 82803

Aspartate Aminotrans AST(SGOT)

AST is present in high activity in liver, heart and skeletal muscle. It is often increased following myocardial infarction, pulmonary embolism, skeletal muscle trauma, alcoholic cirrhosis and some types of hepatitis.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 84450

Aspergillus Abs Quant DID

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

Aspergillus fumigatus Ab

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86606

Bacterial Antigens Panel

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container  
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:
Barbiturates Conf Ur GCMS

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82205

Bartonella Antibody Panel

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:

Basic Metabolic Panel

Includes: Sodium; Potassium; Chloride; Carbon Dioxide; BUN; Calcium; Creatinine; Glucose.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 80048

BCR-ABL CML-ALL PCR

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:

Benzodiazepines Conf Ur GCMS

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 80154
## Beta Hydroxybutyrate

<table>
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<th>Specimen Requirements:</th>
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Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82010

## Beta Strep Culture

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Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:

## Beta-2 Glycoprotein I Ab G+A+M

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</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86146

## Beta-2-Glycoprotein I Ab IgA

Assess the risk of thrombosis in patients who may be at risk for antiphospholipid syndrome (APS). This test should be used in conjunction with current traditional anticardiolipin and anticoagulant tests.

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<tr>
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</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86146
**Beta-2-Glycoprotein I Ab IgG**  
B2GLYPG

Assess the risk of thrombosis in patients who may be at risk for antiphospholipid syndrome (APS). This test should be used in conjunction with current traditional anticardiolipin and anticoagulant tests.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86146

**Beta-2-Glycoprotein I Ab IgM**  
B2GLYPM

Assess the risk of thrombosis in patients who may be at risk for antiphospholipid syndrome (APS). This test should be used in conjunction with current traditional anticardiolipin and anticoagulant tests.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86146

**Beta2-Microglobulin**  
B2MIC

Beta 2 Microglobulin normally passes through the glomerulus into the proximal tubule where much of it is reabsorbed. Serum levels are indicative of glomerular function. When impaired, serum levels rise in inverse ratio to glomerular filtration rate.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82232
Bile Acids Total

Used to evaluate the enterohepatic cycle consisting of the biliary system, intestine, portal circulation, and hepatocytes. The concentration of bile acids in serum is elevated in patients with many structural liver diseases, due to the inability of the liver to extract bile acids efficiently from portal blood. Intrahepatic cholestasis of pregnancy (ICP) is a temporary condition caused by maternal liver dysfunction during pregnancy. It is characterized by intense generalized pruritus (itchiness) which usually begins in the third trimester. ICP is also known as cholestatic jaundice of pregnancy, cholestatic hepatitis, icterus gravidarum, and obstetric cholestasis. Maternal blood levels of bile salts are often at least three times the normal level in ICP; however, the levels may be 10 to 100 times normal.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells
Patient should be fasting; however, a two-hour postprandial level has been used by various physicians in order to evaluate hepatic function after the gallbladder has been completely emptied (ie, challenge the liver with a high level of bile acids in the p

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82239

Bilirubin Direct

Bilirubin is a by-product of the normal destruction of red cells in the spleen, liver and bone marrow. May be elevated in liver diseases, anemia and gallbladder obstruction.

Specimen Requirements: Serum0.5 mL
Collection Container: Gold Top Serum Separator Tube (SST)
Protect from light.

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82248

Bilirubin Fluid

Specimen Requirements: Body Fluid1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container
Protect from light.

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 82247
**Bilirubin Total**

Specimen Requirements: Body Fluid 0.5 mL  
Collection Container: Gold Top Serum Separator Tube (SST)  
Protect from light.

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 82247

**BK Virus PCR Quant**

Detection and quantitation of BK virus in plasma specimens as an aid in the diagnosis and management of BK virus infections.

Specimen Requirements: Plasma  
Collection Container: Lavender Top (EDTA) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87799

**BK Virus PCR Quant Urine**

Detection and quantitation of BK virus in plasma specimens as an aid in the diagnosis and management of BK virus infections.

Specimen Requirements: Urine  
Collection Container: Sterile Urine Collection Container  
Frozen

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87799

**Blood Culture**

Specimen Requirements:  
Collection Container: See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:
Blood Urea Nitrogen

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry

CPT Code: 84520

Body Fluid Cult + Gram Stain

Specimen Requirements:
Collection Container:

See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology

CPT Code:

Bordetella pert + para DNA PCR

Specimen Requirements: Nasopharyngeal Swab
Collection Container:

Performed at: Laboratory Corporation of America, Referral Testing

CPT Code:

Bronchial Culture + Gram Stain

Specimen Requirements:
Collection Container:

See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology

CPT Code:

Brucella Ab IgG + M

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

CPT Code:
**Brucella Ab IgG EIA**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86622

**Brucella Ab IgM EIA**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86622

**B-type Natriuretic Peptide**

Support a diagnosis of congestive heart failure (CHF).

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 83880

**C difficile Toxin + Ag**

Specimen Requirements: Unformed stool, submitted in sterile specimen cup.
Collection Container: Sterile Specimen Container
Specimen must be unformed and by nature will conform to the shape of the container. Specimens that are solid or that do not conform to the shape of the container will be rejected.

Performed at: Willamette Valley Laboratory Services, Serology  CPT Code:

**C difficile Toxin Gene NAA**

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can. Frozen

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87493
**C1 Esterase Inhibitor**

C1 esterase inhibitor is decreased in hereditary angioneurotic edema; decrease may be functional or quantitative.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
                    Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86160

**C1 Esterase Inhibitor Function**

Esterase inhibitor is decreased in hereditary angioneurotic edema. Functional level will be decreased when concentration of inhibitor is decreased or inhibitor is nonfunctional.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
                    Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86161

**CA 125 Antigen**

The Human Epididymis Protien (HE4) EIA is an enzyme immunometric assay for the quantitative determination of HE4 in human serum. The assay is to be used as an aid in monitoring recurrence or progressive disease in patients with epithelial ovarian cancer. Serial testing for patient HE4 assay values should be used in conjunction with other clinical methods used for monitoring ovarian cancer.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
                    Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86304
CA 15-3

The CA 15-3 assay value, regardless of level, should not be interpreted as absolute evidence for the presence or absence of malignant disease. The CA 15-3 assay value should be used in conjunction with information available from clinical evaluation and diagnostic procedure.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86300

CA 19-9 Antigen

Intended for the in vitro quantitative determination of CA 19-9 tumor-associated antigen in human serum and plasma. CA 19-9 is used to monitor gastrointestinal, pancreatic, liver, and colorectal malignancies.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86301

CA 27.29 Antigen

Manage patients with metastatic carcinoma of the breast.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86300
Calcitonin

Detection and confirmation C-cell hyperplasia (the precursor of medullary carcinoma of thyroid) as well as a tumor marker for diagnosis and management of medullary carcinoma of the thyroid gland. Preoperative serum calcitonin is reported to roughly correlate with tumor weight or extent of disease; therefore, postoperative levels also have prognostic application. The doubling time of serum levels correlates with a recurrence. Multiple endocrine neoplasia (MEN) type II includes medullary carcinoma of the thyroid, hyperparathyroidism, and pheochromocytoma (Sipple syndrome). MEN type IIb includes medullary carcinoma of the thyroid, pheochromocytoma, mucosal neuromas, marfanoid habitus, and intestinal ganglioneuromatosis. An important use of calcitonin assay is in follow-up of patients with medullary carcinoma and work-up of their families to detect early, subclinical cases. Indications for calcitonin assay include family history of unspecified type of thyroid cancer, calcified thyroid mass, thyroid tumor associated with hypercalcemia and/or pheochromocytoma, amyloid-containing metastatic carcinoma with unknown primary site and the presence of mucosal neuromas.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate serum from cells
Patient should be fasting. Allow blood to clot for one to four hours in an ice bath or refrigerator (2°C to 8°C). Spin in chilled centrifuge holders or refrigerated centrifuge. Transfer the serum into a plastic aliquot tube. Freeze immediately and maintain.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82308

Calcium

Work-up for coma, pancreatitis and other gastrointestinal problems, nephrolithiasis, polydipsia, polyuria, azotemia, multiple endocrine adenomatosis.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry
CPT Code: 82310
Calcium Ionized

Evaluate nonbound calcium, calcium metabolism, physiologically active calcium fraction, hyperparathyroidism, ectopic hyperparathyroidism. Occasionally useful when hypercalcemia coexists with abnormal protein state such as myeloma. Useful in assessing active calcium fraction in hypoproteinemia and acidosis when calcium is low.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
Centrifuge and send unopened gel-barrier tube with vacuum intact.
It is critical that the vacuum not be disrupted. Exposure of the serum to room air causes a loss of carbon dioxide to the atmosphere. This changes the sample pH and can prevent the lab from

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82330

Calcium Urine

Reflects intake, rates of intestinal calcium absorption, bone resorption and renal loss. Those processes relate to parathyroid hormone and vitamin D levels. Evaluation of bone disease, calcium metabolism, renal stones (nephrolithiasis);1 idiopathic hypercalciuria,2 and especially, parathyroid disorders. Follow-up of patients on calcium therapy for osteopenia.

Specimen Requirements: Urine 24 Hour, HCl preservative25.0 mL aliquot
Collection Container: Sterile Urine Collection Container
Refrigerated
Urine Ph must Be < 3;Room Temperature

Performed at: Willamette Valley Laboratory Services, Urine  CPT Code: 82340

Calcium Urine 24h

Reflects intake, rates of intestinal calcium absorption, bone resorption and renal loss. Those processes relate to parathyroid hormone and vitamin D levels. Evaluation of bone disease, calcium metabolism, renal stones (nephrolithiasis);1 idiopathic hypercalciuria,2 and especially, parathyroid disorders. Follow-up of patients on calcium therapy for osteopenia.

Specimen Requirements: Urine 24 Hour25.0 mL aliquot
Collection Container: 24 Hour Urine Collection Container, Preserved with HCL
Room temperature
Urine Ph must Be < 3;Room Temperature

Performed at: Laboratory Corporation of America, Urine  CPT Code: 82340
Calprotectin Stool

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can.
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83993

Cannabinoid Conf Ur GCMS

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82542

Capillary Blood Gas

Specimen Requirements: Whole blood
Collection Container: Heparinized Capillary Tube
Capillary tube should be sealed prior to transport.
Mix well with mixing flea and seal specimen ends prior to transport.
Specimens must be transported to the laboratory for testing within 30 minutes of collection.

Performed at: Willamette Valley Laboratory Services, Blood Gas  CPT Code: 82803

Carbamazepine Level

This heterocyclic (iminostilbene) compound has potent antiepileptic properties and is effective alone or with other antiepileptic drugs in partial seizures, especially complex partial seizures, generalized tonic-clonic seizures, and combinations of these seizure types. Carbamazepine generally is ineffective for absence, myoclonic, and atonic seizures. In children with symptomatic generalized epilepsy and continuous spike-and-wave discharge, these seizure types may develop or tonic-clonic seizures may increase in frequency with use of carbamazepine. It has also been noted1 that the dose of carbamazepine cannot be used as a reliable index for predicting the serum concentration of either total or free carbamazepine serum concentrations in children with epilepsy.

Specimen Requirements: Serum1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology  CPT Code: 80156
Carbon Dioxide

Evaluate the total carbonate buffering system in the body, acid-base balance. High results may represent respiratory acidosis with CO2 retention, or metabolic alkalosis (e.g., prolonged vomiting). Low value may indicate respiratory alkalosis as in hyperventilation or metabolic acidosis (e.g., diabetes with ketoacidosis).

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82374

Carbon Monoxide

Determine the extent of carbon monoxide poisoning, toxicity. This test may also be used to evaluate the effect of smoking on the patient. It can rule out carbon monoxide exposure in patients presenting with headache, irritability, nausea, vomiting, vertigo, dyspnea, collapse, coma, convulsions. It also has use in patients exposed to fires and smoke inhalation.

Specimen Requirements: Whole blood 1.5 mL
Collection Container: Green Top (Sodium Heparin) Tube
Room temperature, whole blood

Performed at: Willamette Valley Laboratory Services, Blood Gas CPT Code: 82375

Carboxyhemoglobin

Determine the extent of carbon monoxide poisoning, toxicity. This test may also be used to evaluate the effect of smoking on the patient. It can rule out carbon monoxide exposure in patients presenting with headache, irritability, nausea, vomiting, vertigo, dyspnea, collapse, coma, convulsions. It also has use in evaluating patients exposed to fires and smoke inhalation.

Specimen Requirements: Whole blood 1.5 mL
Collection Container: Green Top (Sodium Heparin) Tube
Refrigerated, whole blood

Performed at: Willamette Valley Laboratory Services, Blood Gas CPT Code: 82375
Carcinoembryonic Antigen

This assay is intended for the in vitro quantitative determination of carcinoembryonic antigen in human serum and plasma. The main indication for CEA determinations is the follow-up and therapy-management of colorectal carcinoma.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82378

Cardiac Blood Gas Femoral CARDBGFEM

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas CPT Code: 82803

Cardiac Blood Gas IVC CARDBGIVC

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas CPT Code: 82803

Cardiac Blood Gas PA/PCW CARDBGPA

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas CPT Code: 82803

Cardiac Blood Gas RA CARDBGRA

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas CPT Code: 82803
Cardiac Blood Gas RV

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas  CPT Code: 82803

Cardiac Blood Gas SVC

Specimen Requirements: Whole blood
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas  CPT Code: 82803

Cardiolipin IgA Antibody

Anticardiolipin antibodies are often present in individuals with the antiphospholipid antibody syndrome. Individuals with the antiphospholipid antibody syndrome (APS) have an increased risk for stroke, myocardial infarction, venous thrombosis, thromboembolism, thrombocytopenia, and/or recurrent miscarriages. ACA are frequently observed in patients with other autoimmune disorders and malignancies. Individuals with ACA secondary to these other conditions are at increased risk of developing APS. A variety of therapeutic drugs can induce the production of ACA. These drug-induced antibodies may be clinically significant if they persist.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86147
Anticardiolipin antibodies are often present in individuals with the antiphospholipid antibody syndrome. Individuals with the antiphospholipid antibody syndrome (APS) have an increased risk for stroke, myocardial infarction, venous thrombosis, thromboembolism, thrombocytopenia, and/or recurrent miscarriages. ACA are frequently observed in patients with other autoimmune disorders and malignancies. Individuals with ACA secondary to these other conditions are at increased risk of developing APS. A variety of therapeutic drugs can induce the production of ACA. These drug-induced antibodies may be clinically significant if they persist.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86147

Anticardiolipin antibodies are often present in individuals with the antiphospholipid antibody syndrome. Individuals with the antiphospholipid antibody syndrome (APS) have an increased risk for stroke, myocardial infarction, venous thrombosis, thromboembolism, thrombocytopenia, and/or recurrent miscarriages. ACA are frequently observed in patients with other autoimmune disorders and malignancies. Individuals with ACA secondary to these other conditions are at increased risk of developing APS. A variety of therapeutic drugs can induce the production of ACA. These drug-induced antibodies may be clinically significant if they persist.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86147

Evaluate various muscle disorders. L-carnitine is a normal component of human serum. Its concentrations are altered in patients with acute muscular necrosis, kidney disease, systemic carnitine deficiency, and diabetes mellitus.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82379
Carotene

Confirm the diagnosis of carotenoderma; detect fat malabsorption; depressed carotene levels may be found in cases of steatorrhea.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Frozen, separate plasma from cells  
Patients must be fasting for a minimum of eight hours. Patients should avoid foods containing carotene for 48 hours (24 hours for patients younger than six months of age). After collection, protect specimen from light. Submit in foil or amber colored tr

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82380

Catecholamines Fractionated

Specimen Requirements: Plasma
Collection Container: Green Top (Sodium Heparin) Tube  
Frozen, separate plasma from cells  
Patient should be fasting for four or more hours without smoking. Walnuts, bananas, and α-methylldopa (Aldomet®) should be avoided for a week prior to sampling. Other drug interference may occur, including epinephrine and epinephrine-like drugs (eg, nosedr

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82384

Catecholamines Free Urine 24h

Work up neuroblastoma; diagnose pheochromocytoma.

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container, Preserved with HCL  
Refrigerated  
Brown urine container with 30 mL 6N HCl preservative. Caution: Strong acid. May cause skin burns.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82382
CBC w Absolute Neutrophil Ct

Includes: Hematocrit; hemoglobin; mean corpuscular volume (MCV); mean corpuscular hemoglobin (MCH); mean corpuscular hemoglobin concentration (MCHC); red cell distribution width (RDW); platelet count; red cell count (RBC); white blood cell count (WBC). Used as a screening test to evaluate overall health; detect and/or identify a wide range of hematologic disorders; assist in managing medications/chemotherapeutic decisions.

Specimen Requirements: Whole blood 3.0 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology
CPT Code: 85027

CBC w Automated Diff

Includes: Hematocrit; hemoglobin; mean corpuscular volume (MCV); mean corpuscular hemoglobin (MCH); mean corpuscular hemoglobin concentration (MCHC); red cell distribution width (RDW); percentage and absolute differential counts; platelet count (RBC); red cell count; white blood cell count (WBC). Used as a screening test to evaluate overall health; detect and/or identify a wide range of hematologic disorders; assist in managing medications/chemotherapeutic decisions.

Specimen Requirements: Whole blood 3.0 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology
CPT Code: 85025

CBC w Manual Diff

Includes: Hematocrit; hemoglobin; mean corpuscular volume (MCV); mean corpuscular hemoglobin (MCH); mean corpuscular hemoglobin concentration (MCHC); red cell distribution width (RDW); platelet count; red cell count (RBC); white blood cell count (WBC), and manual differential. Used as a screening test to evaluate overall health; detect and/or identify a wide range of hematologic disorders; assist in managing medications/chemotherapeutic decisions.

Specimen Requirements: Whole blood 3.0 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology
CPT Code:
CBC wo Diff

Includes: Hematocrit; hemoglobin; mean corpuscular volume (MCV); mean corpuscular hemoglobin (MCH); mean corpuscular hemoglobin concentration (MCHC); red cell distribution width (RDW); platelet count; red cell count (RBC); white blood cell count (WBC). Used as a screening test to evaluate overall health; detect and/or identify a wide range of hematologic disorders; assist in managing medications/chemotherapeutic decisions.

Specimen Requirements: Whole blood3.0 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology

CD4/CD8 Ratio Profile

Includes: Percentage CD3+CD4+; absolute CD3+CD4+; percentage CD3+CD8+; absolute CD3+CD8+; CD4:CD8 ratio; CBC with differential.

Specimen Requirements:
Collection Container: Light Yellow Top (ACD) Tube and Lavender Top (EDTA) Tube. Must submit both tubes.

Performed at: Laboratory Corporation of America, Referral Testing

Celiac Disease Ab Panel

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

Cell Count Diff Body Fluid

Specimen Requirements: Body Fluid5.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container
Specimen should be submitted in EDTA anticoagulant. Clotted specimens are not acceptable for analysis.

Performed at: Willamette Valley Laboratory Services, Body Fluid

CBCX

CELIACP

CELLFL

CPT Code: 85027
CPT Code: 86360
CPT Code:
CPT Code: 89051
**Cell Count Diff CSF**

Evaluate bacterial or viral encephalitis, meningitis, meningoencephalitis, mycobacterial or fungal infection, primary or secondary malignancy, leukemia/malignant lymphoma of CNS, trauma, vascular occlusive disease, heredofamilial, and/or degenerative processes.

Specimen Requirements: CSF Container #3 1.0 mL
Collection Container: Cerebral Spinal Fluid Collection Container #3
Transport to laboratory as soon as possible.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 89051

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**Cell Count Diff Pericardial**

Specimen Requirements: Body Fluid 5.0 mL
Collection Container: Lavender Top (EDTA) Tube
Specimen should be submitted in EDTA anticoagulant. Clotted specimens are not acceptable for analysis.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 89051

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**Cell Count Diff Peritoneal**

Specimen Requirements: Body Fluid 5.0 mL
Collection Container: Lavender Top (EDTA) Tube
Specimen should be submitted in EDTA anticoagulant. Clotted specimens are not acceptable for analysis.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 89051

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**Cell Count Diff Pleural**

Specimen Requirements: Body Fluid 5.0 mL
Collection Container: Sterile Specimen Container
Specimen should be submitted in EDTA anticoagulant. Clotted specimens are not acceptable for analysis.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 89051
**Cell Count Diff Synovial**  
Specimen Requirements: Body Fluid 5.0 mL  
Collection Container: Lavender Top (EDTA) Tube  
Specimen should be submitted in EDTA anticoagulant. Clotted specimens are not acceptable for analysis.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 89051

**Cell Count Diff Thoracic**  
Specimen Requirements: Body Fluid 5.0 mL  
Collection Container: Lavender Top (EDTA) Tube  
Specimen should be submitted in EDTA anticoagulant. Clotted specimens are not acceptable for analysis.

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 89051

**Centromere Protein B Antibody**  
Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86255

**Ceruloplasmin**  
Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82390

**Chlam pneumoniae Ab IgG+A+M**  
Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:
**Chlam+GC by Nuc Acd Probe**

Specimen Requirements: Swab  
Collection Container: Viral Transport Media

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: CHLGCGNAA

**Chlam+GC by Nuc Acd Probe Urin**

Specimen Requirements: Urine  
Collection Container: Sterile Urine Collection Container

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: CHLGCGNAAUR

**Chlamydia pneumoniae Ab IgG**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: CHPABG

**Chlamydia pneumoniae Ab IgG+M**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: CHPABGM

**Chlamydia pneumoniae Ab IgM**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: CHPABM
Chlamydia trach DNA NAA Throat

Specimen Requirements: Swab
Collection Container: Submitted in APTIMA Kit

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87491

Chlamydia trachomatis DNA NAA

Specimen Requirements: Swab
Collection Container: Viral Transport Media

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87491

Chloride

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 82435

Chloride Urine

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine  CPT Code: 82436

Chloride Urine 24h

Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine  CPT Code: 

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**Cholesterol**

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 82465

**Cholesterol Pericardial**

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 82465

**Cholesterol Peritoneal**

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 82465

**Cholesterol Pleural**

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 82465

**Cholesterol Synovial**

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 82465
Cholinesterase

Erythrocyte cholinesterase is measured to diagnose organophosphate and carbamate toxicity and to detect atypical forms of the enzyme. Cholinesterase is irreversibly inhibited by organophosphate insecticides and reversibly inhibited by carbamate insecticides. Serum or plasma pseudocholinesterase is a better measure of acute toxicity, while erythrocyte levels are better for chronic exposure. (Serum level returns to normal prior to normalizing of red cell level).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
Refrigerate entire specimen. Do not separate.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82482

Chromium Level

Specimen Requirements: Plasma
Collection Container: Royal Blue (EDTA) Trace Metals tube
Room temperature

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82495

Chromogranin A

Detect neuroendocrine cancers. Chromogranin A levels can be elevated in patients with severe renal failure. Elevated levels of CgA are also common in patients on treatment with proton pump inhibitors.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86316

Citric Acid Urine 24h

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container, Preserved with HCL
Frozen

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:
CK Isoenzymes

Includes: Total CK and relative percentage of BB (CK-1), MB (CK-2), and MM (CK-3); percentage of macro CK, if present.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82552

Clozapine Level

Evaluate toxicity; monitor therapeutic levels

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 80154

Cobalt

Specimen Requirements: Plasma
Collection Container: Royal Blue (EDTA) Trace Metals tube
Room temperature

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83018

Cocaine Confirm Urine

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 80102

Cocaines Conf Ur GCMS

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82520
**Coccidioides Ab CF**

Used to diagnose coccidioidomycosis. Low titers are usually associated with mild and localized disease. Patients with DID titers ≥1:16 should be observed for evidence of pulmonary or extrapulmonary dissemination. The higher the DID titer, the poorer the prognosis, assessing the extent and severity of both acute and chronic coccidioidomycosis. Falling DID titers indicate an improved clinical status. Finding DID antibody in CSF supports the diagnosis of coccidioidal meningitis (if fungal osteomyelitis of the base of the skull can be excluded).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86635

**Coccidioides Ab Quant DID**

Used to diagnose coccidioidomycosis. Low titers are usually associated with mild and localized disease. Patients with DID titers ≥1:16 should be observed for evidence of pulmonary or extrapulmonary dissemination. The higher the DID titer, the poorer the prognosis, assessing the extent and severity of both acute and chronic coccidioidomycosis. Falling DID titers indicate an improved clinical status. Finding DID antibody in CSF supports the diagnosis of coccidioidal meningitis (if fungal osteomyelitis of the base of the skull can be excluded).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86635

**Cold Agglutinins**

Support the diagnosis of primary atypical pneumonia, infection with Mycoplasma pneumoniae, and hemolytic anemia, gangrene, cirrhosis, Raynaud disease, some viral diseases, and infectious diseases such as staphylococcemia, influenza, and tuberculosis.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
Transport blood immediately to laboratory. Incubate at 37°C and allow to clot at 37°C. Separate serum from cells. Do not refrigerate prior to separating serum from cells.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86157
**Complement C2**

Assess patients with hereditary deficiency of this component or acquired decrease in its level which may be seen due to hypercatabolism in hereditary angioneurotic edema, or consumption or loss as in vasculitides, glomerulonephritides, immune complex diseases. C2 deficiency is the most common complement deficiency (1 in 10,000) and is associated with SLE.

**Specimen Requirements:** Serum

**Collection Container:** Gold Top Serum Separator Tube (SST)
- Frozen, separate plasma from cells
- Place tube in ice bath following venipuncture. Transfer specimen to a plastic transport tube before freezing. Freeze serum immediately following centrifugation and separation from cells.

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86160

**Complement C3**

Quantitation of C3 is used to detect individuals with inborn deficiency of this factor or those with immunologic disease in whom complement is consumed at an increased rate. These include lupus erythematosus, chronic active hepatitis, certain chronic infections, poststreptococcal and membranoproliferative glomerulonephritis, and others.

**Specimen Requirements:** Serum

**Collection Container:** Gold Top Serum Separator Tube (SST)
- Refrigerated, separate serum from cells
- Remove serum or plasma within 45 minutes and transfer to a plastic transport tube

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86160

**Complement C4**

Quantitation of C4 is used to detect individuals with inborn deficiency of this factor or those with immunologic disease in whom hypercatabolism of complement causes reduced levels. These diseases include lupus erythematosus, serum sickness, certain glomerulonephritides, chronic active hepatitis, and others.

**Specimen Requirements:** Serum

**Collection Container:** Gold Top Serum Separator Tube (SST)
- Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86160
Complement Total CH50

Evaluate and follow up SLE (systemic lupus erythematosus) patient's response to therapy; may predict disease flare in SLE; evaluate for complement component deficiency; evaluate complement activity in cases of immune complex disease, glomerulonephritis, rheumatoid arthritis, SBE, cryoglobulinemia. The CH50 assay mainly evaluates the classical pathway.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells
Allow specimen to clot at room temperature for 15 to 30 minutes.
Remove serum after centrifugation, place in plastic transport tube, and freeze immediately

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 86162

Comprehensive Metabolic Panel

Includes: Sodium; Potassium; Chloride; Carbon Dioxide; BUN; Calcium; Creatinine; Glucose; Albumin; Alkaline Phosphatase; Bilirubin, Total; Total Protein; ALT/SGPT; AST/SGOT

Specimen Requirements: Serum 5.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 80053

Copper

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82525

Copper Urine 24h

Specimen Requirements: Urine 24 Hour Collection Container: 24 Hour Urine Collection Container Room temperature

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:
Cord Blood Gas Arterial

Specimen Requirements: Whole blood 0.5 mL
Collection Container: Heparinized Syringe

Performed at: Willamette Valley Laboratory Services, Blood Gas
CPT Code: 82803

Cord Blood Gas Venous

Specimen Requirements: Whole blood 0.5 mL
Collection Container: Green Top (Sodium Heparin) Tube
Room temperature, whole blood

Performed at: Willamette Valley Laboratory Services, Blood Gas
CPT Code: 82803

Cord Workup

Specimen Requirements:
Collection Container: Cord Blood

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine
CPT Code:

Cortisol Free Urine 24h

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

Cortisol Level AM

Establish the diagnosis of adrenocortical insufficiency, Addison's disease, adrenocortical hypersecretion, Cushing's syndrome. Malfunction of the organs in the hypothalamic-pituitary-adrenal cortex axis will result in alteration of the cortisol levels.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82533
Establish the diagnosis of adrenocortical insufficiency, Addison's disease, adrenocortical hypersecretion, Cushing's syndrome. Malfunction of the organs in the hypothalamic-pituitary-adrenal cortex axis will result in alteration of the cortisol levels.

### Cortisol Level PM

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82533

### Cortisol Level Random

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82533

### Cortisol Response to ACTH Stim

**Specimen Requirements:** Serum 1.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Two (2) specimens must be submitted for this test. The first specimen is collected prior to administration of ACTH. The second specimen is collected at 1 hour (60 minutes) after administration of ACTH. Clearly label both specimens.

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:**

### Coxsackie Virus Group B Abs

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 86658

✧ Page 70 ✧
C-Peptide

The principal use of C-peptide is in the evaluation of hypoglycemia. C-peptide is also useful in evaluating residual beta-cell function in insulin-dependent diabetics, many of whom have antibodies that interfere with insulin assays.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 84681

C-Reactive Protein High Sens

Measurement of CRP by high sensitivity CRP assays may add to the predictive value of other markers used to assess the risk of cardiovascular and peripheral vascular disease.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 86141

C-Reactive Protein Quant

CRP is an acute phase reactant, which can be used as a test for inflammatory diseases, infections, and neoplastic diseases. Progressive increases correlate with increases of inflammation/injury. CRP is a more sensitive, rapidly responding indicator than ESR. CRP may be used to detect early postoperative wound infection and to follow therapeutic response to anti-inflammatory agents. Recent reports have indicated that a highly sensitive version of the CRP assay may be used as an additional indicator for susceptibility to cardiac disease.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 86140

Creatine Kinase

Test for acute myocardial infarct and for skeletal muscular damage; elevated in some patients with myxedema (hypothyroidism), malignant hyperthermia syndrome, and muscular dystrophy.

Specimen Requirements: Serum 2.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82550
Creatinine
A renal function test, providing a rough approximation of glomerular filtration.
Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)
Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 82565

Creatinine Clearance
Renal function test when used as part of creatinine clearance; crude marker for completeness of 24-hour urine collections when collected for other purposes.
Specimen Requirements: Serum and Urine 24 Hour 1.0 mL of serum and 10.0 mL aliquot of urine.
Collection Container: Gold Top Serum Separator Tube (SST) and 24 Hour Urine Collection Container
A serum creatinine is performed as part of this test, and is charged separately. Please submit patient's height and weight inorder to perform the creatinine clearance calculation. If submitting a urine aliquot, please include total volume of 24 hour col
Performed at: Willamette Valley Laboratory Services, Urine CPT Code: 82575

Creatinine Urine
Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container
Performed at: Willamette Valley Laboratory Services, Urine CPT Code: 82570

Creatinine Urine 24h
Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container Refrigerated
Performed at: Willamette Valley Laboratory Services, Urine CPT Code:
Cryoglobulins may be present in macroglobulinemia of Waldenström, myeloma, chronic lymphocytic leukemia, lupus, chronic active hepatitis, and other viral infections.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Room temperature, separate serum from cells
Specimen must be drawn in a prewarmed tube and kept at 37°C while clotting. Separate serum from cells immediately after clot formation (keep at 37°C while clotting) and transfer serum into a clean transport tube.

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82595

Cryptococcus Ag + Reflx Titer

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 

Cryptococcus Ag CSF

Aid in establishing the presence if Cryptococcus neoformans infection.

Specimen Requirements: CSF
Collection Container: Cerebral Spinal Fluid Collection Container  
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86403

Cryptosporidium Ag Stool

Specimen Requirements: Stool
Collection Container: Sterile Specimen Container

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87328
<table>
<thead>
<tr>
<th>Test</th>
<th>CPT Code</th>
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<tbody>
<tr>
<td>Crystals Synovial</td>
<td>CRYSY</td>
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<tr>
<td>Specimen Requirements: Body Fluid</td>
<td>3.0 mL</td>
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<tr>
<td>Collection Container: Lavender Top (EDTA) Tube</td>
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<tr>
<td>Performed at: Willamette Valley Laboratory Services, Body Fluid</td>
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<tr>
<td>CSF Culture + Gram Stain</td>
<td>CSF</td>
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<td>Specimen Requirements:</td>
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<td>Collection Container:</td>
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<td>See microbiology specimen collection instructions.</td>
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<td>CVP Catheter Tip Culture</td>
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<td>Performed at: Willamette Valley Laboratory Services, Microbiology</td>
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<tr>
<td>Cyanide</td>
<td>CYAN</td>
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<td>Specimen Requirements: Plasma</td>
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<tr>
<td>Collection Container: Grey Top (Potassium Oxalate/Sodium Fluoride) Tube Refrigerated, whole blood</td>
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</tr>
<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
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</tbody>
</table>
**Cyclic Citrul Peptide IgG+IgA**

The presence of CCP antibodies, when considered in conjunction with other laboratory and clinical findings, is an aid in the diagnosis of rheumatoid arthritis (RA). Approximately 70% of RA patients are positive for anti-CCP IgG, while only 2% of random blood donors and control subjects are positive.

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83516

**Cyclosporine Level**

The agent is used extensively to control rejection of organ transplants, especially of liver, heart, or kidney. Monitoring blood levels is imperative because the pharmacokinetics of cyclosporine are not only complex, but vary over time in the same patient; thus, blood levels cannot be well predicted from dosing schedules.

**Specimen Requirements:** Whole blood  
**Collection Container:** Lavender Top (EDTA) Tube  
Refrigerated, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 80158

**Cystatin C**

Since it is formed at a constant rate and freely filtered by the healthy kidney, cystatin C is a good marker of renal function.

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82610
Cytomegalovirus Ab IgG  
CMVG

Aid in diagnosis of CMV infection. In general, a fourfold increase in IgG titer over a four-week period is presumptive evidence of recent infection; however, this relationship may not hold true in certain individuals due to biological fluctuation of the antibody levels. The best test to diagnose acute CMV infection is the CMV IgM assay test. Most adults are infected with CMV and it is normal to be a carrier of the virus.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86644

Cytomegalovirus Ab IgM  
CMVM

Used in the acute diagnosis of CMV infection. CMV causes an infectious mononucleosis syndrome clinically indistinguishable from heterophil positive mononucleosis, a very common entity. Significant CMV titers are found almost universally in patients with AIDS, and CMV genome has been demonstrated in the cells of Kaposi sarcoma. CMV is a significant cause of postcardiotomy, post-transplant, and postpump hepatitis syndromes. Most adults are infected with CMV and it is normal to be a carrier of the virus.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86645

Cytomegalovirus DNA PCR Quant  
CMVPCRQT

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube
Frozen, separate plasma from cells
Separate plasma from cells within 24 hours. Transport to laboratory frozen.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87497
D Dimer

Rule out deep vein thrombosis (DVT) and pulmonary embolism;6-11 evaluate disseminated intravascular coagulation;12-15 can be used to monitor the extent of clot lysis during thrombolytic therapy16.

Specimen Requirements: Plasma, Citrated 2.0 mL
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube

Performed at: Willamette Valley Laboratory Services, Coagulation CPT Code: 85379

Dehydroepiandrosterone (DHEA)

Evaluate adrenal carcinomas that frequently secrete large amounts of DHEA.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST) Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82626

Dexamethasone Level

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST) Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82542

DHEA Sulfate

Work up women with infertility, amenorrhea, or hirsutism to identify the source of excessive androgen; aid in the evaluation of androgen excess (hirsutism and/or virilization), including Stein-Leventhal syndrome and adrenocortical diseases, including congenital adrenal hyperplasia and adrenal tumor.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST) Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82627
**Digoxin Level**

Diagnose and prevent digoxin toxicity; prevent underdosage; monitor therapeutic drug level; prevention and therapy of cardiac arrhythmias.

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology  
CPT Code: 80162

**Diphtheria Antitoxoid Ab**

Assess immunity against diphtheria by determining levels of circulating antibodies to diphtheria toxin or to measure the immune response, postvaccination, in individuals suspected of immunodeficiency disorders.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86317

**Direct Antiglobulin Test**

Specimen Requirements: Whole Blood
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code: 86880

**Direct Antiglobulin Test IgG**

Specimen Requirements: Whole Blood
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code: 86880
### DNA Double Strand Ab

Specific assay for confirming the diagnosis of systemic lupus erythematosus (SLE). Antibodies to DNA, either single- or double-stranded, are found primarily in systemic lupus erythematosus, and are important, but not necessary or sufficient for diagnosing that condition. Such antibodies are present in 80% to 90% of SLE cases. They are also present in smaller fractions of patients with other rheumatic disorders, and in chronic active hepatitis, infectious mononucleosis, and biliary cirrhosis.

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 86225

### Drug Screen Comprehensive Urine

**Specimen Requirements:** Urine 10.0 mL  
**Collection Container:** Sterile Specimen Container  
Urine drug screen results are a screening test, for medical purposes only.

**Performed at:** Willamette Valley Laboratory Services, Toxicology  
**CPT Code:** 0

### Ear Culture + Gram Stain

**Specimen Requirements:**  
**Collection Container:** See microbiology specimen collection instructions.

**Performed at:** Willamette Valley Laboratory Services, Microbiology  
**CPT Code:**

### EBV Capsid IgM Ab

Used in the diagnosis of acute EBV infections (infectious mononucleosis).

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 86665
### EBV Nuclear Antigen IgG Ab

Aid in the diagnosis of EBV infections (infectious mononucleosis).

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Room temperature, separate plasma from cells  

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 86664

### Elastase Pancreatic Stool

**Specimen Requirements:** Stool  
**Collection Container:** Contact laboratory for special collection can. Refrigerated

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82656

### Electrolytes Panel

Carbon dioxide; chloride; potassium; sodium.

**Specimen Requirements:** Serum 2.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)

**Performed at:** Willamette Valley Laboratory Services, Chemistry  
**CPT Code:** 80051

### Elution Test Result

**Specimen Requirements:** Whole Blood  
**Collection Container:** Lavender Top (EDTA) Tube

**Performed at:** Willamette Valley Laboratory Services, Transfusion Medicine  
**CPT Code:** 86860

### Endomysial Ab IgA

Evaluate humoral immunity; monitor therapy in IgA myeloma.

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST) Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 86255
**Eosinophil Smear**

Investigate allergic, asthmatic disorders, and parasitic infestations.

Specimen Requirements: Urine, Sputum, Nasal Smear or Nasal Wash
Collection Container:

Performed at: Willamette Valley Laboratory Services, Hematology  
CPT Code: 89190

**Epstein Barr DNA PCR Quant**

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube  
Frozen, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

**Erythropoietin**

Patients suffering from most anemias will present with higher than normal concentrations of serum erythropoietin.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82668

**Estradiol**

This estradiol assay is designed for the investigation of fertility of women of reproductive age and for the support of in vitro fertilization.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82670
**Estriol**

Evaluate fetal distress and placental function in the management of patients facing complications such as pre-eclampsia, fetal growth retardation, diabetes, Rh immunization, choriocarcinoma, and hydatidiform mole. May be elevated in hydrops fetalis in the presence of a dying fetus. May be low in the presence of a living anencephalic fetus.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82677

**Estrogen**

Evaluate for ovarian estrogen producing tumor in the premenarcheal and postmenopausal female; evaluate estrogen excess in males. Estrogen analysis may be helpful in establishing time of ovulation and optimal time for conception.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82672

**Estrogens Fractionated**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

** Estrone**

Evaluate postmenopausal vaginal bleeding due to peripheral conversion of androgenic steroids.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82679
**Ethosuximide Level**

Evaluate toxicity; monitor therapeutic levels.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 80168

**Ethylene Glycol Level**

Ethylene glycol is a colorless, odorless, sweet tasting compound used commercially in antifreeze. It has been utilized in suicide attempts, as a substitute for ethanol and in accidental poisonings in both children and domestic pets.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82693

**Extractable Nuclear Abs**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

**Eye Culture + Gram Stain**

Specimen Requirements:  
Collection Container: See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:
Factor IX  

Document specific factor IX deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85250

Factor IX Activity  

Document specific factor IX deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85250

Factor V Activity  

Assess factor V activity level.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85220

Factor V Leiden Mutation  

Specimen Requirements: Whole blood  
Collection Container: Lavender Top (EDTA) Tube  
Room temperature, whole blood  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 81241
## Factor VIII Activity

Diagnosis of von Willebrand factor (vWF) deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85240

## Factor X Chromogenic

The chromogenic factor X activity test can be useful in monitoring patients where baseline PT is prolonged.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85520

## Factor XI Level

Document specific factor deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85270

## Factor XII Level

Detect specific coagulation factor XII activity.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85280
**Factor XIII Level**

Detect homozygous deficiency of factor XIII.

**Specimen Requirements:** Plasma

**Collection Container:** Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 85291

**Fat Stool 72h**

Fecal fats can be useful in diagnosis of cystic fibrosis, chronic pancreatitis, neoplasia, or stone obstruction.

**Specimen Requirements:** Stool

**Collection Container:** Contact laboratory for special collection can.  
Refrigerated
Collect stool directly into can. Do not fill any can more than 2/3 full.  
Secure lid with pressure and firmly attach the O-ring. State  
collection time on the can label. Specimens should be collected for  
a total of 72 hours.

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82710

**Fat Stool Qual**

**Specimen Requirements:** Stool

**Collection Container:** Contact laboratory for special collection can.  
Refrigerated

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82705

**Felbamate Level**

Evaluate toxicity; monitor therapeutic levels.

**Specimen Requirements:** Serum

**Collection Container:** Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82491
**Ferritin**

Diagnose hypochromic, microcytic anemias. Decreased in iron deficiency anemia and increased in iron overload. Ferritin levels correlate with and are useful in evaluation of total body storage iron. In hemochromatosis, both ferritin and iron saturation are increased. Ferritin levels in hemochromatosis may be >1000 ng/mL.

Specimen Requirements: Serum 0.8 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 82728

**Fibrinogen**

Diagnosis of homozygous and heterozygous fibrinogen deficiency as well as dysfibrinogenemia; diagnosis of disseminated intravascular coagulation.

Specimen Requirements: Plasma, Citrated 2.7 mL
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube

Performed at: Willamette Valley Laboratory Services, Coagulation  
CPT Code: 85384

**Fibronectin Fetal Vag**

Specimen Requirements:  
Collection Container: FFN Specimen Collection Kit

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code:

**Flecainaide Level**

Flecainide is used for the treatment and prophylaxis of supraventricular tachycardia, including AV nodal and AV reentrant tachycardia and atrial fibrillation in patients with normal or near-normal left ventricular function.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 80190
**Folate**

The terms folate and folic acid are often used interchangeably. This test is used to detect folate deficiency; monitor therapy with folate; evaluate megaloblastic and macrocytic anemia.

**Specimen Requirements:** Serum 1.0 mL
**Collection Container:** Gold Top Serum Separator Tube (SST)

**Performed at:** Willamette Valley Laboratory Services, Chemistry
**CPT Code:** 82746

**Folic Acid RBC Panel**

**Specimen Requirements:** Whole blood
**Collection Container:** Lavender Top (EDTA) Tube
Refrigerated, whole blood

**Performed at:** Laboratory Corporation of America, Referral Testing

**Follicle Stimulating Hormone**

Excessive FSH and LH are found in hypogonadism, anorchia, gonadal failure, Klinefelter syndrome, alcoholism, and castration. FSH and LH are pituitary products, useful to distinguish primary gonadal failure from secondary (hypothalamic/pituitary) causes of gonadal failure, menstrual disturbances, and amenorrhea. Useful in defining menstrual cycle phases in infertility evaluation of women and testicular dysfunction in men. FSH is commonly used with LH, which also is a gonadotropin.

Both are low in pituitary or hypothalamic failure. FSH and LH levels are high following menopause.

**Specimen Requirements:** Serum
**Collection Container:** Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing
**CPT Code:** 83001
### Fructosamine

Evaluate diabetic control, reflecting diabetic control over a shorter time period (one to three weeks) than that represented by hemoglobin A1c (8-12 weeks). Indicated as an index of longer-term control than glucose levels, especially in diabetic subjects with abnormal hemoglobins and in type 1 diabetes in children.

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82985

### Fungal Antibody Quant

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:**

### Fungus Culture

**Specimen Requirements:**  
**Collection Container:**

**Performed at:** Laboratory Corporation of America, MYC  
**CPT Code:**

### Gabapentin Level

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82491
**Gamma-Glutamyltransferase (GGT)**

A biliary enzyme that is especially useful in the diagnosis of obstructive jaundice, intrahepatic cholestasis, and pancreatitis. GGT is more responsive to biliary obstruction than are aspartate aminotransferase (AST/SGOT) and alanine aminotransferase (ALT/SGPT).

**Specimen Requirements:** Serum 1.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 82977

**Gastrin**

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Frozen, separate serum from cells  
The patient must be fasting overnight, 12 to 14 hours. Separate serum from cells and freeze immediately.

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82941

**GC Culture + Gram Stain**

**Specimen Requirements:**  
**Collection Container:**  
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:

**Genital Culture + Gram Stain**

**Specimen Requirements:**  
**Collection Container:**  
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:
Gentamicin Level Peak

Monitor the therapeutic dosage of Gentamicin.

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube or Gold Top Serum Separate Tube (SST)

Performed at: Willamette Valley Laboratory Services, Toxicology
CPT Code: 80170

Gentamicin Level Random

Monitor the therapeutic dosage of Gentamicin.

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube or Gold Top Serum Separate Tube (SST)

Performed at: Willamette Valley Laboratory Services, Toxicology
CPT Code: 80170

Gentamicin Level Trough

Monitor the therapeutic dosage of Gentamicin.

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube or Gold Top Serum Separate Tube (SST)

Performed at: Willamette Valley Laboratory Services, Toxicology
CPT Code: 80170

Giardia lamblia Ag Stool

Rapid detection of Giardia lamblia from clinical samples

Specimen Requirements: Stool
Collection Container: Sterile Specimen Container or Para Pak preservative
Package stool in O&P Transport kit. Fecal specimens for parasitic examination should be collected before initiation of anti diarrheal therapy or antiparasitic therapy. The highest yield on hospitalized patients occurs when diarrhea is present on admission

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 87329
Gliadin Ab Panel

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

Glomerular Basement Membrn IgG

Detect the presence of circulating glomerular basement membrane-specific antibodies in Goodpasture syndrome; quantitation may be useful in monitoring treatment. This test is often used in conjunction with the antineutrophil cytoplasmic antibody (ANCA) test for Wegener granulomatosis and vasculitis.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83516

Glucose

Diagnose diabetes mellitus; evaluate disorders of carbohydrate metabolism including alcoholism; evaluate acidosis and ketoacidosis; evaluate dehydration, coma, hypoglycemia of insulinoma, neuroglycopenia

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry
CPT Code: 82947

Glucose CSF

Evaluate meningitis, neoplastic involvement of meninges, other neurological disorders; diagnose neuroglycopenia, even in the presence of normal plasma glucose, especially in chlorpropamide (Diabinese®) poisoning.

Specimen Requirements: CSF Container #1 11.0 mL
Collection Container: Cerebral Spinal Fluid Collection Container #1

Performed at: Willamette Valley Laboratory Services, Body Fluid
CPT Code: 82945
Glucose Fasting

Diagnose diabetes mellitus; evaluate disorders of carbohydrate metabolism including alcoholism; evaluate acidosis and ketoacidosis; evaluate dehydration, coma, hypoglycemia of insulinoma, neuroglycopenia

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 82947

Glucose Fluid

Evaluate meningitis, neoplastic involvement of meninges, other neurological disorders; diagnose neuroglycopenia, even in the presence of normal plasma glucose, especially in chlorpropamide (Diabinese®) poisoning.

Specimen Requirements: CSF Container #11.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 82945

Glucose Pericardial

Evaluate meningitis, neoplastic involvement of meninges, other neurological disorders; diagnose neuroglycopenia, even in the presence of normal plasma glucose, especially in chlorpropamide (Diabinese®) poisoning.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 82945

Glucose Pleural

Evaluate meningitis, neoplastic involvement of meninges, other neurological disorders; diagnose neuroglycopenia, even in the presence of normal plasma glucose, especially in chlorpropamide (Diabinese®) poisoning.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 82945
**Glucose Synovial**

Evaluate meningitis, neoplastic involvement of meninges, other neurological disorders; diagnose neuroglycopenia, even in the presence of normal plasma glucose, especially in chlorpropamide (Diabinese®) poisoning.

**Specimen Requirements:** Body Fluid 1.0 mL  
**Collection Container:** Red Top (No Additive) Tube or Sterile Specimen Container

**Performed at:** Willamette Valley Laboratory Services, Body Fluid  
**CPT Code:** 82945

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**Glucose Test Strip Urine**

**Specimen Requirements:** Urine 10.0 mL  
**Collection Container:** Sterile Urine Collection Container

**Performed at:** Willamette Valley Laboratory Services, Urine  
**CPT Code:** 81002

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**Glucose Tolerance 2h**

**Specimen Requirements:** Serum 2.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Call the laboratory to schedule an appointment. Patients should be fasting (no caloric intake) for at least 8 hours prior to their scheduled appointment.

**Performed at:** Willamette Valley Laboratory Services, Chemistry  
**CPT Code:** 82951

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**Glucose Tolerance 2h Gestation**

**Specimen Requirements:** Serum 2.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Call the laboratory to schedule an appointment. Patients should be fasting (no caloric intake) for at least 8 hours prior to their scheduled appointment.

**Performed at:** Willamette Valley Laboratory Services, Chemistry  
**CPT Code:** 82951
Glucose Tolerance Screen 1h (GTS)

Specimen Requirements: Serum 2.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)
Draw 1 hour after patient has ingested the 50gm glucose beverage.
Clearly label specimen with time of collection.

Performed at: Willamette Valley Laboratory Services, Chemistry
CPT Code: 82950

Glucose Urine (GLUUR)

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine
CPT Code:

Glucose-6-Phos Dehydrogenase (G6PD)

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Refrigerated, whole blood

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

Glutamate Decarboxylase 65 Ab (GAD)

Detect the presence of antibodies to glutamic acid decarboxylase, which provides early evidence of autoimmune disease activity

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83519
GlycoMark, 1-5 Anhydroglucitol

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
Separate serum from cells within one hour of collection.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84378

Gram Stain

Specimen Requirements:
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:

Growth Hormone Human

Pituitary function test useful in the diagnosis of hypothalamic disorder, hypopituitarism, acromegaly, and ectopic growth hormone production by neoplasm

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83003

H pylori Ag Stool

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can.
Frozen

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 87338
**Haptoglobin**

Haptoglobin is useful in work-up for hemolytic states

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83010

**HCG Beta Quant Tumor Marker**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 84702

**HCG Serum Qual**

Confirmation of pregnancy.

Specimen Requirements: Serum or Urine 1.0 mL
Collection Container: Sterile Urine Container or Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 84703

**HCG Serum Quant**

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 84702

**HCG Urine Qual**

Confirmation of pregnancy.

Specimen Requirements: Urine 1.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine  CPT Code: 84703
HDL Cholesterol

A protective substance utilized for prediction of coronary arterial disease, especially useful in individuals with high serum cholesterol levels

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 83718

Heavy Metals Screen Blood

Specimen Requirements: Plasma
Collection Container: Royal Blue (EDTA) Trace Metals tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:

Heavy Metals Screen Urine

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container
Room temperature

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:

Helicobacter pylori Ab IgA

Diagnose H. pylori infection in patients with duodenal disease and for monitoring the eradication of H. pylori following antimicrobial therapy; identify the small percentage of H. pylori-infected patients who fail to mount a systemic IgG response and demonstrate IgA antibodies only and for those patients who have chronic mucosal infections.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 86677
**Helicobacter pylori Ab IgG**

Diagnose H. pylori infection in patients with duodenal disease and for monitoring the eradication of H. pylori following antimicrobial therapy; identify the small percentage of H. pylori-infected patients who fail to mount a systemic IgG response and demonstrate IgA antibodies only and for those patients who have chronic mucosal infections.

**Specimen Requirements:** Serum
**Collection Container:** Gold Top Serum Separator Tube (SST)
**Performed at:** Laboratory Corporation of America, Referral Testing
**CPT Code:** 86677

**Helicobacter pylori Ab IgM**

Diagnose early H. pylori infection in patients with gastric and duodenal disease. Circulating antibodies to H. pylori are predominantly of the IgG class. A systemic response of the IgA type is usually less pronounced but, if significant, may indicate a more severe inflammation. A few patients develop only antibodies to IgA. Antibodies to IgM, although rare, may indicate an early infection.

**Specimen Requirements:** Serum
**Collection Container:** Gold Top Serum Separator Tube (SST)
**Performed at:** Laboratory Corporation of America, Referral Testing
**CPT Code:** 86677

**Hematocrit**

Evaluate anemia, blood loss, and state of hydration or suspect polycythemic condition and response to treatment

**Specimen Requirements:** Whole blood 1.5 mL
**Collection Container:** Lavender Top (EDTA) Tube
**Performed at:** Willamette Valley Laboratory Services, Hematology
**CPT Code:** 85014

**Hematocrit Body Fluid**

Evaluate anemia, blood loss, and state of hydration or suspect polycythemic condition and response to treatment

**Specimen Requirements:** Body Fluid 3.0 mL
**Collection Container:** Lavender Top (EDTA) Tube
**Performed at:** Willamette Valley Laboratory Services, Body Fluid
**CPT Code:** 85014
Hemoglobin

Evaluate anemia, blood loss, hydration or suspected polycythemic condition, and response to treatment

Specimen Requirements: Whole blood 1.5 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology
CPT Code: 85018

Hemoglobin + Hematocrit

Specimen Requirements: Whole blood 1.5 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology
CPT Code:

Hemoglobin A1c

Hemoglobin A1c values are used to assess glucose control in diabetes

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83036

Hemoglobin Electrophoresis

Diagnose thalassemias and hemoglobin variants

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Refrigerated, whole blood
State patient's age, ethnic background, MCV, transfusion history, and any other known hematological data on the request form.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83021
**Hep B Ab PCR Quant + Graph**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87517

**Hep C Ab w Reflx Verify**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

**Hep C RNA PCR Qualitative**

Detect and confirm hepatitis C virus infection

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87521

**Hep C RNA PCR Quantitative**

Determine the number of international units (IU) of hepatitis C virus (HCV) RNA per milliliter serum or plasma in known HCV-positive patients

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87522
Hep C Virus Genotype PCR

This assay, for in vitro use, is intended for the genotyping of hepatitis C virus (HCV) in human serum and plasma.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells
Only submit samples that contain a HCV viral load >600 IU/mL serum or plasma.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87902

Heparin Anti-Xa Level

The chromogenic factor X activity test can be useful in monitoring patients where baseline PT is prolonged.

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 85520

Heparin Induced Platelet Ab

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86022

Hepatic Function Panel

Specimen Requirements: Serum 4.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 80076
<table>
<thead>
<tr>
<th>Test Description</th>
<th>Code</th>
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<tbody>
<tr>
<td><strong>Hepatitis A Ab IgM</strong></td>
<td>HAVIGM</td>
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<tr>
<td>Specimen Requirements: Serum</td>
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<tr>
<td>Collection Container: Gold Top Serum Separator Tube (SST)</td>
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<td>Refrigerated, separate serum from cells</td>
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<td><strong>Hepatitis A Ab Total</strong></td>
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<td><strong>Hepatitis B Ab PCR Quant</strong></td>
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<td><strong>Hepatitis B Core Ab IgM</strong></td>
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<td><strong>Hepatitis B Core Ab Total</strong></td>
<td>HBCT</td>
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<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
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<tr>
<td>CPT Code: 86704</td>
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</tr>
</tbody>
</table>
**Hepatitis B Surface Ab**  

Presence of anti-HBs is an indicator of clinical recovery and subsequent immunity to hepatitis B virus. This test is useful for evaluation of possible immunity in individuals who are at increased risks for exposure to the hepatitis B (ie, hemodialysis unit personnel, venipuncturists, etc). Evaluate the need for hepatitis B immune globulin after needlestick injury; evaluate the need for hepatitis B vaccine and follow immune status after hepatitis B vaccine.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86706

**Hepatitis B Surface Ag w Conf**  

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 

**Hepatitis Be Ab**  

Differential diagnosis, staging, and prognosis of hepatitis B infection. The appearance of anti-HBe in patients who have previously been HBeAg positive indicates a reduced risk of infectivity. Failure of appearance implies disease activity and probable chronicity but patients with HBeAb may have chronic hepatitis. Chronic HBsAg carriers can be positive for either HBeAg or anti-HBe, but are less infectious when anti-HBe is present. HBe can persist for years, but usually disappears earlier than anti-HBs or anti-HBc. Anti-HBe has not been found as the sole serologic marker for hepatitis B infection.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells  

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86707
HBeAg appears in acute B hepatitis with or shortly after HBsAg, when the patient is most infectious. HBeAg is found only in HBsAg-positive sera. During the HBeAg-positive state, usually three to six weeks, hepatitis B patients are at increased risk of transmitting the virus to their contacts, including babies born during this period. Exposure to serum or body fluid positive for HBeAg and HBsAg is associated with three to five times greater risk of infectivity than when HBsAg positivity occurs alone. Persistence of HBeAg is associated with chronic liver disease.

**Specimen Requirements:** Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87350

**Hepatitis Panel Acute**

Comprehensive profile for detecting markers for HAV or HBV infections; can be used for all stages of infection

**Specimen Requirements:** Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 80074

**Hereditary Hemochromatosis**

**Specimen Requirements:** Plasma
Collection Container: Lavender Top (EDTA) Tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 81256
Herpes Simplex 1+2 Ab IgM

Detect IgG antibodies specific to HSV type 1 and/or 2 infection; confirm or rule out possible infection with herpes simplex types 1 and/or 2 virus in prenatal patients in whom HSV infection can cause serious prenatal disease. In a patient with no history of lesion disease, a positive result for this test may be indicative that the primary infection was asymptomatic. Once infected by HSV, it is possible for a patient to shed virus without the development of lesions (asymptomatic shedding). This test does not indicate the site of HSV infection.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86694

Herpes Simplex 1+2 DNA PCR

Specimen Requirements: Swab (dacron or rayon)
Collection Container:

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

Herpes Simplex 1+2 DNA PCR CSF

Specimen Requirements: CSF
Collection Container: Cerebral Spinal Fluid Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

Herpes Simplex Virus 1 Ab IgG

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86695
Herpes Simplex Virus 2 Ab IgG

Detect IgG antibodies specific to HSV type 1 and/or 2 infection; confirm or rule out possible infection with herpes simplex types 1 and/or 2 virus in prenatal patients in whom HSV infection can cause serious prenatal disease. In a patient with no history of lesion disease, a positive result for this test may be indicative that the primary infection was asymptomatic. Once infected by HSV, it is possible for a patient to shed virus without the development of lesions (asymptomatic shedding). This test does not indicate the site of HSV infection.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86694

Histone Abs

Histones are lysine-rich and arginine-rich basic proteins of eukaryotic cells which are predominantly found as complexes with DNA. Antibodies to histones are detected in approximately 30% to 60% of patients with systemic lupus erythematosus (SLE), but their presence in about 95% of patients with drug-induced lupus is more important diagnostically.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86235

Histoplasma capsulatum Ab

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86698

HIV 1 RNA Branched DNA bDNA

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87536
**HIV 1+O+2 Ab w Confirmation**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86703

**HLA-B27**

Evaluate spondyloarthritis and other disorders associated with HLA-B27. HLA-B27 is strongly associated with ankylosing spondylitis (Marie-Strumpell disease). A patient with consistent clinical and radiographic findings who is B27-positive has a greater chance of having or developing ankylosing spondylitis than a negative patient. The antigen is not causative, however, and 10% of normal subjects are B27-positive. This test should not be considered a screening procedure for ankylosing spondylitis.

Specimen Requirements: Whole Blood
Collection Container: Lavender Top (EDTA) Tube  
Room temperature, whole blood  
Draw or submit specimen Monday - Thursday only.

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86812

**Homocysteine**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83090
HSV 1+2 IgG + Reflex Type Spec  

Detect IgG antibodies specific to HSV type 1 and/or 2 infection; confirm or rule out possible infection with herpes simplex types 1 and/or 2 virus in prenatal patients in whom HSV infection can cause serious prenatal disease. In a patient with no history of lesion disease, a positive result for this test may be indicative that the primary infection was asymptomatic. Once infected by HSV, it is possible for a patient to shed virus without the development of lesions (asymptomatic shedding). This test does not indicate the site of HSV infection.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86694

HSV 1+2 Type Specific IgG  

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

IFE + PE Serum  

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

IFE + PE Urine  

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:
**IgG CSF**

Evaluate central nervous system involvement by infection, neoplasm, or primary neurologic disease (in particular, multiple sclerosis).

Specimen Requirements: CSF
Collection Container: Cerebral Spinal Fluid Collection Container
Room temperature

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82784

**IgG Index + Syn Rate (CSF+Ser)**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

**IgG Subclasses (1-4)**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

**Immunoelectrophoresis Ur 24h**

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

**Immunofixation Serum IFE**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:
**Immunoglobulin A**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82784

**Immunoglobulin E**

Evaluate immunoglobulin status in possible atopic disease

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82785

**Immunoglobulin G**

Evaluate central nervous system involvement by infection, neoplasm, or primary neurologic disease (in particular, multiple sclerosis).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82784

**Immunoglobulin M**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 82784
**Immunoglobulins A+G+M**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: IGGAM

**Influenza A+B Rapid Antigen**

Specimen Requirements: Nasopharyngeal Swab  
Collection Container:  

Performed at: Willamette Valley Laboratory Services, Serology  
CPT Code: FLUABSCR

**Insulin Abs**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Frozen, separate plasma from cells  
No radioactive isotopes should be administered 24 hours prior to venipuncture.

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: INSAB

**Insulin Level**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: INS

**Insulin Level Free + Total**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: INSFT
Interleukin 6 (IL-6)

For diagnosis and monitoring inflammatory activity in primary systemic small vessel vasculitides. The anti-MPO-ANCA EIA is useful for confirming positive ANCA results by IFA, particularly with the pANCA pattern. Presence of anti-MPO antibodies is highly specific for idiopathic and vasculitis-associated crescentic glomerulonephritis, classic polyarteritis nodosa, Churg-Strauss syndrome, and polyangiitis overlap syndrome without renal involvement. Levels of anti-MPO are elevated during active phases of disease and lower during remission. Therefore, monitoring anti-MPO levels can aid in disease management.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83520

Intrinsic Factor Ab

Pernicious anemia is one of the major causes of vitamin B12 deficiency and megaloblastic anemia. It is a disease of the stomach in which secretion of intrinsic factor is severely reduced or absent, resulting in malabsorption of B12. Intrinsic factor blocking antibody, which prevents the binding of vitamin B12 to the intrinsic factor molecule, is present in >50% of all patients with pernicious anemia and only rarely encountered in other conditions. Parietal cell antibody is present in a larger percentage of pernicious anemia patients; but it is also associated with a number of other disorders, making it a less specific marker for pernicious anemia. Qualitative assay for intrinsic factor blocking antibody contributes to the diagnosis and differential diagnosis of B12 deficiency. In the context of a low or borderline B12 result, where other clinical and hematological findings are compatible with a diagnosis of B12 deficiency, the presence of intrinsic factor blocking antibody can be taken as confirmation of this diagnosis and at the same time as an indication of its cause. The combination of megaloblastic anemia, low serum B12, and serum antibodies to intrinsic factor is essentially diagnostic of pernicious anemia and obviates further investigation, including Schilling test. A negative result, on the other hand, cannot rule out the possibility of pernicious anemia since blocking antibody is not demonstrable in nearly 50% of all patients with this disorder.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells
No specimen should be collected from a patient currently undergoing B12 therapy less than one week after the last B12 injection.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86340
Iron

Aid in the evaluation of a number of conditions involving red cell production and destruction, iron metabolism, or iron transport

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 83540

Irritable Bowel Disease

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

JAK2 Mutation Analysis Qual

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube  
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

JO-1 Extractable Nuclear Ab

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86235

Joint Fld Culture + Gram Stain

Specimen Requirements:  
Collection Container: See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:
**Kappa+Lambda Light Chain Anal**  
KLFR

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Serum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Gold Top Serum Separator Tube (SST)</td>
</tr>
<tr>
<td></td>
<td>Refrigerated, separate serum from cells</td>
</tr>
</tbody>
</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:  

**KB Stain % Fetal Blood**  
KBPCTFET

| Specimen Requirements: | Whole blood 3.0 mL  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Lavender Top (EDTA) Tube</td>
</tr>
</tbody>
</table>

Performed at: Willamette Valley Laboratory Services, Hematology  
CPT Code: 85460

**Lactate Dehydrogenase (LDH)**  
LDH

Useful in the differential diagnosis of acute myocardial infarction, megaloblastic anemia (folate deficiency, pernicious anemia), hemolytic anemia, and very occasionally renal infarct.

| Specimen Requirements: | Serum 3.0 mL  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Gold Top Serum Separator Tube (SST)</td>
</tr>
</tbody>
</table>

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 83615

**Lactic Acid**  
LACTIC

Hypoperfusion is the most common cause of lactic acidosis and hyperlactacidemia may be the only marker of tissue hypoperfusion.

| Specimen Requirements: | Plasma, Sodium Fluoride 1.0 mL  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Grey Top (Potassium Oxalate/Sodium Fluoride) Tube</td>
</tr>
<tr>
<td></td>
<td>On ice</td>
</tr>
<tr>
<td></td>
<td>Draw blood in a grey-top (potassium oxalate/sodium fluoride) tube.</td>
</tr>
<tr>
<td></td>
<td>Immediately place specimen on ice.</td>
</tr>
<tr>
<td></td>
<td>Spin down and remove plasma from cells within 1.5 minutes of draw.</td>
</tr>
<tr>
<td></td>
<td>Because of the volatility of lactic acid when left on red blood cells, the laborator</td>
</tr>
</tbody>
</table>

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 83605
Lamotrigine Level  

Specimen Requirements: Serum  
Collection Container: Red Top (No Additive) Tube  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82491

LDH CSF  

A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes.

Specimen Requirements: CSF Container #11.0 mL  
Collection Container: Cerebral Spinal Fluid Collection Container #1

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 83615

LDH Pericardial  

A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes.

Specimen Requirements: Body Fluid1.0 mL  
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 83615

LDH Peritoneal  

A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes.

Specimen Requirements: Body Fluid1.0 mL  
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 83615
**LDH Pleural**

A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 83615

**LDH Synovial**

A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 83615

**LDH Thoracentesis**

A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes.

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 83615

**LDL Cholesterol Direct**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST) Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 83721
**Lead**

Monitor exposure to lead

Specimen Requirements: Plasma
Collection Container: Tan Top Trace Metals tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83655

**Lead Level (Ped)**

Monitor exposure to lead

Specimen Requirements: Plasma
Collection Container: Tan Top Trace Metals tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83655

**Legionella pneumo DFA NonUrine**

Confirm the diagnosis of *Legionella pneumophila* serogroup 1 infection.

Specimen Requirements: Body Fluid
Collection Container: Sterile Specimen Container

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87540

**Legionella pneumo Ag Urine EIA**

Confirm the diagnosis of *Legionella pneumophila* serogroup 1 infection.

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87540
**Legionella pneumophilia S1-6Ab**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86713

**Leukocyte Alkaline Phosphatase**

Aids in the differential diagnosis of chronic myelocytic leukemia (CML) versus leukemoid reaction; aids in the evaluation of polycythemia vera, myelofibrosis with myeloid metaplasia, and paroxysmal nocturnal hemoglobinuria

Specimen Requirements:  
Collection Container:

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85540

**Levetiracetam Level**

Specimen Requirements: Serum  
Collection Container: Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82491

**Lipase**

Diagnose pancreatitis, more specific for pancreatitis than is serum amylase

Specimen Requirements: Serum1.0 mL  
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 83690

**Lipase Fluid**

Diagnose pancreatitis, more specific for pancreatitis than is serum amylase

Specimen Requirements: Body Fluid1.0 mL  
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 83690
Lipid Panel

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry
CPT Code: 80061

Lipoprotein (a)

Lipoprotein (a) has been called a powerful predictor of premature atherosclerotic vascular disease.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83695

Lithium Level

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology
CPT Code: 80178

Liver Fibrosis Panel

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86376

Liver Kidney Microsomal 1 Ab

The detection of LKM-1 antibodies is an aid in the diagnosis of autoimmune hepatitis, type 2 (AIH-2).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86376
**Lupus Anticoagulant Reflex**

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: LUPP

**Luteinizing Hormone (LH)**

The primary clinical use of LH measurement is in evaluating the normalcy of hypothalamic-pituitary-gonadal axis.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: LH

**Lyme Dis (B burgdor) Abs**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: LYMEABS

**Lyme Dis Ab Pnl w Confirm WB**

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: LYMEPWB
Magnesium

Magnesium deficiency produces neuromuscular disorders. Increased magnesium levels relate mostly to patients in renal failure.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 83735

Magnesium Urine

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code: 83735

Magnesium Urine 24h Panel

Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code:

Malarial Smear

Establish the diagnosis of Plasmodium or other parasitic infection; diagnose malarial parasitic infestation of blood; evaluate febrile disease of unknown origin.

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 87207

Maternal Screen Quad Marker

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82105
<table>
<thead>
<tr>
<th>Test Name</th>
<th>Code</th>
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<tbody>
<tr>
<td>Mercury</td>
<td>MERC</td>
</tr>
<tr>
<td>Metanephrine Frac Ur 24h Quant</td>
<td>METFR24U</td>
</tr>
<tr>
<td>Metanephrines</td>
<td>MET</td>
</tr>
<tr>
<td>Methadone Level</td>
<td>METH</td>
</tr>
</tbody>
</table>

**Mercury**

Monitor exposure to mercury

**Specimen Requirements:** Plasma  
**Collection Container:** Royal Blue (EDTA) Trace Metals tube  
**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 83825

**Metanephrine Frac Ur 24h Quant**

Evaluate the presence of abnormal catecholamine production. Diagnose pheochromocytoma, neuroblastoma, and ganglioneuroblastoma.

**Specimen Requirements:** Urine 24 Hour  
**Collection Container:** 24 Hour Urine Collection Container Refrigerated  
No caffeine before or during collection. Monamine oxidase inhibitors should be discontinued at least one week prior to beginning collection.

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 83835

**Metanephrines**

**Specimen Requirements:** Plasma  
**Collection Container:** Lavender Top (EDTA) Tube Refrigerated, separate plasma from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 83835

**Methadone Level**

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:**
<table>
<thead>
<tr>
<th>Test Name</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methemoglobin</td>
<td>METHGBCO</td>
</tr>
<tr>
<td>Specimen Requirements:</td>
<td>Whole blood</td>
</tr>
<tr>
<td>Collection Container:</td>
<td>Green Top (Sodium Heparin) Tube</td>
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<tr>
<td>Room temperature, whole blood</td>
<td></td>
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<tr>
<td>Performed at:</td>
<td>Willamette Valley Laboratory Services, Blood Gas</td>
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<tr>
<td>CPT Code:</td>
<td>83050</td>
</tr>
<tr>
<td>Methyl Alcohol Level, Quant</td>
<td>MEOH</td>
</tr>
<tr>
<td>Specimen Requirements:</td>
<td>Plasma</td>
</tr>
<tr>
<td>Collection Container:</td>
<td>Grey Top (Potassium Oxalate/Sodium Fluoride) Tube</td>
</tr>
<tr>
<td>Room temperature, whole blood</td>
<td></td>
</tr>
<tr>
<td>Do not prepare venipuncture site with alcohol or remove stopper from tube. Use betadine to clean the venipuncture site.</td>
<td></td>
</tr>
<tr>
<td>Performed at:</td>
<td>Laboratory Corporation of America, Referral Testing</td>
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<tr>
<td>CPT Code:</td>
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<tr>
<td>Methylene tetrahydrofolate</td>
<td>MTHFR</td>
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<td>CPT Code:</td>
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<td>Methylmalonic Acid</td>
<td>MMA</td>
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<td>Specimen Requirements:</td>
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<td>Refrigerated, separate serum from cells</td>
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<td>Laboratory Corporation of America, Referral Testing</td>
</tr>
<tr>
<td>CPT Code:</td>
<td>83921</td>
</tr>
</tbody>
</table>
**Microalbumin Creat Ratio Ur**  
MALBCRERAT

Measurement of albumin levels in urine below the detection level of urine dipsticks. This test is useful in the management of patients with relatively early diabetes mellitus to assist in avoiding or delaying the onset of diabetic renal disease.

Specimen Requirements: Urine 10.0 mL  
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code: 82043

**Microalbumin Urine 24h**  
MALB24

Specimen Requirements: Urine 24 Hour 10.0 mL aliquot  
Collection Container: 24 Hour Urine Collection Container  
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code:

**Mitochondria M2 Ab**  
MITO

The presence of mitochondrial antibodies can be used in conjunction with clinical findings and other laboratory tests to aid in the diagnosis of primary biliary cirrhosis (PBC).

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells  
Maintain specimen at room temperature no longer than eight hours. Samples can be refrigerated for 48 hours. For longer storage, freeze sample at -20°C or lower

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83516

**Mono Screen**  
MONO

Specimen Requirements: Serum 1.0 mL  
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Serology  
CPT Code:
MRSA Surveillance Screen

Specimen Requirements: Nasal Swab
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:

Mumps Virus Ab IgG

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86735

Mumps Virus Ab IgM

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86735

Mycophenolic Acid

Monitor therapeutic levels; evaluate toxicity.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 80299
**Mycoplasma pneumoniae Ab IgG**  

*Aid in the diagnosis of atypical pneumonia, which is a cause of community-acquired pneumonia. Primary infection usually occurs in children and reinfection in adults is common. Results must be interpreted in light of each patient's history, physical examination, and other diagnostic findings.*

**Specimen Requirements:**  
*Collection Container:* Gold Top Serum Separator Tube (SST)  
*Room temperature, separate serum from cells*

**Performed at:** Laboratory Corporation of America, Referral Testing  
*CPT Code:* 86738

---

**Mycoplasma pneumoniae Ab IgM**  

*Aid in the diagnosis of atypical pneumonia and Stevens-Johnson syndrome by providing laboratory support for a Mycoplasma pneumoniae infection. Results must be interpreted in light of each patient's history, physical examination, and other diagnostic findings.*

**Specimen Requirements:**  
*Collection Container:* Gold Top Serum Separator Tube (SST)  
*Refrigerated, separate serum from cells*

**Performed at:** Laboratory Corporation of America, Referral Testing  
*CPT Code:* 86738

---

**Mycoplasma pneumoniae Culture**

**Specimen Requirements:**  
*Collection Container:* See microbiology specimen collection instructions.

**Performed at:** Willamette Valley Laboratory Services, Microbiology  
*CPT Code:*

---

**Myoglobin**

*Diagnose skeletal or myocardial muscle injury.*

**Specimen Requirements:**  
*Collection Container:* Gold Top Serum Separator Tube (SST)  
*Refrigerated, separate serum from cells*

**Performed at:** Laboratory Corporation of America, Referral Testing  
*CPT Code:* 83874
Myoglobin Urine Quant

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Collect specimen in early morning or immediately following exercise.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 83874

N. gonorrhoeae DNA NAA

Specimen Requirements: Swab
Collection Container: Viral Transport Media

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 87591

Nasal Culture + Gram Stain

Specimen Requirements:
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:

Neutrophil Cytoplasmic Abs

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

NMR Lipoprotein Profile

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:
Norovirus PCR Stool

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can.
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

N-Telopeptide Serum

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 82523

N-Telopeptide Urine

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

Occult Blood Immunogenic Fecal

Specimen Requirements: Stool
Collection Container: Fecal Occult Blood Collection Kit

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:
Oligoclonal Immunoglobulin CSF

Diagnose diseases of the central nervous system including meningitis, tumor, syphilis, and multiple sclerosis

Specimen Requirements: Serum and CSF
Collection Container: Gold Top Serum Separator Tube (SST) and Cerebral Spinal Fluid
Frozen, separate plasma from cells
Must submit serum sample and CSF specimen inorder for testing to be completed. Testing can not be completed without both specimens. Failure to submit both serum and CSF are causes for rejection.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83916

Opiates Urine w Confirm

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83925

Osmolality Serum

Evaluate electrolyte and water balance, hyperosmolar status, and hydration status; evaluate dehydration, acid-base balance; evaluate seizures.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83930

Osmolality Stool

Evaluate electrolyte and water balance, hyperosmolar status, and hydration status; evaluate dehydration, acid-base balance; evaluate seizures.

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can.
Frozen

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83930
Osmolality Urine

Evaluate concentrating ability of the kidneys (eg, in acute and chronic renal failure); evaluate electrolyte and water balance; used in work-up for renal disease, syndrome of inappropriate antidiuretic hormone secretion (SIADH), and diabetes insipidus

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated
Centrifuge urine sample after collection for five minutes at 4°C to 25°C to remove gross particulate matter.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83935

Osteocalcin

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 83937

Ova + Parasite Exam

Establish the diagnosis of parasitic infestation.

Specimen Requirements: Stool
Collection Container: Sterile Specimen Container or Para Pak preservative

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87177

Oxalate Urine 24h

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container, Preserved with HCL Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:
### Oxcarbazepine Level

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube  
Refrigerated, separate serum from cells  
**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 80299

### Paraneoplastic Profile II

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells  
**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 86256

### Parathyroid Horm Reltd Protein

PTH-related peptide (PTHrP) is the principle mediator of humoral hypercalcemia of malignancy.  
**Specimen Requirements:** Plasma  
**Collection Container:** Lavender Top (EDTA) Tube  
Frozen, separate serum from cells  
**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82397

### Parathyroid Hormone Intact

Diagnosis of parathyroid disease and other diseases of calcium homeostasis; monitoring patients undergoing renal dialysis.  
**Specimen Requirements:** Plasma  
**Collection Container:** Lavender Top (EDTA) Tube  
Refrigerated, separate plasma from cells  
Transfer separated plasma into a plastic transport tube clearly labeled as "EDTA Plasma" and maintain at refrigerated temperature.  
**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 83970
**Partial Thromboplastin**

The aPTT is sensitive to deficiency or inhibition of factors in the intrinsic pathway.

**Specimen Requirements:** Plasma, Citrated 2.7 mL

**Collection Container:** Light Blue Top (3.2% Sodium Citrate) Tube

**Performed at:** Willamette Valley Laboratory Services, Coagulation

**CPT Code:** 85730

---

**Parvovirus B19 Human IgG + IgM**

**Specimen Requirements:** Serum

**Collection Container:** Gold Top Serum Separator Tube (SST)

- Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing

**CPT Code:**

---

**pH Fluid**

**Specimen Requirements:** Body Fluid 1.0 mL

**Collection Container:** Red Top (No Additive) Tube or Sterile Specimen Container

**Performed at:** Willamette Valley Laboratory Services, Body Fluid

**CPT Code:**

---

**pH Pleural**

**Specimen Requirements:** Body Fluid 1.0 mL

**Collection Container:** Red Top (No Additive) Tube or Sterile Specimen Container

**Performed at:** Willamette Valley Laboratory Services, Body Fluid

**CPT Code:**

---

**pH Test Strip Urine**

**Specimen Requirements:** Urine 10.0 mL

**Collection Container:** Sterile Urine Collection Container

**Performed at:** Willamette Valley Laboratory Services, Urine

**CPT Code:** 81002
<table>
<thead>
<tr>
<th>Test</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phencyclidine Conf Ur GCMS</strong></td>
<td>PHENCYUC</td>
</tr>
<tr>
<td>Specimen Requirements: Urine</td>
<td></td>
</tr>
<tr>
<td>Collection Container: Sterile Urine Collection Container</td>
<td></td>
</tr>
<tr>
<td>Refrigerated</td>
<td></td>
</tr>
<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td>CPT Code: 83992</td>
</tr>
<tr>
<td><strong>Phencyclidine Confirm Urine</strong></td>
<td>DSPHENC</td>
</tr>
<tr>
<td>Specimen Requirements: Urine</td>
<td></td>
</tr>
<tr>
<td>Collection Container: Sterile Urine Collection Container</td>
<td></td>
</tr>
<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td>CPT Code: 80102</td>
</tr>
<tr>
<td><strong>Phenobarbital Level</strong></td>
<td>PHENO</td>
</tr>
<tr>
<td>Specimen Requirements: Serum</td>
<td></td>
</tr>
<tr>
<td>Collection Container: Red Top (No Additive) Tube</td>
<td></td>
</tr>
<tr>
<td>Refrigerated, separate serum from cells</td>
<td></td>
</tr>
<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td>CPT Code: 82205</td>
</tr>
<tr>
<td><strong>Phenytoin Level</strong></td>
<td>PTN</td>
</tr>
<tr>
<td>Specimen Requirements: Serum 1.0 mL</td>
<td></td>
</tr>
<tr>
<td>Collection Container: Red Top (No Additive) Tube</td>
<td></td>
</tr>
<tr>
<td>Performed at: Willamette Valley Laboratory Services, Toxicology</td>
<td>CPT Code: 80185</td>
</tr>
</tbody>
</table>
Phenytoin Level Free

Measurement of the free fraction is not cost-effective on a routine outpatient basis, but may be clinically relevant in exceptional circumstances associated with alterations in the binding of phenytoin. Binding kinetics may be altered in uremia, hepatic disease, late pregnancy or postpartum, cases of head injury associated with a hypermetabolic state, and certain instances of polypharmacy.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 80186

Phenytoin Level Free + Total

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:

Phosphorus

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 84100

Phosphorus Urine 24h

Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine CPT Code:
### Platelet Count

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Whole blood 1.5 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Lavender Top (EDTA) Tube</td>
</tr>
</tbody>
</table>

Performed at: Willamette Valley Laboratory Services, Hematology  
CPT Code: 85049

### Pneumococcal 14 Ab Panel IgG

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Serum</th>
</tr>
</thead>
</table>
| Collection Container:  | Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells |

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

### Pneumocystis carinii Smear

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Stool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Container:</td>
<td>Sterile Specimen Container</td>
</tr>
</tbody>
</table>

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 88313

### Porphobilinogen Ur 24h Quant

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Urine 24 Hour</th>
</tr>
</thead>
</table>
| Collection Container:  | 24 Hour Urine Collection Container, Preserved with Glacial Acetic Acid  
Frozen |

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

### Porphyrins Random Urine Quant

<table>
<thead>
<tr>
<th>Specimen Requirements:</th>
<th>Urine</th>
</tr>
</thead>
</table>
| Collection Container:  | Sterile Urine Collection Container  
Refrigerated |

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84120
Porphyrrins Urine 24h Quant

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container
Room temperature

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 84120

Potassium  K

Evaluate electrolyte balance.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 84132

Potassium Urine  KU

Evaluate electrolyte balance, acid-base balance.

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine  CPT Code: 84133

Potassium Urine 24h  K24UP

Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine

Prealbumin  PREALB

Evaluate protein malnutrition, total parenteral nutrition, and liver dysfunction.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 84134
**Primidone+Phenobarbital Level**

Specimen Requirements: Serum  
Collection Container: Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

**Progesterone**

Establish the presence of a functioning corpus luteum or luteal cell function; confirm basal body temperature measurements for the occurrence of ovulation; obtain an indication of the day of ovulation; evaluate the functional state of the corpus luteum in infertility patients; assess placental function during pregnancy; ovarian function test.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84144

**Proinsulin**

Proinsulin, which has relatively low biological activity (approximately 10% of insulin potency), is the major storage form of insulin.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84206

**Prolactin**

First test for work-up of galactorrhea (inappropriate lactation). Pituitary function test useful in the detection of prolactin-secreting pituitary tumors (microadenomas, macroadenomas) with or without galactorrhea, with or without structural evidence of sellar enlargement. Elevated prolactin may be associated with corpus luteum insufficiency or anovulation.

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84146
Prostate Spec Ag Total + %Free

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

Prostate Specific Ag Screen

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 0

Prostate Specific Ag

Prostate specific antigen (PSA) is a glycoprotein produced exclusively by the epithelial cells lining the prostatic ducts and acini. Normally, it is secreted into the prostatic ducts and is present only in prostate tissue, prostatic fluid, and seminal plasma. PSA is produced by normal, hyperplastic, and cancerous prostatic tissue. In recent years, urologists have found serum PSA to be the most sensitive marker for monitoring patients with known prostate cancer. In these patients, serum PSA levels are used to predict survival and tumor recurrence following therapy. Serum PSA levels are frequently monitored in conjunction with another serum marker for prostatic cancer: prostatic acid phosphatase (PAP). Although PAP is not as sensitive for prostatic cancer as PSA, concurrent use of the two markers has been shown to enhance efficacy in monitoring progression of disease and response to therapy.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84153
Prot Electro Interp Urine 24h  PEPI24U

Evaluate myeloma, macroglobulinemia of Waldenström, lymphoma, amyloidosis; differentiate between normal renal function, glomerular proteinuria, and tubular proteinuria.

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 84166

Protein C Antigen  PROTCAG

Confirmation and characterization of protein C deficiency.

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 85302

Protein C Deficiency Profile  PROTCDEF

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

Protein C Func + Protein S Fun  PROTCFNSFN

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:
Protein C Functional

Measure the level of functional protein C in plasma.

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 85303

Protein Creatinine Ratio Urine

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine
CPT Code:

Protein CSF

A nonspecific but reliable indication of CNS pathology such as meningitis, brain abscess, meningovascular syphilis, CVA, neoplastic diseases, multiple sclerosis, and other degenerative processes causing neurologic disease.

Specimen Requirements: CSF Container #11.0 mL
Collection Container: Cerebral Spinal Fluid Collection Container #1

Performed at: Willamette Valley Laboratory Services, Body Fluid
CPT Code: 84157

Protein Electrophoresis Urine

Evaluate myeloma, macroglobulinemia of Waldenström, lymphoma, amyloidosis; differentiate between normal renal function, glomerular proteinuria, and tubular proteinuria.

Specimen Requirements: Urine
Collection Container: Sterile Urine Collection Container
Refrigerated

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84166
Protein Electrophoresis+Interp SPEI

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:

Protein Fluid TPFL

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 84157

Protein Pericardial TPPC

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 84157

Protein Peritoneal TPPT

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 84157

Protein Pleural TPPL

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  CPT Code: 84157
Protein S Antigenic

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing

Protein S Functional

Confirmation and characterization of protein S (PS) congenital deficiency.

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 85306

Protein S Panel

Specimen Requirements: Plasma
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing

Protein Synovial

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid
CPT Code: 84157

Protein Test Strip Urine

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine
CPT Code: 81002
Protein Total Ur

Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine CPT Code: 84156

Protein Urine 24h

Specimen Requirements: Urine 24 Hour 10.0 mL aliquot
Collection Container: 24 Hour Urine Collection Container Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine CPT Code:

Prothrombin Time PT

Evaluation of the extrinsic coagulation system; aid in screening for congenital and acquired deficiencies of factors II, V, VII, X, and fibrinogen. This test is used clinically for the therapeutic monitoring of warfarin (Coumadin®) anticoagulant therapy.

Specimen Requirements: Plasma, Citrated 2.7 mL
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube Submit whole blood uncentrifuged within 24 hours of collection.

Performed at: Willamette Valley Laboratory Services, Coagulation CPT Code: 85610

PSA Ultra Sensitive wo Serial PSAUS

Intended to aid in the management of patients following surgical or medical treatment for prostate cancer.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST) Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 84153
PT 20210 (F2 DNA Polymorphism)

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Room temperature, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 81240

PT Mixing Study

Evaluation of the extrinsic coagulation system; aid in screening for congenital and acquired deficiencies of factors II, V, VII, X, and fibrinogen.7-9 This test is used clinically for the therapeutic monitoring of warfarin (Coumadin®) anticoagulant therapy.

Specimen Requirements: Plasma, Citrated 2.7 mL
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube
Submit whole blood uncentrifuged within 24 hours of collection.

Performed at: Willamette Valley Laboratory Services, Coagulation  CPT Code: 85610

PTT Mixing Study

The aPTT is sensitive to deficiency or inhibition of factors in the intrinsic pathway.

Specimen Requirements: Plasma, Citrated 2.7 mL
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube

Performed at: Willamette Valley Laboratory Services, Coagulation  CPT Code: 85730

Q Fever Abs IgG

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86638

Renal Function Panel

Specimen Requirements: Serum 5.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 80069
Renin Activity

Measurement of renin activity is useful in the differential diagnosis of individuals with hypertension.

Specimen Requirements: Plasma
Collection Container: Lavender Top (EDTA) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 84244

Reticulocyte

Evaluate erythropoietic activity which is increased in acute and chronic hemorrhage, and hemolytic anemias; evaluate erythropoietic response to antianemic therapy.

Specimen Requirements: Whole blood3.0 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology  CPT Code: 85045

Rh Immune Globulin Wrkup

Specimen Requirements:
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  CPT Code:

Rheumatoid Factor Quant

Detect rheumatoid factor in joint (synovial) fluid.

Specimen Requirements: Body Fluid1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  CPT Code: 86431
Rotavirus Ag Stool EIA

Detect rotavirus in stools of patients suspected of having viral gastroenteritis.

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can.
Refrigerated
Swabs, diapers and specimens submitted in preservative media are not acceptable for analysis.

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 87425

RPR Reflex FTA+TPPA+VDRL

Test for syphilis.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86592

RSV Rapid Antigen

Evaluate lower respiratory tract infections in young children.

Specimen Requirements: Nasopharyngeal Swab2-3 mL
Collection Container:

Performed at: Willamette Valley Laboratory Services, Serology  CPT Code: 87807

Rubella Ab IgG

Recommended for immune status determination

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86762
Rubella Ab IgM  

Recommended for immune status determination

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86762

Rubeola (Measles) Ab IgG  

Determine status or, with paired sera, aid in the diagnosis of recent infection.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86765

Saccharomyces cerevisiae Panel  

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

Salicylate Level  

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology  
CPT Code: 80196

Scleroderma Scl70 ENA Ab  

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86235
Sedimentation Rate Automated

Specimen Requirements: Whole blood 3.0 mL
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology
CPT Code: 85652

Serotonin

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84260

Sex Hormone Binding Globulin

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84270

Shiga Toxin EIA

Specimen Requirements:
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:

Shigella Typing

Specimen Requirements:
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology
CPT Code:
### Sickle Cell Screen

**Specimen Requirements:** Whole blood  
**Collection Container:** Lavender Top (EDTA) Tube  
**Room temperature, whole blood**

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 85660

![SICKLES CRN](image)

### Sirolimus Level

**Specimen Requirements:** Whole blood  
**Collection Container:** Lavender Top (EDTA) Tube  
**Refrigerated, whole blood**

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 80195

### Sjogrens Syndrome Panel

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
**Refrigerated, separate serum from cells**

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:**

### SLE (Lupus) Panel

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
**Room temperature, separate serum from cells**

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:**

### Sodium

**Electrolyte, acid-base balance; water balance; water intoxication; diagnose dehydration.**

**Specimen Requirements:** Serum 1.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)

**Performed at:** Willamette Valley Laboratory Services, Chemistry  
**CPT Code:** 84295

![Sodium](image)
Sodium Stool

Specimen Requirements: Stool
Collection Container: Contact laboratory for special collection can.
                 Frozen

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84302

Sodium Urine

Specimen Requirements: Urine10.0 mL
Collection Container: Sterile Urine Collection Container
                 Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine
CPT Code: 84300

Sodium Urine 24h

Specimen Requirements: Urine 24 Hour10.0 mL aliquot
Collection Container: 24 Hour Urine Collection Container
                 Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine
CPT Code:

Somatomedin-C (Insulin Growth)

Diagnose acromegaly, in which Sm-C and GH are increased; evaluate hypopituitarism and hypothalamic lesions in children (diagnosis of dwarfism and response to therapy).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
                 Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84305

Sperm Count Post Vasectomy

Specimen Requirements: Semen
Collection Container: Sterile Specimen Container
                 Room temperature

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 89310
**Sputum Culture + Gram Stain**  
Specimen Requirements:  
Collection Container:  
See microbiology specimen collection instructions.  
Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:  

**Stone (Calculi) Analysis**  
Specimen Requirements: Urine  
Collection Container: Sterile Urine Collection Container  
Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82360

**Stool Culture**  
Specimen Requirements:  
Collection Container:  
See microbiology specimen collection instructions.  
Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:  

**Strep B Culture**  
Specimen Requirements:  
Collection Container:  
See microbiology specimen collection instructions.  
Performed at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:  

**Strep Group A Rapid Antigen**  
Specimen Requirements: Throat swab (dacron or rayon)  
Collection Container:  
Performed at: Willamette Valley Laboratory Services, Serology  
CPT Code: 87430
Surgical Cult +Gram Stn +Anaer

Specimen Requirements:
Collection Container:
See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology

**T3 Free**

Evaluate thyroid function and assess abnormal binding protein disorders.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

**T3 Reverse**

Reverse T3 measurement may be useful in evaluating the euthyroid sick patient with low T3 concentrations. Also useful in evaluating thyroid function and metabolism.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

**T3 Total**

Thyroid function which is particularly useful in the diagnosis of T3 thyrotoxicosis, in which T3 is increased and T4 is within normal limits. T3 toxicosis is occasionally found in Graves' disease.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

---

T3F

T3REV

T3T

CPT Code: 84481

CPT Code: 84482

CPT Code: 84480
**T3 Uptake**

T3 should never be used alone; rather, its usual application is use with thyroxine (T4).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84479

**T4 (Thyroxine)**

Thyroid function test. Decreased in hypothyroidism and in the third stage of (painful) subacute thyroiditis; increased with hyperthyroidism, with subacute thyroiditis in its first stage and with thyrotoxicosis due to Hashimoto disease.3 Used to diagnose T4 toxicosis.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 84436

**T4 (Thyroxine) Free**

Free T4 may be indicated when binding globulin (TBG) problems are perceived, or when conventional test results seem inconsistent with clinical observations.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 84439

**T7 (Free Thyroxine Index)**

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code:
Tacrolimus (FK506) Level

Tacrolimus is an immunosuppressive drug that is believed to prevent rejection in transplantation patients. Measurement of tacrolimus blood levels may be of use in monitoring patients receiving this drug.

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Refrigerated, whole blood

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 80197

TB QuantiFERON

Specimen Requirements: Serum
Collection Container: Quantiferon Testing Kit

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 86480

Testosterone Free

Evaluate hirsutism and masculinization in women; evaluate testicular function in clinical states where the testosterone binding proteins may be altered (obesity, cirrhosis, thyroid disorders).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code: 84402

Testosterone Free + Total

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  CPT Code:
Testosterone Total

Testosterone testing is used to evaluate androgen excess or deficiency related to gonadal function, adrenal function, or tumor activity.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84403

Tetanus Antitoxoid Ab IgG

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86317

T-Helper CD4 Helper Lymph Prof

Specimen Requirements:
Collection Container: Light Yellow Top (ACD) Tube and Lavender Top (EDTA) Tube. Must submit both tubes.

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86361

Theophylline Level

Specimen Requirements: Serum 1.0 mL
Collection Container: Red Top (No Additive) Tube

Performed at: Willamette Valley Laboratory Services, Toxicology  
CPT Code: 80198

Therapeutic Phlebotomy

Specimen Requirements:
Collection Container:

Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code: 99195
**Thiopurine Methyltransferase**

**Specimen Requirements:** Whole blood  
**Collection Container:** Lavender Top (EDTA) Tube  
Refrigerated, whole blood

Perform at: Laboratory Corporation of America, Referral Testing  
CPT Code: 82657

**Throat Culture**

**Specimen Requirements:**  
**Collection Container:** See microbiology specimen collection instructions.

Perform at: Willamette Valley Laboratory Services, Microbiology  
CPT Code:

**Thrombin Time**

**Specimen Requirements:** Plasma  
**Collection Container:** Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Perform at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85670

**Thyroglobulin + Thyroperox Abs**

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Perform at: Laboratory Corporation of America, Referral Testing  
CPT Code:

**Thyroglobulin Ab**

Detect and confirm autoimmune thyroiditis, Hashimoto thyroiditis.

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Perform at: Laboratory Corporation of America, Referral Testing  
CPT Code: 86800
Thyroglobulin Quant

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

CPT Code:

Thyroid Stimulating Hormone

Thyroid function test.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry

CPT Code: 84443

Thyroid Stimulating Immunoglobulin

Thyroid-stimulating immunoglobulins (TSI) can be detected in the majority of patients (77.8%) with Graves' disease.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

CPT Code: 84445

Thyroperoxidase Ab

Differential diagnosis of hypothyroidism and thyroiditis. This test should be used in conjunction with antithyroglobulin test, since autoimmune thyroiditis may demonstrate a response to antigens other than thyroid microsomes. Antibodies to thyroid microsomes (thyroid peroxidase) are present in 70% to 90% of patients with chronic thyroiditis. They are also present in smaller percentages of patients of other thyroid diseases. Antibody production may be confined to lymphocytes within the thyroid, and serum may be negative. Small numbers (3%) of people with no evidence of disease may have antibody. This is more frequent in females and increases with age.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing

CPT Code: 86376
<table>
<thead>
<tr>
<th>Test</th>
<th>CPT Code</th>
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<tr>
<td>Thyrotropin Receptor Ab (TSHRAB)</td>
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<tr>
<td>Specimen Requirements: Serum</td>
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<td>Collection Container: Gold Top Serum Separator Tube (SST)</td>
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<td>Refrigerated, separate serum from cells</td>
<td></td>
</tr>
<tr>
<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td>83520</td>
</tr>
<tr>
<td>Tissue Culture Surg + Gram Stn (TX)</td>
<td></td>
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<tr>
<td>Specimen Requirements:</td>
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<tr>
<td>Collection Container:</td>
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<tr>
<td>See microbiology specimen collection instructions.</td>
<td></td>
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<tr>
<td>Performed at: Willamette Valley Laboratory Services, Microbiology</td>
<td></td>
</tr>
<tr>
<td>Tissue Transglutaminase Ab IgA (TTGA)</td>
<td></td>
</tr>
<tr>
<td>Specimen Requirements: Serum</td>
<td></td>
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<tr>
<td>Collection Container: Gold Top Serum Separator Tube (SST)</td>
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<tr>
<td>Refrigerated, separate serum from cells</td>
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<td>Performed at: Laboratory Corporation of America, Referral Testing</td>
<td>86256</td>
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<tr>
<td>Tissue Transglutaminase Ab IgG (TTGG)</td>
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<tr>
<td>Specimen Requirements: Serum</td>
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<td>86256</td>
</tr>
</tbody>
</table>
**Tobramycin Level Peak**

Tobramycin is administered to treat serious infections caused by aerobic gram-negative bacilli (eg, a number of the Enterobacteriaceae, P aeruginosa). These include lower respiratory tract, intra-abdominal, soft tissue, bone or joint, wound, and complicated urinary tract infections; bacteremias; and meningitis.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 80200

**Tobramycin Level Trough**

Tobramycin is administered to treat serious infections caused by aerobic gram-negative bacilli (eg, a number of the Enterobacteriaceae, P aeruginosa). These include lower respiratory tract, intra-abdominal, soft tissue, bone or joint, wound, and complicated urinary tract infections; bacteremias; and meningitis.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 80200

**Topiramate Level**

Topiramate is an anticonvulsant drug used as an adjunctive therapy in the treatment of patients with partial and secondary generalized epilepsy.

Specimen Requirements: Serum
Collection Container: Red Top (No Additive) Tube
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 80201

**Total Protein**

Evaluate nutritional status; investigate edema.

Specimen Requirements: Serum 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry
CPT Code: 84155
Toxoplasma gondii Ab IgG

Detect TORCH antibodies; aid in the diagnosis of congenital infection. Toxoplasma, rubella, cytomegalovirus, and herpes are all causes of potentially catastrophic congenital infections, which can be quickly fatal or lead to chronic sequelae including hepatitis, encephalitis, and failure to thrive. Demonstration of IgM antibody or rising titers of IgG antibody can confirm a diagnosis of specific infection. The availability of IgM specific assays also determines whether antibody in cord blood represents passive transfer from the mother (IgG antibody) or signifies congenital infection (IgM antibody).

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 86777

Toxoplasma gondii Ab IgM Quant

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 86777

Transferrin

Increased in iron deficiency anemia. It is decreased in chronic inflammatory states, hereditary atransferrinemia, some instances of acquired liver disease, neoplasia, and renal disease. Transferrin is an index of nutritional status.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 84466
Treponema pallidum Ab IF

Used in the confirmation of syphilis. FTA antibodies should not be used to follow disease activity or response to treatment since fluorescence has no relation to disease activity. Also, antibody levels will remain elevated for life.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 86780

Triglyceride Pericardial

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 84478

Triglyceride Peritoneal

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 84478

Triglyceride Pleural

Specimen Requirements: Body Fluid 1.0 mL
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid CPT Code: 84478

Triglycerides

Specimen Requirements: Plasma 1.0 mL
Collection Container: Gold Top Serum Separator Tube (SST)

Performed at: Willamette Valley Laboratory Services, Chemistry CPT Code: 84478
Triglyceride Synovial  
TRIGSY

Specimen Requirements: Body Fluid 1.0 mL  
Collection Container: Red Top (No Additive) Tube or Sterile Specimen Container  
Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 84478

Troponin I  
TRO

Specimen Requirements: Serum 1.0 mL  
Collection Container: Gold Top Serum Separator Tube (SST)  
Performed at: Willamette Valley Laboratory Services, Chemistry  
CPT Code: 84484

Tryptase  
TRY

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells  
Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 83516

Type and Screen  
TS

Specimen Requirements:  
Collection Container: Pink Top (K2 EDTA) Tube, Transfusion Armband Required  
Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code:

Type and Screen Newborn < 4mo  
TSNB

Specimen Requirements:  
Collection Container: Lav K2EDTA MAP Microtainer Tube, Transfusion Armband Required  
Performed at: Willamette Valley Laboratory Services, Transfusion Medicine  
CPT Code:
UA w Microscopic  
Specimen Requirements: Urine 10.0 mL  
Collection Container: Sterile Urine Collection Container  
Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code: 81001

UA w Microscopic if indicated  
Specimen Requirements: Urine 10.0 mL  
Collection Container: Sterile Urine Collection Container  
Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code:

UA wo Microscopic  
Specimen Requirements: Urine 10.0 mL  
Collection Container: Sterile Urine Collection Container  
Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code: 81003

Urea Nitrogen Urine  
Specimen Requirements: Urine 1.0 mL  
Collection Container: Sterile Urine Collection Container Refrigerated  
Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code: 84540

Urea Nitrogen Urine 24h  
Specimen Requirements: Urine 24 Hour 10.0 mL  
Collection Container: 24 Hour Urine Collection Container Refrigerated  
Performed at: Willamette Valley Laboratory Services, Urine  
CPT Code:
### Urease for H. pylori Gastric Bx

**GASTBXH**

**Specimen Requirements:** Biopsy  
**Collection Container:**

**Performed at:** Willamette Valley Laboratory Services, Microbiology  
**CPT Code:**

### Uric Acid

**URIC**

An increased uric acid level does not necessarily translate to a diagnosis of gout; about 10% to 15% of instances of hyperuricemia are caused by gout.

**Specimen Requirements:** Serum1.0 mL  
**Collection Container:** Gold Top Serum Separator Tube (SST)

**Performed at:** Willamette Valley Laboratory Services, Chemistry  
**CPT Code:** 84550

### Uric Acid Pericardial

**URICPC**

**Specimen Requirements:** Body Fluid1.0 mL  
**Collection Container:** Red Top (No Additive) Tube or Sterile Specimen Container

**Performed at:** Willamette Valley Laboratory Services, Body Fluid  
**CPT Code:** 84560

### Uric Acid Pleural

**URICPL**

**Specimen Requirements:** Body Fluid1.0 mL  
**Collection Container:** Red Top (No Additive) Tube or Sterile Specimen Container

**Performed at:** Willamette Valley Laboratory Services, Body Fluid  
**CPT Code:** 84560

### Uric Acid Synovial

**URICSY**

**Specimen Requirements:** Body Fluid1.0 mL  
**Collection Container:** Red Top (No Additive) Tube or Sterile Specimen Container

**Performed at:** Willamette Valley Laboratory Services, Body Fluid  
**CPT Code:** 84560
Uric Acid Urine


Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine CPT Code: 84560

Uric Acid Urine 24h

Specimen Requirements: Urine 24 Hour 10.0 mL
Collection Container: 24 Hour Urine Collection Container Refrigerated

Performed at: Willamette Valley Laboratory Services, Urine CPT Code:

Uric Acid Urine Random


Specimen Requirements: Urine 10.0 mL
Collection Container: Sterile Urine Collection Container

Performed at: Willamette Valley Laboratory Services, Urine CPT Code: 84560

Urine Culture

Specimen Requirements:
Collection Container: See microbiology specimen collection instructions.

Performed at: Willamette Valley Laboratory Services, Microbiology CPT Code:
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<thead>
<tr>
<th>Test Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>Urine ID + Sensitivity</td>
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<td>See microbiology specimen collection instructions.</td>
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<td>Urine Sensitivity</td>
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<td>See microbiology specimen collection instructions.</td>
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<tr>
<th>Test Description</th>
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</thead>
<tbody>
<tr>
<td>Vaginal Culture + Gram Stain</td>
<td>VAG</td>
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<td>Specimen Requirements:</td>
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<td>Collection Container:</td>
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<td>See microbiology specimen collection instructions.</td>
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<th>Test Description</th>
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<tbody>
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<td>VAGDNA</td>
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<td>Specimen Requirements:</td>
<td>Swab</td>
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<td>Collection Container:</td>
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<tr>
<th>Test Description</th>
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<td>Valproic Acid Level</td>
<td>VALPR</td>
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<td>Specimen Requirements:</td>
<td>Serum 1.0 mL</td>
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<tr>
<td>Collection Container:</td>
<td>Red Top (No Additive) Tube</td>
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<tr>
<td>Performed at: Willamette Valley Laboratory Services, Toxicology</td>
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CPT Code: 80164
Vancomycin Level Peak

Use of intravenous vancomycin should be restricted to serious infections caused by susceptible staphylococci or other gram-positive bacteria when other antibiotics are ineffective or not tolerated.

Specimen Requirements: Serum1.0 mL
Collection Container: Red Top (No Additive) Tube or Gold Top Serum Separate Tube (SST)

Performed at: Willamette Valley Laboratory Services, Toxicology CPT Code: 80202

Vancomycin Level Random

Use of intravenous vancomycin should be restricted to serious infections caused by susceptible staphylococci or other gram-positive bacteria when other antibiotics are ineffective or not tolerated.

Specimen Requirements: Serum1.0 mL
Collection Container: Red Top (No Additive) Tube or Gold Top Serum Separate Tube (SST)

Performed at: Willamette Valley Laboratory Services, Toxicology CPT Code: 80202

Vancomycin Level Trough

Use of intravenous vancomycin should be restricted to serious infections caused by susceptible staphylococci or other gram-positive bacteria when other antibiotics are ineffective or not tolerated.

Specimen Requirements: Serum1.0 mL
Collection Container: Red Top (No Additive) Tube or Gold Top Serum Separate Tube (SST)

Performed at: Willamette Valley Laboratory Services, Toxicology CPT Code: 80202

Vanillylmandelic Acid Urin 24h

Specimen Requirements: Urine 24 Hour
Collection Container: 24 Hour Urine Collection Container Room temperature

Performed at: Laboratory Corporation of America, Referral Testing CPT Code:
VAP Cholesterol Panel

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code:

Varicella Zoster Virus Ab IgG

Diagnose VZV infection; determine adult susceptibility to infection.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86787

Varicella Zoster Virus Ab IgM

Diagnose VZV infection.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Room temperature, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 86787

Vasoactive Intestinal Polypept

Hypersecretion of VIP is observed in “pancreatic cholera syndrome,” Verner-Morrison syndrome or the watery diarrhea-hypokalemia-hypochlorhydria (WDHH) syndrome. It is characterized by hypermotility, watery diarrhea syndromes with hypokalemia and hypochlorhydria, dehydration and weakness; these symptoms can be reproduced by VIP. VIP can be secreted by pancreatic or ectopic islet cell tumors, and in islet-cell hyperplasia.

Specimen Requirements:
Collection Container: Trasylol Kit
Patient must not have received radioactive substances 24 hours prior to test. Patient should receive at least 300 grams of carbohydrate daily for three days before fasting 12 hours.

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84586
Venous Blood Gas

Specimen Requirements: Whole blood 1.5 mL
Collection Container: Green Top (Sodium Heparin) Tube
Room temperature, whole blood
Specimens must be transported to the laboratory for testing within 30 minutes of collection.

Performed at: Willamette Valley Laboratory Services, Blood Gas
CPT Code: 82803

Viscosity Serum

Evaluate hyperviscosity syndrome associated with monoclonal gammopathy states (myeloma, macroglobulinemia of Waldenström, and other dysproteinemias), including occasional cases of rheumatoid arthritis, SLE, systemic lupus erythematosus, hyperfibrinogenemia.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 85810

Vitamin A

Differential diagnosis of hypervitaminosis A. A combination of a low serum carotene level and a low vitamin A suggests inadequate vitamin A nutrition.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Protect from light

Performed at: Laboratory Corporation of America, Referral Testing
CPT Code: 84590
Vitamin B1 (Thiamine) VITB1

The classic vitamin B1 deficiency disease is beriberi, the primary symptoms of which are neurological and cardiovascular disturbances such as myocardial damage, cardiac failure, and neuritis and neural paralyses accompanied by metabolic dysfunction in the form of lactate acidosis and branched-chain ketoaciduria.

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Frozen, whole blood
Collect in a prechilled tube. Refrigerate and protect from light

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 84425

Vitamin B12 B12

Detect B12 deficiency as in pernicious anemia; diagnose folic acid deficiency; evaluate hypersegmentation of granulocyte nuclei; follow up MCV >100; diagnose macrocytic anemia; diagnose megaloblastic anemia; evaluate alcoholism, prenatal care; evaluate malabsorption, neurological disorders, or the elevation of B12 as seen in liver cell damage or myeloid leukemia.

Specimen Requirements: Serum
Collection Container: Gold Top Serum Separator Tube (SST)
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 82607

Vitamin B2 (Riboflavin) VITB2

Riboflavin deficiency is known as pellagra, usually found in those who do not consume a diet rich in organ meats, leafy greens, and whole grains. It is seen in elderly, alcoholics, those with chronic liver disease, and those on total parenteral nutrition.

Specimen Requirements: Whole blood
Collection Container: Lavender Top (EDTA) Tube
Frozen, whole blood

Performed at: Laboratory Corporation of America, Referral Testing CPT Code: 84252
**Vitamin B6 (Pyridoxine)**

Detect vitamin B6 deficiency.

**Specimen Requirements:** Whole blood  
**Collection Container:** Lavender Top (EDTA) Tube  
Protect from light

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 84207

**Vitamin C**

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Frozen, separate plasma from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82180

**Vitamin D 1,25-Dihydroxy**

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82652

**Vitamin D 25-OH (D3)**

Rule out vitamin D deficiency.

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 82306

**Vitamin E Panel**

**Specimen Requirements:** Serum  
**Collection Container:** Gold Top Serum Separator Tube (SST)  
Protect from light

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** 84446
**Vitamin K1**

Specimen Requirements: Plasma  
Collection Container: Lavender Top (EDTA) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 84597

**Von Willebrand Ag**

Diagnose von Willebrand factor (vWF) deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85246

**Von Willebrand Factor Activity**

Diagnose von Willebrand factor (vWF) deficiency.

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85245

**Von Willebrand Multimeric**

Specimen Requirements: Plasma  
Collection Container: Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code: 85247
**Von Willebrand Profile**

Specimen Requirements: Plasma  
Collection Container:  Light Blue Top (3.2% Sodium Citrate) Tube  
Frozen, separate plasma from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

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**WBC Stool**

Specimen Requirements: Stool  
Collection Container: Sterile Specimen Container

Performed at: Willamette Valley Laboratory Services, Body Fluid  
CPT Code: 87205

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**WBC w Absolute Neutrophil Ct**

Specimen Requirements: Whole blood 3.0 mL  
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology  
CPT Code:

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**West Nile Ab IgG + IgM**

Specimen Requirements: Serum  
Collection Container: Gold Top Serum Separator Tube (SST)  
Refrigerated, separate serum from cells

Performed at: Laboratory Corporation of America, Referral Testing  
CPT Code:

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**White Blood Count**

White cell enumeration; identify leukopenia and leukocytosis.

Specimen Requirements: Whole blood 1.5 mL  
Collection Container: Lavender Top (EDTA) Tube

Performed at: Willamette Valley Laboratory Services, Hematology  
CPT Code: 85048
## Wound Culture + Gram Stain

**Specimen Requirements:**
Collection Container: See microbiology specimen collection instructions.

**Performed at:** Willamette Valley Laboratory Services, Microbiology  
**CPT Code:** WD

## Zinc Level

Monitor exposure to zinc.

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube  
Room temperature, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** ZI

## Zonisamide Level

**Specimen Requirements:** Serum  
**Collection Container:** Red Top (No Additive) Tube  
Refrigerated, separate serum from cells

**Performed at:** Laboratory Corporation of America, Referral Testing  
**CPT Code:** ZONI

**CPT Code:** 82542