SARATOGA HOSPITAL LABORATORY

SERVICE DIRECTORY

The Clinical Laboratory Service Directory has been reviewed and approved on the dates indicated. This manual is the property of Saratoga Hospital and may not be copied or disclosed without proper approval.

Reviewed By:

____________________________________  Date
Administrative Laboratory Director

Approved By:

Laboratory Medical Director  Date  Laboratory Medical Director  Date
Saratoga Hospital Laboratory  Saratoga Hematology-Oncoology Laboratory
Wilton Medical Arts Laboratory
SARATOGA HOSPITAL
DEPARTMENT OF LABORATORY
MEDICINE

SERVICE DIRECTORY
SARATOGA HOSPITAL
DEPARTMENT OF LABORATORY MEDICINE

CLINICAL LABORATORY SERVICE DIRECTORY

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CLINICAL LABORATORY SERVICE DIRECTORY

USE OF THE DIRECTORY

The purpose of this manual is to provide information on the diagnostic services offered by the Saratoga Hospital Laboratory. The information presented is intended to serve as a resource for test selection, requisition and specimen requirements. The optimal use of our diagnostic resources is best achieved through the use of this manual and direct communication with our professional staff.

The “Scope of Service” section describes the services which are provided by each laboratory department, including hours of operation.

The “Client Services” section provides information on the support services, billing information and laboratory reports.

The “Specimen Collection” section provides general instructions for collecting specimens.

The “Table of Diagnostic Tests” provides specific information for each test and is arranged in alphabetical order according to their most common name. In addition, some tests are also listed by their most commonly known synonyms.

This manual will be updated on a periodic basis.
<table>
<thead>
<tr>
<th>LABORATORY/SERVICE</th>
<th>PHONE NUMBER</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory Medical Director</td>
<td>583-8442 or 583-8445</td>
<td>William E. Field II, M.D.</td>
</tr>
<tr>
<td>Saratoga Hospital Laboratory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilton Medical Arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory Medical Director</td>
<td>583-8442</td>
<td>Nicole M. Durie, M.D.</td>
</tr>
<tr>
<td>Saratoga Hematology-Oncology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathologist(s)</td>
<td>583-8442 or 583-8445</td>
<td>Nicole M. Durie, M.D.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Josenia Tan, M.D.</td>
</tr>
<tr>
<td>Laboratory Administrative Director</td>
<td>583-8443</td>
<td>Richard Vandell, Administrative Director</td>
</tr>
<tr>
<td>Laboratory Information Services</td>
<td>580-2810</td>
<td>Reta Caligaris, LIS Coordinator</td>
</tr>
<tr>
<td></td>
<td>583-8657</td>
<td>John Leming, LIS Coordinator</td>
</tr>
<tr>
<td>Quality Assurance/Compliance</td>
<td>580-2557</td>
<td>Madeline LaPierre, Supervisor</td>
</tr>
<tr>
<td>Evening/Night</td>
<td>583-8750</td>
<td>Mary Hill, Supervisor</td>
</tr>
<tr>
<td><strong>Pathology (Histology/Cytology)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td>583-8442 or 8445 (fax)</td>
<td>Transcriptionist/Secretary</td>
</tr>
<tr>
<td></td>
<td>580-2581</td>
<td>Histology Laboratory</td>
</tr>
<tr>
<td></td>
<td>583-8752</td>
<td>Carolyn DeMarinis, Anatomic Pathology Manager</td>
</tr>
<tr>
<td><strong>Clinical Laboratory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Gas</td>
<td>580-2554</td>
<td>Chris Torino, Administrative Director</td>
</tr>
<tr>
<td>Blood Bank</td>
<td>583-8458</td>
<td>Pamela Drislane, Supervisor</td>
</tr>
<tr>
<td></td>
<td>583-8757</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>583-8747</td>
<td>Donald Dennison, Supervisor</td>
</tr>
<tr>
<td></td>
<td>583-8755</td>
<td></td>
</tr>
<tr>
<td>Hematology</td>
<td>583-8750</td>
<td>Pamela Drislane, Supervisor</td>
</tr>
<tr>
<td></td>
<td>583-8757</td>
<td></td>
</tr>
<tr>
<td>Microbiology/Virology</td>
<td>538-8751 (Lab)</td>
<td>Deborah Petrie, Supervisor</td>
</tr>
<tr>
<td></td>
<td>580-2556 (Office)</td>
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<tr>
<td>Phlebotomy/Point of Care</td>
<td>583-8743</td>
<td>Teri Baldwin, Supervisor</td>
</tr>
<tr>
<td></td>
<td>886-5545</td>
<td>Dan Bernhard, Phlebotomy Coordinator</td>
</tr>
<tr>
<td></td>
<td>583-8748</td>
<td>Central Receiving/Processing</td>
</tr>
<tr>
<td></td>
<td>580-2542</td>
<td>Hemedraw Specialist</td>
</tr>
<tr>
<td><strong>Client Response</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Support Services</td>
<td>583-8741</td>
<td>Test Results</td>
</tr>
<tr>
<td></td>
<td>581-8440</td>
<td>General Information</td>
</tr>
<tr>
<td></td>
<td>580-2806 (fax)</td>
<td>Jeanne Leonard, Coordinator</td>
</tr>
<tr>
<td></td>
<td>580-2615</td>
<td>Lab Registrar</td>
</tr>
<tr>
<td><strong>Off-site Facilities</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Satellite Laboratories</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saratoga Hematology-Oncology Laboratory</td>
<td>886-5176</td>
<td>Pamela Drislane, Supervisor</td>
</tr>
<tr>
<td>Wilton Medical Arts</td>
<td>580-2217</td>
<td>Rhea Jamro, Supervisor</td>
</tr>
<tr>
<td></td>
<td>580-2292</td>
<td></td>
</tr>
<tr>
<td></td>
<td>580-2108 (fax)</td>
<td></td>
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<tr>
<td></td>
<td>580-2247</td>
<td></td>
</tr>
<tr>
<td><strong>Patient Service Centers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saratoga Family Health</td>
<td>886-5434</td>
<td>Teri Baldwin, Supervisor</td>
</tr>
<tr>
<td>Schuylerville Family Health</td>
<td>695-3668</td>
<td></td>
</tr>
<tr>
<td>Milton Health Center</td>
<td>289-2725</td>
<td></td>
</tr>
</tbody>
</table>
DEPARTMENT OF ANATOMIC AND CLINICAL PATHOLOGY

SCOPE OF SERVICE PLAN

The Anatomical and Clinical Pathology Departments at Saratoga Hospital provides the highest quality of anatomical and clinical laboratory services to support and enhance the ability of the hospital and other health care providers to deliver superior care to our patients. The Hospital and Departmental Missions are the laboratory’s purpose and guide. They underscore our determination to have significant impact on patients.

We provide services of the highest quality through innovative ideas while constantly improving, striving for and maintaining a high degree of skill. We seek to meet this goal in a work environment that values a sense of community among all employees, an opportunity to perform meaningful work and a sense of dignity from the contributions they all make.

We are committed to service, education and development.

SERVICE: providing Anatomic and Clinical cutting edge technology, performed in a timely and cost effective manner. Our goal is to exceed client/patient expectations while maintaining a cost competitive position. This process keeps a strong customer focus, involves staff, and uses data and team knowledge to improve decision making.

EDUCATION: to create a “learning organization” within the Anatomic and Clinical Laboratories and to educate clinicians in optimal test utilization, and to provide assistance with interpretation of laboratory results.

DEVELOPMENT: to implement new procedures to expedite the diagnosis and treatment of patients.

The key to achieving these goals are constant communication among well trained laboratory staff and their customers. Strong medical direction, a quality centered management strategy and advanced technology is vital to providing quality laboratory services.

Services are provided according to hospital and departmental policy and procedure and are in compliance with current established techniques. All services meet the regulatory requirements of the New York State Department Of Health (NYSDOH), The Centers for Medicare & Medicaid Services (CMS), Clinical Laboratory Improvement Amendments (CLIA), the American Association of Blood Banks (AABB), the College of American Pathologists (CAP), and the Joint Commission.

The Laboratory’s quality system is organized to monitor processes and operations for all laboratory sites through the performance of self-assessment audits, error management, and customer feedback.

The performance of the procedures involves highly skilled Board Certified Pathologists, New York State licensed Clinical Laboratory Technologists, Clinical Laboratory Technicians, Histotechnologists, and Cytotechnologists. Support staff includes Clinical Laboratory Aides, Phlebotomists, Clerical and Secretarial Support.
Our major areas of service are:

- Surgical Pathology
- Cytology
- Blood Gases
- Blood Bank
- Chemistry/Special Chemistry
- Hematology/Coagulation
- Microbiology
- Molecular Diagnostics
- Phlebotomy
- Point of Care Testing (POCT)
- Therapeutic Drugs

All departmental services are provided under the administrative and clinical direction of the Laboratory Director. The Administrative Director manages and directs the daily departmental operation in conjunction with the Supervisors, and provides administrative coverage during off hours.

The Saratoga Hospital operates satellite laboratories at Wilton Medical Arts (WMA) and Saratoga Hematology-Oncology (SHOL). In addition to providing laboratory tests for the WMA facility’s Urgent Care Center and Saratoga Family Physicians (SFP), the WMA laboratory provides specimen collection and routine testing for the outpatient community. Services performed at the SHOL site are limited to testing that supports the Hematology-Oncology Practice.

The laboratory monitors and supervises all waived and moderately complex point of care testing. All laboratory tests performed within the hospital and its satellite laboratories for which a result is generated and which is used for the treatment of a patient comes under the laboratory license and is controlled by the laboratory. All testing performed at satellite clinics, outside the hospital’s main campus, is performed under each clinic’s CLIA license.
LABORATORY HOURS OF OPERATION /GENERAL INFORMATION

Main Campus: Saratoga Hospital

Clinical Laboratory: opened 24 hours a day; limited test menu on the night shift. Routine results for testing performed in house are available within 24 hours of specimen receipt. Exceptions are noted in the service directory. Hours for outpatient phlebotomy services are listed under “Phlebotomy Services”.

Pathology/Cytology: 7:00 AM - 4:00 PM, Monday- Friday; closed weekends and holidays.

Satellite Laboratories:

<table>
<thead>
<tr>
<th>Saratoga Hematology-Oncology Laboratory</th>
<th>Wilton Medical Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>MON-FRI: 8:00 am to 5 pm</td>
<td>MON-FRI: 7 am to 9 pm</td>
</tr>
<tr>
<td></td>
<td>SAT: 9 am to 9 pm</td>
</tr>
<tr>
<td></td>
<td>SUN: 9 am to 5 pm</td>
</tr>
</tbody>
</table>

**Semen analysis, Glucose Tolerance Tests, Ammonia Levels, Cerebrospinal fluid and Cryoglobulins are never collected at the SHOL or WMA laboratories. Please refer these patients to the Saratoga Hospital Lab (appointments are required; please call ahead.)

Tests performed at the WMA Laboratory:

<table>
<thead>
<tr>
<th>Bacterial vaginosis</th>
<th>MonoSpot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Metabolic Panel</td>
<td>Quantitative HCG</td>
</tr>
<tr>
<td>B-np</td>
<td>Rapid Streptococcus A Antigen (Throat)</td>
</tr>
<tr>
<td>CBC, CBC w/automated diff</td>
<td>Rapid Influenza Antigen A and B</td>
</tr>
<tr>
<td>Comprehensive Metabolic Panel</td>
<td>Rapid Trichomonas</td>
</tr>
<tr>
<td>D-dimer</td>
<td>T4</td>
</tr>
<tr>
<td>Electrolytes</td>
<td>Total CK</td>
</tr>
<tr>
<td>ESR</td>
<td>Troponin</td>
</tr>
<tr>
<td>FT4</td>
<td>TSH</td>
</tr>
<tr>
<td>Hepatic Function Panel</td>
<td>Uric Acid</td>
</tr>
<tr>
<td>Hemoglobin A1C</td>
<td>Urinalysis</td>
</tr>
<tr>
<td>Lipid Evaluation Panel</td>
<td>Urine Pregnancy Test</td>
</tr>
<tr>
<td>Magnesium</td>
<td>Wet Prep for Yeast</td>
</tr>
<tr>
<td>Microalbumin</td>
<td></td>
</tr>
</tbody>
</table>

Tests performed at the SHOL site:

| CBC, CBC w/automated diff |
| Urinalysis without microscopic |
| POC INR |
| POC Glucose |

All other laboratory tests are transported to the Main Laboratory or the appropriate reference laboratory.


AREAS OF SERVICE

PHLEBOTOMY SERVICES

Trained phlebotomists provide 24 hour coverage to inpatient areas of the hospital. Saratoga Hospital also operates several patient service centers for the convenience of our outpatient population:

<table>
<thead>
<tr>
<th>Saratoga Hospital Laboratory</th>
<th>Wilton Medical Arts Laboratory</th>
<th>Milton Health Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>211 Church St.</td>
<td>3040 Route 50N</td>
<td>510 Geyser Road</td>
</tr>
<tr>
<td>Saratoga Springs, NY 12866</td>
<td>Saratoga Springs, NY 12866</td>
<td>Ballston Spa, NY 12020</td>
</tr>
<tr>
<td>Phone: 583-8440</td>
<td>Phone: 580-2273 or 580-CARE</td>
<td>Phone: 298-2725</td>
</tr>
<tr>
<td>Hours:</td>
<td>Hours:</td>
<td>Hours:</td>
</tr>
<tr>
<td>Mon - Fri: 7 am to 8 pm</td>
<td>Mon-Fri: 7 am to 9 pm</td>
<td>Mon-Fri: 7 am to 3:30 pm</td>
</tr>
<tr>
<td>Sat: 7 am to 1 pm</td>
<td>Sat: 9 am to 5 pm</td>
<td></td>
</tr>
<tr>
<td>Sun: CLOSED</td>
<td>Sun: 9 am to 5 pm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Saratoga Family Health</th>
<th>Schuylerville Family Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>119 Lawrence Street</td>
<td>200 Broad Street</td>
</tr>
<tr>
<td>(Inside Wesley Health Care Center, Inc.)</td>
<td>Schuylerville, NY 12871</td>
</tr>
<tr>
<td>Saratoga Springs, NY 12866</td>
<td>Phone: 695-3668</td>
</tr>
<tr>
<td>Phone: 581-7730</td>
<td>Hours:</td>
</tr>
<tr>
<td>Hours:</td>
<td>Thurs: 8:30 am to 4:00 pm</td>
</tr>
<tr>
<td>Mon–Fri. 8 am to 12:00 pm</td>
<td></td>
</tr>
</tbody>
</table>

Homedraw service is available for patients who qualify. Accepted reasons for homedraws are:

- A patient is considered homebound if he/she is not physically able to travel the distance with assistance from the parking lot to the collection station.
- Post-surgical patients with restricted or limited activities.

Please call 580-2542 for additional information. A Homedraw Request Form AND the test requisition is required. **The homedraw will not be scheduled without the required written documentation.**

The program operates within a twelve mile radius of the Saratoga Hospital from Monday – Friday. Appointments are scheduled according to our pre-determined routes.

POINT OF CARE TESTING

The Point-of-Care Testing (POC) program monitors and supervises all laboratory testing performed outside the physical facilities of the clinical laboratory. This includes testing done by hospital employees and medical staff. The program provides guidelines to ensure consistent, accurate and reliable laboratory testing at the patient’s immediate location.

The clinical laboratory in conjunction with departments that perform Point-of-Care Testing coordinates all activities associated with the program:
• Review and approval of testing procedures and equipment,
• Monitoring Quality Control,
• Proficiency Testing,
• Training of individuals who performed testing.

Requests to add a test to the program must be submitted to the Point-of-Care supervisor and approved by the Point-of-Care committee. Point-of-Care Testing at Saratoga Hospital is licensed by the New York State and must meet all CLIA, CAP and TJC guidelines for laboratory testing.

ANATOMIC PATHOLOGY SERVICES

ANATOMIC PATHOLOGY- provides diagnostic surgical pathology, frozen sections, cytopathology, autopsy, and transcription services.

A completed pathology/cytology requisition is required with each specimen. All pertinent clinical information must be included to ensure accurate surgical and cytologic evaluation. Computer order entry is not available for anatomic pathology.

PATHOLOGY DEPARTMENT- prepares and processes tissue specimens for microscopic diagnoses. Specimens are received in fixative, unless special studies are requested, and labeled appropriately.

CYTOLOGY DEPARTMENT- processes body fluids, fine needle aspirations and pap smears for cytologic diagnoses. If delivery is delayed, refrigerate specimens.

AUTOPSY SERVICES: Medical staff of Saratoga Hospital may request an autopsy on deceased inpatients, in consultation with the pathologist.

For additional instructions or information call extension 8752 or 2581 (within hospital) or 583-8442 (outside the hospital).

TRANFUSION SERVICE

Services Provided:
• Stores and distributes blood, blood products, allograft tissues and Rhogam.
• Performs ABO and Rh typing, antibody screening, compatibility testing, antibody identification studies and direct antiglobulin testing.

Transfusion Protocols:

1. A written order by a credentialed practitioner is required for all transfusion requests. Inpatient requests are ordered by the patient care unit through the computer system. Outpatient requests must be scheduled through the Inpatient Admitting (583-8432).
2. Requests must include the product, amount and the reason for transfusion. The transfusion service must be contacted in advance for special product requirements (Platelet products, Irradiated, CMV negative, HLA matched).
3. The Saratoga Hospital Blood Bank and Transfusion Committee has established written criteria for the transfusion of blood products which are available upon request.
4. The type and screen (TS) protocol is designed for cases where the need for transfusion is rare. The patient's blood sample is tested for ABO and Rh and screened for atypical antibodies. If needed, a crossmatch can be completed within 10 minutes for patients with no atypical antibodies. Patients with atypical antibodies are automatically converted to a type and crossmatch for two units.

5. Transfusion reactions: All suspected transfusion reactions are considered stat and must be reported to the blood bank for follow-up. Refer to the instructions [form #4729] on the transfusion reaction form for information on handling transfusion reactions. For inpatient transfusions, reactions are reported through the Meditech Nursing TAR module.

**Specimen Labeling:**

Positive identification of the patient is the most important step in preventing hemolytic transfusion reactions. All patients who will or may receive transfusions must be identified with an armband, which includes the patient’s full name, date of birth and a unique identifier. All patients must be identified and specimens labeled according to the Saratoga Hospital’s “Patient Identification” and “Specimen Labeling” procedures.

The specimen label must include:

- Patient’s full name, correctly spelled and no letters omitted.
- Complete date of birth.
- **Inpatient:** patient’s medical record number [HO#]. The account number [X#] is not acceptable.
- **Outpatient:** The “Typenex” wrist band identification system is used for all outpatients who require (or may require) transfusions. Contact the transfusion service for additional information.
- The date and time the specimen was drawn.
- The initials of the person who drew the specimen.

All specimens that are not labeled properly will be rejected. Specimens drawn from transfusion candidates with no armbands will also be rejected. If there is an emergency where there is no time to collect another specimen, Type “O NEG” uncrossmatched blood will be provided.

This stringent policy is the standard of care for transfusion safety. The reason for the policy is to prevent a break in the chain of identification which links the patient to the specimen and to the blood product transfused. When the chain is broken, the selection of the blood product becomes essentially random-then the risk of a major, potentially fatal, hemolytic transfusion reaction because of an ABO mismatch, approaches 30%. Our specimen labeling policy is consistent with requirements established by the FDA, NYS and other regulatory agencies.

**Products:**

- All blood products with the exception of Rh immune globulin are obtained from the New York Penn region of the American Red Cross.
- Tissue products are ordered exclusively by Surgical Central Supply. Tissue is stored in the blood bank and issued upon the request of the OR.
- Red blood cells and plasma are the most frequently requested products and are routinely stocked in the blood bank.
- Less frequently used products are ordered on an as needed basis from the Red Cross. These products should only be ordered if there is an order to transfuse. Products that are not transfused are not returnable to the Red Cross and will be discarded.
- **Autologous and Directed donations:** Since the transfusion service is not a blood collection center, we refer all requests for autologous and directed donations to the American Red Cross. Autologous blood donations for surgical patients are scheduled by the physician directly with the Red Cross {1-800-634-9064}.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>AVAILABILITY</th>
<th>VOLUME</th>
<th>STORAGE</th>
<th>SHELF LIFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packed RBC, Leuko-reduced</td>
<td>Stock</td>
<td>300 ml</td>
<td>1-6°C</td>
<td>42 days</td>
</tr>
<tr>
<td>Frozen plasma</td>
<td>Stock</td>
<td>170-300 ml</td>
<td>-18°C; Thaw in 37°C water bath for 15 minutes.</td>
<td>Frozen- 1 year Thawed 24 hours</td>
</tr>
<tr>
<td>Platelethapheresis</td>
<td>Special order</td>
<td>100-500 ml</td>
<td>20-24°C</td>
<td>5 days</td>
</tr>
<tr>
<td>HLA platelethapheresis</td>
<td>Special order</td>
<td>100-500 ml</td>
<td>20-24°C</td>
<td>5 days</td>
</tr>
<tr>
<td>Cryoprecipitate</td>
<td>Stock</td>
<td>15 ml</td>
<td>-18°C; Thaw in 37°C water bath for 10 minutes</td>
<td>1 year</td>
</tr>
<tr>
<td>Rhogam</td>
<td>Stock</td>
<td>Syringe</td>
<td>1-4°C</td>
<td>2 years</td>
</tr>
</tbody>
</table>

**LABORATORY SPECIALTIES**

**CHEMISTRY**

Chemistry conducts routine Clinical Chemistry, Therapeutic drugs, Endocrinology and Toxicology.

**HEMATOLOGY**

The hematology laboratory performs blood counts, differentials, urinalysis testing, and coagulation studies. Technologists assist physicians in the collection and preparation of bone marrow aspirates performed on site.

**CLINICAL MICROBIOLOGY**

Bacterial Cultures are performed 7 days/week, 7am - 3pm. Organism identification and antimicrobial susceptibilities are performed when appropriate.

Direct Acid Fast smears for mycobacteria are performed 7 days/week, 7am - 3pm. Concentrated smears and cultures are performed by a reference lab.

Rapid antigen testing for group A Streptococcus, Influenza A & B, RSV and Trichomonas are performed 7 days/week, 24 hours/day.

Testing for Clostridium difficile toxins A&B is performed 7 days/week (afternoons).

**REFERENCE LABORATORIES**

Tests that are not performed at our on-site laboratories are referred to outside reference laboratories. Reference laboratories must also hold the appropriate New York State laboratory permits. Criteria based on quality and responsiveness to our customers’ needs are used in the selection of all reference laboratories. Our reference laboratories are approved by the Saratoga Hospital’s Medical Executive committee on an annual basis. A current list of all approved reference laboratories is available by contacting the Laboratory Quality Assurance/Compliance Supervisor (580-2557).
CLIENT SERVICES
RESOLVING CUSTOMER COMPLAINTS

The staff at Saratoga Hospital is committed to resolving issues to the satisfaction of our customers. It is important to us that you let us know when we have failed to meet your expectations. Issues can be referred to the Administrative Laboratory Director (583-8443), the Quality/Compliance Supervisor (580-2557) or the Supervisor for the appropriate Department (see Clinical Laboratory Telephone Directory).

REQUEST FOR SUPPLIES

Outreach Clients: In accordance with New York State law on Laboratory Business Practices (Subpart 34-2 of 10 NYCRR), the laboratory will provide supplies to collect, process and transport specimens sent to our laboratory for testing. To obtain supplies, please complete an “Outpatient Laboratory Supplies Request” form. Allow three business days for routine deliveries.

Inpatient: Supplies for routine blood collection and urine tubes are available from the laboratory. Specimen collection cups are available from General Stores.

TEST REQUISITIONING

The laboratory will examine specimens only at the request of licensed physicians or other person authorized by law to use the findings of laboratory examinations in their practice or the performance of their official duties. Authorized persons include:

- Physicians
- Dentists and podiatrists
- Chiropractors
- Physician Assistants and Certified Nurse-Midwives provided the supervising physician authorizes such examination.
- Nurse Practitioners
- Police officers provided such examination is incident to arrest charges for alcohol or drug impairment.
- Judges ordering paternity tests under the Family Court Act.

Inpatient: For each pathology/cytology specimens, a completed pathology/cytology requisition is required. All pertinent clinical information must be included to ensure accurate surgical and cytologic evaluation. All other tests are ordered by the patient care unit through the hospital’s computer system.

Outpatient: The laboratory provides pre-printed requisitions for outpatient test requests.

The following information is required prior to the testing of any specimen:

- Name, address and phone number of physician
- Signature of physician or designee. (Electronic signatures are acceptable but must be approved by the HIS director.)
- Date of order (we will not accept written requests that are more than six months old).
- Patient’s full name and date of birth
- Diagnosis for each test requested
- Name of tests (s)
Insurance information:

Insurance information must be obtained for all requested laboratory services. Written documentation on the requisition is preferred but not required. If insurance information is not available, the patient will be billed.

Standing orders:

Standing orders are used when the patient is required to have lab tests over a period of time [i.e. Protime, monthly]. These orders are valid for a period of 6 months from the date of the original requisition. Renewals of standing orders that have expired are the responsibility of the provider and the patient.

NOTICE TO PHYSICIANS REGARDING MEDICAL NECESSITY

The Centers for Medicare and Medicaid Services (CMS) requires that we notify physicians and other providers legally authorized to order laboratory tests that Medicare will only pay for tests that meet the Medicare coverage criteria and are considered “reasonable and necessary” to treat or diagnose the patient’s medical condition.

Diagnosis: Physicians are required to provide a diagnosis that medically justifies each laboratory test at the time the request for testing is presented. It is critical that the information provided is consistent with the documentation in the patient’s record since it may be requested as part of a post payment review.

Organ and Disease Panels: All panels (organ and disease or custom) can only be billed and paid when all components in the panel are medically necessary.

Medicare Fee Schedule: A current Medicare laboratory fee schedule with CPT codes is available upon request from the Saratoga Hospital Laboratory. The Medicaid reimbursement amount is equal to or less than the amount of Medicare reimbursement.

Clinical Consultant: Access to a clinical consultant regarding laboratory tests is available at 583-8442.

Material contained in this yearly notification is current as of the date published and is subject to change without notice. The OIG believes that a physician who orders medically unnecessary tests and knowingly causes a false claim to be submitted may be subject to sanctions or remedies under criminal or administrative law.

COVERAGE DECISIONS/ ADVANCE BENEFICIARY NOTICES (ABN)

In order to ensure that services being paid by the Medicare program are medically necessary CMS has established National Coverage Determinations (NCDs) and has required local carrier to establish Local Coverage Determinations (LCDs). Each policy lists the diagnosis for which Medicare considers a test to be medically necessary. Tests that have an NCD or LCD associated with them are highlighted on the Saratoga Hospital Laboratory requisition.

Please refer to the following websites for a complete list of policies:
Patients presenting directly to our patient service centers have their tests screened for medical necessity prior to collecting the specimen. If there is a reason to suspect that the test is not covered by Medicare, the patient is notified and asked to sign an Advanced Beneficiary Notice (ABN). This informs the patient that the test ordered by their provider does not meet Medicare’s guidelines and will not be paid by Medicare. If the patient signs the ABN, they are acknowledging that they are responsible for payment.

Medicare can deny claims based on the following:

- Medicare does not usually pay for this service for the diagnosis provided (See appropriate NCD or LCD).
- Medicare does not pay for investigational or research use of tests.
- Medicare does not pay for this service based on frequency limitations. Examples of tests with frequency limitations include fecal occult blood, PSA and pap smears when ordered for screening purposes.
- Medicare does not pay for most routine screening tests.
- Medicare does not pay for tests ordered as part of an annual physical exam.

Once signed, the patient is given a copy of the ABN.

**TRANSPORT AND COURIER SERVICES**

The Clinical Laboratory provides courier service for pickup of laboratory specimens, supplies and reports (phone 580-2516). Our courier staff is trained to ensure prompt and reliable service to our clients. Courier service is available Monday-Friday on a regular schedule. Limited STAT pickup of specimens is available on request.

**TURN AROUND TIME FOR LABORATORY TESTS**

**Cytology:** Results are available within 7 days for normal specimens. Abnormal specimens may require 10 days.

**Pathology:** Results are usually available 24-48 hours after specimen receipt.

**Clinical Laboratory**- With the exception of tests sent to reference laboratories, most laboratory results are available on the same day. Exceptions are noted in the service directory of tests.

**PROCESSING REQUESTS FOR STAT TESTING**

Stat testing represents a critical clinical need for timely results. The goal for all stat testing is that results will be available as fast as possible and, at most, within one hour of receipt of the specimen in the laboratory. Requests for stat testing should be authorized by the provider. For inpatient requests, the test must be ordered as priority “S” in the order entry computer system. Paper requisitions must be clearly marked as stat.

After completion of testing, the results will be broadcast, faxed or called to the appropriate location. For outpatients, if results are to be called or faxed, please be sure to include a phone or fax number on the requisition.
STAT PROCEDURE LIST

This list is not intended to be an exclusive list of stat tests. Other tests on the laboratory’s menu may be run on a stat basis but may require a turnaround time (TAT) longer than one hour. Stat availability for satellite laboratories is limited to tests performed at those sites.

* Includes tests performed by satellite laboratories.

<table>
<thead>
<tr>
<th>BACTERIOLOGY</th>
<th>BLOOD BANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection of blood for culture</td>
<td>Compatibility testing</td>
</tr>
<tr>
<td>Meningitis Antigens</td>
<td>Direct Coombs (Direct Antiglobulin Test)</td>
</tr>
<tr>
<td>Gram Stain (CSF, Positive Blood Sterile Body Fluid Cultures)</td>
<td>Distribution of blood products</td>
</tr>
<tr>
<td>Rapid Influenza A&amp;B (Antigens)*</td>
<td>Type (ABO and Rh)</td>
</tr>
<tr>
<td>Rapid Strep A* (Antigen)</td>
<td>Type and Antibody Screen</td>
</tr>
<tr>
<td>Rapid RSV (Antigen)</td>
<td>Work-up of Transfusion Reaction</td>
</tr>
<tr>
<td>Rapid Trichomonas* (Antigen)</td>
<td></td>
</tr>
</tbody>
</table>

CHEMISTRY

| Acetaminophen                                     | Gentamicin                                      |
| Acetone                                           | Glucose*                                        |
| Amylase*                                          | Pregnancy HCG – qualitative (urine or serum)    |
| Basic Metabolic Profile (Glu, BUN, Creat, Electrolytes)* | Pregnancy HCG – quantitative (serum)*          |
| Bilirubin*                                        | Lactic Acid                                     |
| BUN*                                              | Lithium                                         |
| B-NP                                              | Magnesium*                                      |
| Calcium*                                          | Infectious Mono*                                |
| Carbamazepine                                     | Myoglobin                                        |
| CK*                                               | Osmolality                                      |
| CKMB                                              | pH (Urine, Fluids, etc.)                        |
| Comprehensive Metabolic Profile*                  | Phosphorus                                      |
| Creatinine*                                       | Phenobarbital                                   |
| Digoxin                                           | Protein (CSF)                                   |
| Dilantin                                          | Salicylate                                      |
| Drug Screen (Urine)                               | Theophylline                                    |
| Electrolytes*                                     | Tobramycin                                      |
| Ethanol                                           | Troponin *                                      |
| Fetal Fibronectin                                 |                                                 |

HEMATOLOGY

| CBC (w/out differential)*                         | Prothrombin Time (Protime)                      |
| CSF/Fluid cell count                              | Partial Thromboplastin Time (PTT)               |
| Fibrin Degradation Products (FDP)                 | Stool for Occult Blood-ED/Urgent care only*    |
| Hemoglobin and Hematocrit*                        |                                                 |
| Platelet count*                                   | Urinalysis*                                     |

REPORTING TEST RESULTS

Outpatient reports: The laboratory offers several options for the delivery of test results:

- **Printers:** Depending on the volume, providers may request a printer that will transmit reports directly to their office. The report frequency can be customized based on provider’s needs.
- **Automatic fax:** Results can be faxed to the provider on a scheduled basis with stats broadcast as soon as they are complete.
- **Delivery by courier:** Scheduled morning and afternoon deliveries are available for local providers.
• Out of town providers: These reports are generated three times a day and are mailed and/or faxed to the providers.
• Electronic Reports: Saratoga Hospital has options for electronic reporting of results. Contact the Laboratory LIS Coordinator (580-2810) for additional information.

Inpatient:

• Computer access: Results are available directly from the hospital’s computer system using the PCI function. This functionality is available to all units.
• Hard copies of reports: At the patient care unit’s request, reports are transmitted directly to printers on the unit on a scheduled basis. Stats are broadcast as soon as they are complete.

REPORTING CRITICAL VALUES/ALERT VALUES

Critical Results: A laboratory result that indicates the presence of a life-threatening emergency, which may be corrected by appropriate and timely intervention. Critical values are always called by the technologist directly to the appropriate nurse or designee, who is responsible for communicating the value to an authorized provider in a timely manner.

Significantly Abnormal (Alert) Results: Results that are significantly abnormal but do not constitute a medical crisis. These are urgent results that may require prompt action by a responsible provider. The laboratory technologist will call the result to the appropriate nurse or designee as soon as possible.

Critical results and significantly abnormal results reported by reference laboratories are also included under this policy.

Critical Result Reporting:

Once a critical value has been identified, the result is immediately called to the appropriate nurse or designee. The person receiving the result must read the result back to the technologist to ensure that it has been interpreted correctly. The procedure is as follows:

1. Inpatient: The technologist will call the appropriate patient care unit and give the results to a nurse or designee who will communicate the value to the appropriate physician in a timely manner.

2. Outpatient:
   • During business hours: The technologist will call the physician’s office and give the result directly to a nurse or the physician.
   • After business hours: the on call physician will be contacted by the technologist.
   • Physician not available: In the event that the technologist cannot reach the appropriate physician to communicate the critical value, the hospital’s administrative policy “Critical/Alert Value Notification Policy” will be activated. Results will be reported to the Emergency room physician who will address the critical result. The director of the Emergency Department and the Vice-president of Medical Affairs will investigate all instances where the patient’s provider was not available to address a critical result.
CRITICAL/ALERT RESULTS

**Critical results:** These results must be communicated to the responsible licensed caregiver within 90 minutes of initial recognition of the critical result by the notifying diagnostic area.

**Alert Results:** Should be communicated to the responsible caregiver within 8 hours but no later than the next business day. Department specific protocols apply.

**Results are called unless noted otherwise:**

*First instance only= No critical value in the same result range (high vs. low) in the past 5 days.

**Broadcast or faxed only

<table>
<thead>
<tr>
<th>BLOOD BANK</th>
<th>Critical</th>
<th>Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Coombs</td>
<td>Positive with evidence of acute hemolytic reaction.</td>
<td></td>
</tr>
<tr>
<td>CHEMISTRY/HEMATOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amylase (U/L)</td>
<td>High</td>
<td>&gt;500**</td>
</tr>
<tr>
<td>Bicarbonate (mmol)</td>
<td>Low</td>
<td>&lt;10</td>
</tr>
<tr>
<td>BUN (mg/dL)</td>
<td>High</td>
<td>&gt;100**</td>
</tr>
<tr>
<td>Calcium (total) (mg/dL)</td>
<td>High; first instance only</td>
<td>&gt;13.0; not first instance</td>
</tr>
<tr>
<td></td>
<td>Low; first instance only</td>
<td>&lt;7; not first instance</td>
</tr>
<tr>
<td>Chlamydia and/or GC Probe</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>CK (IU/L)</td>
<td>High</td>
<td>&gt;1000</td>
</tr>
<tr>
<td>CKMB (ng/mL)</td>
<td>High; first instance only</td>
<td>&gt;5.0; relative index of ≥4; indicative of acute MI; first instance only</td>
</tr>
<tr>
<td>Creatinine (mg/dL)</td>
<td>High</td>
<td>&gt;4.0**</td>
</tr>
<tr>
<td>Glucose (mg/dL)</td>
<td>Birth -30 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>&gt;600</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;50</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>&gt;400</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;40</td>
</tr>
<tr>
<td>Glucose-Urinalysis</td>
<td>Birth to 18 years</td>
<td>Any positive result</td>
</tr>
<tr>
<td>Hemoglobin (g/dl)</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>&gt;20</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;8.0</td>
</tr>
<tr>
<td></td>
<td>critical drop: &gt; 3</td>
<td></td>
</tr>
<tr>
<td>Hematocrit (%)</td>
<td>High</td>
<td>&gt;60</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;22</td>
</tr>
<tr>
<td>INR</td>
<td>High</td>
<td>&gt;5</td>
</tr>
<tr>
<td>Magnesium (mg/dL)</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High; first instance only</td>
<td>&gt;5.0; not first instance</td>
</tr>
<tr>
<td></td>
<td>Low; first instance only</td>
<td>&lt;1; not first instance</td>
</tr>
<tr>
<td>Magnesium (mg/dL) *Maternity Only</td>
<td>High</td>
<td>≥7</td>
</tr>
<tr>
<td>Manual Differential</td>
<td>Birth-two weeks</td>
<td>Blast or malignant cells; first instance only</td>
</tr>
<tr>
<td>Platelets (x 10^3/uL)</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>&gt;1000</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;30</td>
</tr>
<tr>
<td>Potassium (mmol/L)</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>&gt;900</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;50</td>
</tr>
<tr>
<td>Phosphorus (mg/dL)</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>pH</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>&gt;7.6</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;7.2</td>
</tr>
<tr>
<td>pO2</td>
<td>Birth-two weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>&lt;55</td>
</tr>
<tr>
<td>PTT</td>
<td>Birth-two weeks</td>
<td>≥80 NO heparin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;100 (patients on heparin)</td>
</tr>
<tr>
<td>RPR</td>
<td></td>
<td>Positive (newborns)</td>
</tr>
<tr>
<td></td>
<td>Critical</td>
<td>Alert</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td><strong>MICROBIOLOGY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STAINED SMEARS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSF</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Blood Culture</td>
<td>Positive; first set Positive; 2nd set different organism Positive; 2nd set same organism</td>
<td></td>
</tr>
<tr>
<td>Fluids from joint or other body fluid cavity that is normally sterile.</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>STAT OR specimens - Gram stain</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>AFB smear (direct smear)</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td><strong>CULTURES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSF Culture</td>
<td>Positive- if smear was reported as negative</td>
<td></td>
</tr>
<tr>
<td>Blood Culture</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Sterile Body Fluid Culture</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Wound Culture</td>
<td>Positive for Clostridium</td>
<td>Positive</td>
</tr>
<tr>
<td>All MDROs, VRE/MRSA/VISA/VRSA</td>
<td></td>
<td>Positive</td>
</tr>
<tr>
<td>Stool</td>
<td>Salmonella, Shigella, Campylobacter</td>
<td></td>
</tr>
<tr>
<td><strong>ANTIGEN/TOXINS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Diff Toxins</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Haemophilus influenza antigen</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Neisseria meningitides antigen</td>
<td>Positive</td>
<td></td>
</tr>
</tbody>
</table>
SPECIMEN COLLECTION AND TRANSPORT
SPECIMEN LABELING

Laboratory results are used by physicians to provide quality patient care. Proper patient identification and specimen labeling is essential in providing accurate results that can safely be used in decision-making by the physician.

Identify the patient:

Ask the patient to state their full name and date of birth prior to collecting the specimen. Specimen containers are to be labeled with proper patient identification in the presence of the patient and immediately after completing the collection procedure. (Employees of Saratoga Hospital should refer to the “Patient Identification” and “Specimen Labeling Policy” for additional instructions on specimen labeling).

Additional information:

To ensure proper specimen processing, the following information should accompany the specimen:

1. Patient name and date of birth.
2. Clinical information (patient’s diagnosis, relevant history, and specimen source).
3. Date and time of collection.
4. Initial’s of the collector.
5. Requesting physician.

Refer to Pathology and Blood Bank for additional information.

SPECIMEN TRANSPORT:

Transport specimens to the laboratory as soon as possible. See “Table of Diagnostic Tests” and for specific information on specimen storage and transport. Improper specimen storage can adversely affect test results.

REJECTION OF SPECIMENS:

Specimens will be rejected if the following conditions are not met:

1. The apparent condition of the specimen indicates that it is unsatisfactory for testing or that it is inappropriate for the test requested.
2. It has been collected, labeled, preserved or otherwise handled in such a manner that it has become unsatisfactory or unreliable as a test result.
3. It is perishable and the time lapse between the collection of the specimen and its receipt by the laboratory is of such duration that the test finding may no longer be reliable.

The laboratory will promptly contact the provider/patient care unit regarding specimen rejections.

BLOOD COLLECTION PROTOCOLS

Patient Preparation:

1. Assemble supplies specific for patient’s age and condition.
   a. Choose appropriate tubes for the tests ordered. See Service Directory for test requirements.
2. Put on protective gloves.
   Note: Gloves must stay intact for the duration of the procedure.
3. Position patient in chair or bed, arm outstretched and supported, in a manner both comfortable to the patient and accessible to the phlebotomist.
4. Apply tourniquet (or other restrictive device) 3-4 inches above venipuncture site. If
blood pressure cuff is used, inflate to 40 mm Hg.

*Note: Tourniquet should remain in place 1 minute or less.*

5. If necessary, ask patient to “make a fist” but avoid “pumping”.
6. Identify the appropriate site for venipuncture by palpating the vein.

**Guidelines:**
- Avoid→Healed Burns, Extensive Scaring, or Hematoma
- Do Not→Draw from an arm on the same side as a mastectomy without physician approval.
- Do Not→Draw from an arm having a Cannula, Fistula, or Vascular Graft without physician approval.

**Avoid Nerves:**
- Keep in mind where nerves are found, and avoid these areas.

7. Open an alcohol pad and rub the site, working in concentric circles from the inside out. An iodine prep may be used in cases where the patient is allergic to alcohol or an alcohol study is being performed. Allow to air dry.

**Correct Order of Draw:**
In laboratory medicine, the “quality” of the test result is only as good as the quality of the specimen, which is collected by the health care provider. One of the most important things to consider when collecting blood samples is the order in which the collection tubes are filled. If not collected in the correct order, cross contamination of the samples with anticoagulants contained in the tubes may result.

**EVACUATION SYSTEM - Vacutainer Method**
1. Blood Cultures
2. Sodium Citrate Tube - Light Blue Top
3. Tubes containing a Clot Activator- Red, Gold SST - Serum Separator Tube (gel inside)
4. Sodium Heparin Tube - Green Top with NO Gel
5. Lithium Heparin Tube - Green PST - Plasma Separator Tube (gel inside)
6. EDTA Tube - Lavender Top
7. All Other Additive Tubes

**NON - EVACUATED SYSTEM - Syringe Method**
1. Blood cultures
2. Sodium Citrate Tube - Light Blue Top
3. Tubes containing a Clot Activator- Red, Gold SST - Serum Separator Tube (gel inside)
4. Sodium Heparin Tube - Green Top with NO Gel
5. Lithium Heparin Tube - Green PST - Plasma Separator Tube (gel inside)
6. EDTA Tube - Lavender Top
7. All Other Additive Tubes

**SKIN PUNCTURE - Heel and Finger Sticks**
1. EDTA Tube - Lavender Top Microtainer
2. All Other Additive Tubes
3. All Non Additive Tubes - Red Top Microtainer
### MAXIMUM AMOUNT OF BLOOD TO BE DRAWN ON PATIENTS UNDER 14 YEARS OF AGE

<table>
<thead>
<tr>
<th>Patient’s Weight</th>
<th>Maximum amount to be drawn at any one time</th>
<th>Maximum amount of blood (cumulative) during a given hospital stay (one month or under)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 - 8 lbs. / 2.7 - 3.6kg</td>
<td>2.5 ml</td>
<td>23 ml</td>
</tr>
<tr>
<td>8 - 10lbs. / 3.6 - 4.5kg</td>
<td>3.5 ml</td>
<td>30 ml</td>
</tr>
<tr>
<td>10 - 15lbs. / 4.5 - 6.8kg</td>
<td>5 ml</td>
<td>40 ml</td>
</tr>
<tr>
<td>16 - 20lbs. / 7.3 - 9.7kg</td>
<td>10 ml</td>
<td>60 ml</td>
</tr>
<tr>
<td>21 - 25lbs. / 9.5 - 11.4kg</td>
<td>10 ml</td>
<td>70 ml</td>
</tr>
<tr>
<td>26 - 30lbs. / 11.8 - 13.6kg</td>
<td>10 ml</td>
<td>80 ml</td>
</tr>
<tr>
<td>31 - 35lbs. / 14.1 - 15.9kg</td>
<td>10 ml</td>
<td>100 ml</td>
</tr>
<tr>
<td>36 - 40lbs. / 16.4 - 18.2kg</td>
<td>10 ml</td>
<td>130 ml</td>
</tr>
<tr>
<td>41 - 45lbs. / 18.6 - 20.5kg</td>
<td>20 ml</td>
<td>140 ml</td>
</tr>
<tr>
<td>46 - 50lbs. / 20.9 - 22.7kg</td>
<td>20 ml</td>
<td>160 ml</td>
</tr>
<tr>
<td>51 - 55lbs. / 23.2 - 25.0kg</td>
<td>20 ml</td>
<td>180 ml</td>
</tr>
<tr>
<td>56 - 60lbs. / 25.5 - 27.3kg</td>
<td>20 ml</td>
<td>200 ml</td>
</tr>
<tr>
<td>61 - 70lbs. / 27.7 - 29.5kg</td>
<td>25 ml</td>
<td>220 ml</td>
</tr>
<tr>
<td>66 - 70lbs. / 30.0 - 31.8kg</td>
<td>30 ml</td>
<td>240 ml</td>
</tr>
<tr>
<td>71 - 75lbs. / 32.3 - 34.1kg</td>
<td>30 ml</td>
<td>250 ml</td>
</tr>
<tr>
<td>76 - 80lbs. / 34.5 - 36.4kg</td>
<td>30 ml</td>
<td>270 ml</td>
</tr>
<tr>
<td>81 - 85lbs. / 36.8 - 38.6kg</td>
<td>30 ml</td>
<td>290 ml</td>
</tr>
<tr>
<td>86 - 90lbs. / 39.1 - 40.9kg</td>
<td>30 ml</td>
<td>310 ml</td>
</tr>
<tr>
<td>91 - 95lbs. / 41.4 - 43.2kg</td>
<td>30 ml</td>
<td>330 ml</td>
</tr>
<tr>
<td>96 -100lbs./43.6 - 45.5kg</td>
<td>30 ml</td>
<td>350 ml</td>
</tr>
</tbody>
</table>

### SPECIMEN COLLECTION REQUIREMENTS/NOTES

**Hematology:**

**BODY FLUIDS:** A body fluid cell count/differential requires 1-2 ml of fluid in EDTA lavender top tube.

**BONE MARROWS:** Call hematology (8750) to schedule an appointment. Technologists will assist from 7:30 a.m. to 2:00 p.m., Monday – Friday.

**CSF:** Cerebrospinal fluid cell counts/diffs require 1-2 ml of CSF in an 8 ml plastic tube. Differentials are not performed unless WBC is greater than 5 WBC/mm³.

**PT, PTT, FIBRINOGEN, & D-DIMER:** All tests must be collected in a blue-top tube containing 3.2% buffered sodium citrate. Evacuated collection tubes must be filled to completion to ensure a proper blood-to-anticoagulant ratio. The sample should be mixed immediately by gentle inversion at least six times to ensure adequate mixing of the anticoagulant with the blood.

A discard tube is not required prior to collection of coagulation samples unless a winged blood collection kit is being used. **Winged blood collection kits (butterfly) must use a discard lead tube prior to collecting specimen tube to submit for testing.** This discard tube must be a blue-top tube containing 3.2% buffered sodium citrate or a non-additive tube.
If it is necessary to draw from an in-dwelling line, flush with saline: to avoid Heparin contamination and dilution of specimen, a minimum of 5 cc of blood should be discarded before collecting the specimen.

- PT specimens are stable for 24 hours.
- Fibrinogen and D-Dimers should be performed within 4 hours of collections.
- PTT specimens should be centrifuged within 1 hour of collection. If testing cannot be performed within one hour of collection, frozen plasma must be submitted. Specimens should be centrifuged for at least 15 minutes at 1500xg to produce platelet-poor plasma and the plasma **quick frozen** and maintained in this condition until tested.

**Notes:**

1. **High Hematocrit Samples.** Patients with an elevated hematocrit have a relatively low amount of plasma for a given whole blood (collection) volume. This tends to effectively increase the plasma citrate concentration. If the patient has a known hematocrit >55%, the amount of citrate in the collection tube must be decreased according to the formula below:

   \[
   \text{Citrate volume} = \frac{(100 - \text{hematocrit})}{(595 - \text{hematocrit})} \times \text{total volume}
   \]

   **Example:** Patient hematocrit = 60%

   \[
   \begin{align*}
   \text{Total volume} &= 5 \text{ mL (standard citrated plasma collection tube volume)} \\
   (100 - 60) / (595 - 60) \times 5 &= 0.33 \text{ mL sodium citrate}
   \end{align*}
   \]

2. **Plasma Processing.** Transfer the sample as soon as possible (preferably within 30 minutes of collection). Transfer plasma using a plastic pipette into a plastic tube. Note that glass **should not** be used because glass can activate the clotting cascade. Label each tube “**plasma, citrate.**” The specimen should be **frozen** immediately and maintained frozen until tested.

**SEMEN:** Call Hematology 583-8750 to schedule an appointment Tuesdays and Thursdays from 8:30 a.m. to 1:30 p.m.
**Microbiology:**  
**General Specimen Collection Guidelines**

ESwab Transport Systems consist of 1 flocked swab and 1 vial containing 1ml of transport media, all of which are provided in 1 package.

- Do not remove transport fluid present in the transport tube.

Collect specimen before administering antimicrobial agents when possible.

Collect specimen with as little contamination from indigenous flora as possible to ensure that the sample will be representative of the infected site.

Utilize appropriate collection procedures using sterile equipment and aseptic technique to collect specimens to prevent contamination of specimens during invasive procedures.

Collect an adequate amount of specimen. Inadequate amounts of specimen may yield false-negative results.

Collect specimens in a sturdy, sterile, leak-proof container.

- Sending a syringe is acceptable but the following steps must be performed:
  - REMOVE THE NEEDLE from the syringe.
  - EXPEL ALL AIR from the syringe.
  - Cap the syringe is tightly.
  - **DO NOT SEND A CAPPED SYRINGE IN A VACUUM TUBE SYSTEM!**

**Specimen Transport**

All specimens are considered biohazardous. Specimens must be collected in sterile leak-proof containers and placed into a sealable plastic bag prior to transport to the laboratory. Lab slips and specimen labels must be left outside the bag to prevent contamination.

Routine transport refers to the routine rounds performed by material management for inpatients and the laboratory courier service for outpatient specimens.

**Unacceptable Specimens**

- Specimens received in leaking, cracked or broken containers.
- Swabs that have been delayed in transit more than 1 hour, if they are **NOT** in some type of system containing transport media.
- Specimens collected using swabs with cotton tips or wooden shafts.
- Specimens collected with calcium alginate swabs.
- Specimens with obvious (visually apparent) contamination.
- Specimens not appropriate for a particular test.
- Specimens submitted for anaerobic culture which by definition contain normal anaerobic flora (vaginal, GI, upper respiratory).
- Duplicate throat, urine, sputum, or stool specimens within a 24 hr. period.
- Specimens that are not the correct volume.
- Specimens in formalin.
**Blood Culture Specimen Type and Collection**

**Test Name:** (BCUL) Blood Culture

**Media:** BacT/ALERT Aerobic (FA) Bottle (green cap), **Fill Volume:** minimal is 5 ml, maximum is 10 ml  
BacT/ALERT Anaerobic (FN) Bottle (orange top), **Fill Volume:** minimal is 5 ml, maximum is 10 ml  
BacT/ALERT Pediatric (PF) Bottle (yellow cap), **Fill Volume:** minimal is 0.5 ml, maximum is 5 ml

**Store and Transport:** Room Temperature (transport as soon as possible for optimum results)

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Collection/Container</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neonates to 1 year</strong></td>
<td>BacT/ALERT Pediatric (PF) Bottle (0.5 to 1.5 ml...at least 1.0 ml is preferred)</td>
<td>⚠️Note: Recent studies have shown no difference in microbial recovery when blood specimens were drawn for culture simultaneously or at spaced intervals for up to 24 hours. Recent studies also have shown no significant differences in positivity rates of blood cultures obtained in relation to fever spikes of patients.</td>
</tr>
</tbody>
</table>
| **Children: 1 to 6 yrs** | BacT/ALERT Pediatric (PF) Bottle (1 ml per year of age, divided between 2 blood culture orders) | **Volume of blood collected is the most important variable in detecting bacteremia or fungemia.**  
Single blood cultures should NEVER be drawn from adult patients.  
Blood cultures should not be repeated in 2 to 5 days because blood does not become sterile immediately following the start of antimicrobial therapy.  
- Exception: Patients with infective endocarditis.  
- Exception: Patients with Staphylococcus aureus bacteremia, where positive follow-up blood cultures at 48 to 96 hours were the strongest predictor of complicated S.aureus bacteremia.  
The use of surveillance blood cultures for earlier detection of sepsis should be limited to certain populations such as those in intensive care, undergoing transplantation or with vascular catheters.  
The optimal recovery of bacteria and fungi from blood depends on culturing an adequate volume of blood. Pediatric patients often have higher numbers of microorganisms in their blood however low-level bacteremia may also occur. |
| **Children weighing 30 to 80 lbs** | Total 8 to 20 ml (divided between 2 blood cultures orders)  
4 ml in BacT/ALERT Pediatric (PF) Bottle x 2 draws = 8ml total  
**–OR–**  
5ml in each BacT/ALERT Aerobic (FA) Bottle and Anaerobic (FN) Bottle x 2 draws = 20ml total |  |
| **Adults and children weighing >80 lbs** | **7.5 to 10 ml in each bottle:**  
1 BacT/ALERT Aerobic (FA) and  
1 BacT/ALERT Anaerobic (FN) Vial  
**5 to 7.5 ml in each bottle (is minimal amount):**  
1 BacT/ALERT Aerobic (FA) Bottle and  
1 BacT/ALERT Anaerobic (FN) Bottle | **Frequency:**  
Blood Cultures should be drawn simultaneously or over a short timeframe.  
Drawing blood at intervals is only indicated when it is necessary to document continuous bacteremia in patients with suspected infective endocarditis or other endovascular infections.  
**Generally:** The present guideline is to collect 2 to 3 sets per episode. SEE CHART ON NEXT PAGE |
<table>
<thead>
<tr>
<th><strong>Bacteremia/Fungemia</strong></th>
<th><strong>Recommendations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute sepsis, meningitis, pneumonias, etc.</strong>&lt;br&gt;(when immediate antimicrobial therapy is required)</td>
<td>• Obtain 2 to 3 sets (of maximum volume) consecutively from separate sites before starting therapy.</td>
</tr>
</tbody>
</table>
| **Continuous bacteremia**<br>**and**<br>**Subacute infective endocarditis** | • Draw 3 sets from separate sites, spaced 30 to 60 minutes apart and begin therapy (do not obtain from indwelling catheters)  
• If all are negative 24 hours later, obtain three more sets as described above. |
| **Acute infective endocarditis** | • Draw sets within a 30 minute period before starting empiric antimicrobial therapy. |
| **Fever of unknown origin** | • Draw 2 to 3 sets in a 24 hr period  
• Obtain 2 more sets after 24 to 36 hours. |
| **Pediatric Blood Cultures** | • Draw 2 to 3 aerobic cultures within a 24 hour period  
• Anaerobic cultures may be considered in high-risk groups |
| **Patients on antimicrobial therapy** | • Collect sample prior to the next dose of antibiotic |
Body Fluid Culture (includes Gram stain) Specimen Type and Collection

**Test Name:** (BFCUL) Sterile Body Fluid Culture and Gram Stain  
**Storage/Transport:** Store at Room Temperature/Transport at Room Temperature immediately or as soon as possible.

<table>
<thead>
<tr>
<th>Specimen Type (Sterile Body Fluid Sites)</th>
<th>Collection/Container</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Fluid</td>
<td><strong>Aerobic Culture:</strong> 5 to 10 ml <em>(5 ml is minimal fill volume)</em> in</td>
<td>🚫Send syringe with <strong>NEEDLE REMOVED, ALL AIR EXPELLED</strong> and syringe tightly capped.</td>
</tr>
</tbody>
</table>
### Eye Culture (Gram stain included) Specimen Type and Collection

**Test Name:** (WDCUL) Aerobic Culture and Gram Stain  
**Source:** Eye  
**Add Comment:** Right or Left  
**Storage/Transport:** Store at Room Temperature/Transport at Room Temperature immediately or as soon as possible.

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Collection/Container</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **Conjunctiva** (bacterial conjunctivitis) or **Lid Margin** (staphylococcal blepharoconjunctivitis) | Roll sterile swab over the conjunctiva surface/pus or lid margin before topical medications are applied. ESwab Transport System | **Culture both eyes with separate swabs.**  
Type in comment section right or left eye for each.  
Submit an inoculated JEMBEC plate if *Neisseria gonorrhoeae* is suspected. |

**Pleural Fluid**  
Empyema  
Thoracentesis

**Peritoneal Fluid**  
Abdominal  
Ascites  
Paracentesis  
CAPD  
PV Fluid

**Pericardial Fluid**

**Cul-de-sac Fluid**  
Culdocentesis

**Amniotic Fluid**  
Amniocentesis

**Aqueous or Vitreous Fluid**  
*(bacterial endophthalmitis)*

If blood culture bottles are sent, please include some fluid in a sterile container for a Gram stain.

**Drainage Tube Specimens are discouraged in favor of direct aspiration of the area being drained.**
- Disinfect the collection tubing and aseptically aspirate fluid from the tubing.
- Submit in dry, sterile, leak proof container.
- **DO NOT** inoculate blood culture bottles since they are unlikely to increase the yield of significant microbiota.

**NOTE:** *Swabs are the least appropriate specimens.*
If a swab is to be used for collection, use the ESwab Transport System.

- **Swab of conjunctiva should also be submitted for culture.**
- Submit an inoculated JEMBEC plate if *Neisseria gonorrhoeae* is suspected.
- Fungi, AFB and *Nocardia* spp should be ruled out in chronic post surgical and traumatic infections.
- Viral Cultures should be collected.
- **Blood Cultures should be submitted**
### Respiratory Culture (includes Gram stain) Specimen Type and Collection

**Test Name:** (RESCUL) Respiratory Culture and Gram Stain  
**Storage/Transport:** Transport to the laboratory immediately at Room Temperature. Refrigerate at 2 to 8°C if specimen will be delayed less than 30 minutes.

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Collection/Container</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqueous or Vitreous Fluid</td>
<td>Needle aspiration</td>
<td>• Swab of conjunctiva should also be submitted for culture.</td>
</tr>
<tr>
<td>(bacterial endophthalmitis)</td>
<td>Syringe or Sterile Container</td>
<td>• Submit an inoculated JEMBEC plate if Neisseria gonorrhoeae is suspected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fungi, AFB and Nocardia spp should be ruled out in chronic post surgical and traumatic infections.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Viral Cultures should be collected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Blood Cultures should be submitted.</td>
</tr>
<tr>
<td><strong>Corneal Scrapings</strong></td>
<td>Swabs of corneal scrapings from the advancing edge of the ulcer.</td>
<td></td>
</tr>
<tr>
<td>(bacterial keratitis)</td>
<td></td>
<td>• Swab of conjunctiva should also be submitted for culture.</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>Swabs of sputum</td>
<td>• Fungi, AFB and Nocardia spp should be ruled out in chronic infection.</td>
</tr>
<tr>
<td>(Expectorated)</td>
<td></td>
<td>• Corneal ulcers should have viral cultures collected</td>
</tr>
<tr>
<td><strong>Periorbital</strong></td>
<td>Syringe or Sterile Container</td>
<td>• Order Aerobic and Anaerobic Cultures</td>
</tr>
<tr>
<td>(preseptal cellulitis)</td>
<td></td>
<td>• Blood Cultures should be submitted.</td>
</tr>
<tr>
<td><strong>Orbital</strong></td>
<td>Aspirate from wound or biopsy sample of the wound and/or sinus aspirates.</td>
<td></td>
</tr>
<tr>
<td>(orbital cellulitis)</td>
<td>Syringe or Sterile Container</td>
<td>• Order Aerobic and Anaerobic Cultures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Blood Cultures should be submitted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fungus Culture should be ordered in diabetic and other immunocompromised patients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sinus aspirates should be submitted if extension of sinus infection , paranasal infection or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>endophthalmitis is suspected.</td>
</tr>
<tr>
<td><strong>External Lacrimal Sac</strong></td>
<td>Express pus from lacrimal sac and collect with a swab or syringe.</td>
<td></td>
</tr>
<tr>
<td>(dacryocystitis)</td>
<td>ESwab Transport System or Syringe</td>
<td>• Swab of conjunctiva should also be submitted for culture.</td>
</tr>
<tr>
<td><strong>Lacrimal Glands</strong></td>
<td>Collect specimen of the purulent discharge using a swab.</td>
<td></td>
</tr>
<tr>
<td>(dacryoadentitis)</td>
<td>ESwab Transport System</td>
<td></td>
</tr>
<tr>
<td><strong>Inner Aspect of Eyelid</strong></td>
<td>Collect specimen of the purulent discharge using a swab.</td>
<td></td>
</tr>
<tr>
<td>(canaliculitis)</td>
<td>ESwab Transport System</td>
<td>• Order Aerobic and Anaerobic Cultures</td>
</tr>
</tbody>
</table>

**Service Directory**

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<table>
<thead>
<tr>
<th>Specimen Type (Source)</th>
<th>Collection/Container</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sputum (Induced)</td>
<td>Sterile Container</td>
<td>This is performed using an ultrasonic nebulizer to assist the patient in producing a suitable specimen for testing.</td>
</tr>
<tr>
<td>Endotracheal Aspirate</td>
<td>Sterile Container</td>
<td>Trach specimens are susceptible to colonization within 24 hrs of collection.</td>
</tr>
<tr>
<td>Tracheal Aspirate</td>
<td>Sterile Container</td>
<td></td>
</tr>
<tr>
<td>Bronchoalveolar washing</td>
<td>Bronchoscopy “surgical” collection placed in a Sterile Container</td>
<td>Bronchoalveolar washing is from the major airways which is the same area sampled by an endotracheal aspirate. These are less suitable for culture than BAL specimens.</td>
</tr>
<tr>
<td>Bronchoalveolar lavage (BAL)</td>
<td>Bronchoscopy “surgical” collection placed in a Sterile Container</td>
<td>Bronchoalveolar lavage is from the distal respiratory bronchioles and alveoli.</td>
</tr>
<tr>
<td>Bronchial Brush, Protected</td>
<td>Bronchoscopy “surgical” collection placed in a Sterile Container</td>
<td>Bronchial Brush (PSB, protected specimen brushings) placed in nonbacteriostatic sterile saline (involved area is “brushed” and the brush is withdrawn into an inner cannula, which is withdrawn into the outer cannula to prevent contamination as it is removed).</td>
</tr>
</tbody>
</table>

**GC Culture Specimen Type and Collection**

**Test Name:** (GCCUL) GC Culture  
**Media:** JEMBEC Collection and Transport System (provided by the Microbiology Laboratory)  
**Storage/Transport:** See Comment section below. Transport at **Room Temperature** as soon as possible.  
**DO NOT REFRIGERATE!!**

---

### Sputum (Induced)
- **Collection/Container:** Sterile Container
- **Comments:** This is performed using an ultrasonic nebulizer to assist the patient in producing a suitable specimen for testing.
- **Specimen Type (Source):** Sputum (Induced)
- **Collection/Container:** Sterile Container
- **Comments:** Trach specimens are susceptible to colonization within 24 hrs of collection.
- **Specimen Type (Source):** Endotracheal Aspirate
- **Collection/Container:** Sterile Container
- **Comments:** Trach specimens are susceptible to colonization within 24 hrs of collection.
- **Specimen Type (Source):** Tracheal Aspirate
- **Collection/Container:** Sterile Container
- **Comments:** Trach specimens are susceptible to colonization within 24 hrs of collection.
- **Specimen Type (Source):** Bronchoalveolar washing
- **Collection/Container:** Bronchoscopy “surgical” collection placed in a Sterile Container
- **Comments:** Bronchoalveolar washing is from the major airways which is the same area sampled by an endotracheal aspirate. These are less suitable for culture than BAL specimens.
- **Specimen Type (Source):** Bronchoalveolar lavage (BAL)
- **Collection/Container:** Bronchoscopy “surgical” collection placed in a Sterile Container
- **Comments:** Bronchoalveolar lavage is from the distal respiratory bronchioles and alveoli.
- **Specimen Type (Source):** Bronchial Brush, Protected
- **Collection/Container:** Bronchoscopy “surgical” collection placed in a Sterile Container
- **Comments:** Bronchial Brush (PSB, protected specimen brushings) placed in nonbacteriostatic sterile saline (involved area is “brushed” and the brush is withdrawn into an inner cannula, which is withdrawn into the outer cannula to prevent contamination as it is removed).
- Pharyngeal
- Urethral
- Rectal
- Conjunctiva
- Vitreous or aqueous fluid from eye (bacterial endophthalmitis)
- Vaginal (preteen-aged females suspected of sexual abuse)
- Endocervix (Bartholin’s glands)
- Epididymis
- Disseminated Gonococcal Infection (DGI)
  - Endocervix (female)
  - Urethra (male)
  - Skin lesions
  - Joint fluid (sterile body fluid) from wrist, knee, fingers, ankle or elbow.
  - Blood
- Pelvic Inflammatory Disease (PID)
  - Endocervix
  - Endometrium
  - Fallopian tubes (females)

Specimens are to be collected using rayon, dacron or flocked swabs and directly inoculated to a JEMBEC agar plate and a CAP agar plate (optional).

Inoculate JEMBEC plate in "Z" pattern.

**NOTE:** Vaginal swab specimens are **NOT** considered optimal for the diagnosis of gonorrhea in women and should be reserved only for the evaluation of preteen-aged girls with suspected sexually transmitted disease due to presumed sexual abuse.

**Transport:**
Directly plated cultures (JEMBEC) must be transported to the laboratory in an increased CO2 environment.
- Place CO2 tablet (provided by the Micro Lab) in the specified area of the JEMBEC agar plate.
- Place the JEMBEC plate in the zip-lock bag (provided by the Micro Lab), seal and immediately transport at room temperature to the Microbiology Laboratory.

<table>
<thead>
<tr>
<th>Conjunctival Swabs</th>
<th>Refer to Eye Culture Specimen Type and Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTE:</strong> Swabs can be accepted <strong>ONLY</strong> if they are placed in non-nutritive swab transport media (ESwab Transport System) immediately after collection.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aspirates</th>
<th>Refer to Wound Culture Specify “Culture for GC” in order comments</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sterile Body Fluids</th>
<th>Refer to Body Fluid Culture Specify “Culture for GC” in order comments</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Blood Cultures</th>
<th>Refer to Blood Culture Specify “Culture for GC” in order comments</th>
</tr>
</thead>
</table>

**Wound Culture (includes Gram stain) Specimen Type and Collection**

**Test Name:** (WDCUL) Aerobic Culture and Gram Stain

**Source:** Aspirate, Blister, Burn, Cyst, Drainage, Ear, Eye, Fistula, Incision, Lesion, Pus, Rash, Rectal, Skin/Superficial Wound, Wound, Miscellaneous

**Storage/Transport:** Store at Room Temperature/Transport at Room Temperature immediately or as soon as possible.
<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Collection/Container</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Biopsy of Open Wounds (Best Sample) | Sterile Container or Syringe            | - Debride if appropriate and thoroughly rinse with sterile saline prior to collection.  
- Obtain specimen by biopsy from the leading edge of the lesion or base of the infected area, where pathogens should be present and colonizing organisms are less likely to occur. |
| Fine Needle Aspirations       | Sterile Container or Syringe            |                                                                                                                                               |
| Aspirates of Closed Wounds    | Sterile Container or Syringe            | - Cleanse (disinfect) skin or mucosal surfaces as for a blood culture collection.  
- Obtain culture by needle and syringe aspiration from deeper pockets beneath superficial debris. |
| Infected Viable Tissue        | Sterile Container                      | - Submit tissue, placed on top of sterile gauze wet with nonbacteriostatic saline, in a sterile, leak proof container.                      |
| Pus                           | Sterile Container or Syringe            | - Aspirate (5 ml the best) the deepest portion of the lesion or exudates with a needle and syringe.  
- Aspirate or collect pus from bite wounds at the time of incision or debridement and not when the wound is fresh. |
| Exudates from the Deep Portion of Lesions | ESwap Transport System* | *Swabs are the least appropriate specimens, as the organisms isolated may only be colonizing the area and may not be involved in the infective process.  
- Remove superficial debris by thoroughly irrigating and cleansing the wound with bacteriostatic sterile saline.  
- Swab the area where there is evidence of pus or inflamed tissue. |

**AFB Culture Specimen Type and Collection**

**Test Name:** (AFBCUL) AFB Culture (Direct Smear) and (AFBSMCUL) Acid Fast Smear & Culture (performed at LabCorp Reference Laboratory)

**Please Note:** Only the Direct Smear (Kinyoun Cold Acid-fast Bacilli Stain – Carbol Fuchsin Stain) is performed at Saratoga Hospital. The specimen will be sent to LabCorp Reference Laboratory for a concentrated acid fast smear & culture (with reflex to identification and susceptibility testing).  
- This culture will often detect *Nocardia* species and other aerobic actinomyces and identification, and susceptibility appropriate for these organisms will be included.
• Identification by DNA probes or sequencing and susceptibility to antimicrobial antibiotics that are appropriate to the organism will be performed at an additional charge.

**Storage/Transport:** Transport to the laboratory immediately at room temperature. 
**Refrigerate** at 2 to 8°C if specimen will be delayed less than 30 minutes.

For any question related to testing procedure, source, container or transport requirements, please call the Microbiology Laboratory at 583-2551 prior to collection of specimen.

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount &amp; Container</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSF</td>
<td>5 ml in a sterile, leak proof container</td>
<td></td>
</tr>
<tr>
<td>Fasting Gastric Aspirate/Lavage</td>
<td>5 ml in a sterile, leak proof container</td>
<td></td>
</tr>
<tr>
<td>Respiratory Aspirate</td>
<td>5 ml in a sterile, leak proof container</td>
<td>Collect aspirate using sterile, nonbacteriostatic saline or other noninhibitory medium</td>
</tr>
</tbody>
</table>
| • Induced sputum or tracheal aspirates  
• Bronchial washings or lavages |                                                                          |                                                                          |
| Sputum               | 5 ml in a sterile, leak proof container | Collect first morning sputum (NOT saliva). Three (3) separate specimens collected from 3 separate days (8 to 24 hour intervals) are recommended. |
| Tissue or Biopsy     | 2 mm (cm³) in a sterile, leak proof container | Swabs of exudate from skin sources are acceptable otherwise swab specimens should NOT be submitted.  
• Swab will be rejected without visible evidence of tissue present. |
| Urine                | 50 ml in a sterile, leak proof container |                                                                          |
| Sterile Body Fluid (pleural, pericardial, chronic peritoneal dialysate) | 50 ml in a sterile, leak proof container |                                                                          |
| Bone Marrow          | 5 ml (or as much as possible) in a sterile, leak proof container | * A Direct Smear will not be performed |
| Whole Blood          | 10 ml In a green-top (sodium heparin) tube or Isolator Tube | * A Direct Smear will not be performed |
| Stool                | 10 ml in a sterile, leak proof container | * A Direct Smear will not be performed |

**Urine Culture Specimen Type and Collection**

**Test Name:** (URCUL) Urine Culture  
**Please Note:** Gram stain can be performed if requested by provider. Order (GS) Gram Stain

**Storage/Transport**

• Transport to the laboratory immediately after collection.  
• If urine cannot be delivered to the laboratory **within 2 hours** after collection, **refrigerate up to 24 hours** (which includes the holding period and the transport period).  
• If refrigeration is not possible and specimen transport will be delayed, collect specimen in transport tubes containing preservatives is acceptable.
- Place at least 3ml of urine into the transport tube to avoid an inhibiting or diluting effect on the microorganisms that may be present.

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cystoscopy</strong></td>
<td>(Bilateral urethral catheterization)</td>
</tr>
<tr>
<td><strong>Prostatic Massage</strong></td>
<td>(Manual massage of the prostate)</td>
</tr>
<tr>
<td><strong>Nephrostomy</strong></td>
<td>(Surgical procedure leaving tubing directly in the kidney)</td>
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<th>Specimen Type</th>
<th>Collection</th>
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<tr>
<td><strong>Clean Catch</strong></td>
<td>(Voided midstream)</td>
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<td><strong>Foley</strong></td>
<td>(Indwelling catheter)</td>
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<tr>
<td><strong>Straight Catheter</strong></td>
<td><strong>Pediatric Catheter</strong> (Insertion of a catheter into the urethra)</td>
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<tr>
<td><strong>Suprapubic</strong></td>
<td>(Needle inserted directly through the skin into the bladder to aspirate urine directly from the bladder)</td>
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<tr>
<td><strong>Ileal Conduit</strong></td>
<td>(Double catheter inserted into a cleansed stoma to a depth beyond the fascial level)</td>
</tr>
<tr>
<td><strong>Ureterostomy</strong></td>
<td>(Surgical procedure leaving tubing in abdomen from ureter)</td>
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- Clean the catheter port with 70% alcohol moving in concentric circles away from the center.
  - Alcohol only aids in “pushing” any bacteria away from the collection site.
- Using a needle and syringe, collect urine through the catheter port.
  - Never send urine obtained from a catheter bag.
- Aseptically dispense the urine collected directly into a disposable leakproof sterile container.
  - Collected a minimum of 10 ml when possible.
- When collection is completed, screw cap tightly on container and label according to Laboratory Specimen Labeling Policy.

- Refer to hospital procedure for inserting a urine catheter.
- This “in and out” procedure must be carried out with aseptic technique to avoid the risk of introducing microorganisms into the bladder.
- Discard the initial 15 to 30 ml of urine and submit the next flow of urine for culture.
- Aseptically dispense the urine collected directly into a disposable leakproof sterile container.
  - Collected a minimum of 10 ml when possible.
- When collection is completed, screw cap tightly on container and label according to Laboratory Specimen Labeling Policy.

- Refer to hospital procedure for patient preparation and collection procedure.
- Cleanse the stoma with 70% alcohol followed by iodine moving in concentric circles away from the center.
  - Alcohol and iodine only aid in “pushing” any bacteria away from the collection site.
- Insert a double catheter into the cleansed stoma, to a depth beyond the fascial level and collect the urine.
- Aseptically dispense the urine collected directly into a disposable leakproof sterile container.
  - Collected a minimum of 10 ml when possible.
- When collection is completed, screw cap tightly on container and label according to Laboratory Specimen Labeling Policy.

- Remove the external device.
- Aspirate the urine using a needle and syringe.
- Aseptically dispense the urine collected directly into a disposable leakproof sterile container.
  - Collected a minimum of 10 ml when possible.
- When collection is completed, screw cap tightly on container and label according to Laboratory Specimen Labeling Policy.
Kidney
(Surgical removal of urine directly from kidney)

Rejection Criteria

- Reject a urine specimen > 2 hours old and no evidence of refrigeration.
- Reject 24-hr urine collection.
- Reject urine from the bag of a catheterized patient.
- Reject specimens that have leaked.
- Reject specimen requests for anaerobic culture ...accept suprapubic bladder aspirates or specimens surgically obtained from the kidney (during nephrostomy).
- Reject Foley catheter tips.
- Reject any frozen to partially frozen specimen.
- For infants, a catheterized specimen should be collected.
  - Voided or bagged specimens are discouraged.
- Reject urine specimens collected by the same method within 48 hrs of receipt of the first specimen.
- Reject if specimen collection time and method of collection cannot be provided.

References


MOLECULAR DIAGNOSTICS
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| N. gonorrhea and/or Chlamydia | BD Probetec CT/GC swab Transport kit (female) | N/A | 1. Remove excess mucus from the endocervix with the large-tipped cleaning swab provided with kit. **Do not use the large tipped swab for specimen collection.**  
2. Insert the small tipped specimen swab into the endocervix and rotate the swab for 15 to 30 seconds. Avoid touching the vaginal walls with the swab.  
3. Verify that the Swab Specimen Transport Buffer is at the bottom. Unscrew the cap, insert the swab, and break the swab at the score line. Replace the cap securely making sure the swab fits into cap. Screw on the cap until it clicks into place.  
4. Label properly.  
Swab should be stored at 2 – 3°C for up to 4 days, or frozen at –20°C. |
| N. gonorrhea and/or Chlamydia | BD Probetec CT/GC Urethral swab (Male) | N/A | 1. To ensure accurate tests results, instruct the patient not to urinate for one hour prior to sampling.  
2. Insert the small-tipped specimen swab 2 to 4 cm into the urethra and rotate the swab for three to five seconds. **Do not use the large tipped swab for specimen collection.**  
3. Verify that all Swab Specimen Transport Buffer is at the bottom. Unscrew the cap, insert the swab, and break the swab at the score line. Replace the cap securely making sure the swab fits into cap. Screw on the cap until it clicks into place.  
4. Label properly.  
5. Swab should be stored at 2 – 3°C for up to 4 days, or frozen at -20°C. |
| N. gonorrhea and/or Chlamydia | Urine Sterile Cup | 15 – 20 ml *Max. 60 ml* | 1. Instruct the patient not to urinate for one hour prior to collection.  
2. The patient should collect the first 15 to 20 ml of voided urine (the first part of the stream) in a plastic, preservative free sterile cup.  
3. Close the cup securely and label appropriately.  
4. Refrigerate the specimen immediately at 2 – 8°C.  
5. Transport refrigerated.  
   a. Store at 2– 8°C for up to 4 days or frozen at –20°C. |
PATIENT INSTRUCTIONS

Glucose Tolerance Tests-Patient Instructions:

NOTE: You must have an appointment for this test. Tests can be scheduled Tuesday-Friday in the morning. Please call 583-8440.

You are scheduled to have an oral glucose tolerance tests on so that your doctor can find out how well you body absorbs and uses glucose (sugar). You should not eat 12-14 hours prior to this test.

A blood sample will first be collected in the laboratory, and after this you will be given a glucose solution to drink. The examination lasts for approximately five hours, and several blood samples will be collected from you during this time.

During this test, you may not eat, drink, smoke, walk excessively or leave the laboratory area.

At the following times, you will need to have your blood drawn:

1 hour sample: ______________

2 hour sample: ______________

3 hour sample: ______________

4 hour sample: ______________

5 hour sample: ______________

**IMPORTANT: If the phlebotomist has not called for you when your blood draw is due, please tell the office staff immediately.
PATIENT INSTRUCTIONS

Instructions for collecting Hemoccult Slides

- Do not collect samples during, or until three days after your menstrual period, or while you have bleeding hemorrhoids or blood in your urine.

- Do not consume the following drugs, vitamins and foods:

  Avoid 7 days prior to and during the test period:
  Aspirin or other non-steroidal anti-inflammatory drugs.

  Avoid 72 hours prior to and during the test period:
  Vitamin C in excess of 250 mg per day
  (from all sources, dietary and supplemental)*

  Red meat (beef, lamb), including processed meats and liver
  Raw fruits and vegetables
  (especially melons, radishes, turnips and horseradish)

- Remove toilet bowl cleaners from toilet tank and flush twice before proceeding.

- Collect samples from three consecutive bowel movements or three bowel movements closely spaced in time.

- Protect slides from heat, light and volatile chemical (e.g., iodine or bleach).

- Keep cover flap of slides closed when not in use.

For additional information please call 583-8750.

*Caution: some iron supplements contain quantities of Vitamin C, which exceed 250 mg per day.
PATIENT INSTRUCTIONS

Semen Analysis Collection Instructions

1. Pick up a sterile container provided by physician or laboratory.
2. Call 583-8750 to make an appointment.
3. Refrain from sexual intercourse for 2-7 days.
4. Wash hands and penis with soap and water, rinse thoroughly, dry with a clean towel.
5. Specimen is to be produced by masturbation, collecting the entire ejaculate into the dry specimen container.
6. Lubricants or condoms should not be used during specimen collection.
7. Interrupted intercourse should not be performed for specimen collection, this may result in the loss of a critical portion of ejaculate and cause specimen contamination of vaginal cells.
8. Replace the lid on the container making certain that it is tightly sealed.
9. Place patient’s name, date of birth and time of collection on the container.
10. Specimen must be kept at body temperature.
    Example: Place specimen container in a shirt pocket.
    Do not attempt to warm the specimen by artificial means: car heaters, hot water bottle etc.
11. Deliver the specimen the laboratory within 1 hour of collection. [Please drop specimen off at the laboratory prior to going to registration].

NOTE: Lubricants or condoms should not be used during specimen collection; both are toxic to sperm cells.

Specimens will be accepted by appointment only. Testing will be performed on Tuesday and Thursday from 8:30 am to 1:30 pm by appointment.

For additional information or any questions, please do not hesitate to call the Hematology lab at 583-8750.
PATIENT INSTRUCTIONS

24 Hour Urine Collection
(With No Preservative)

Note: Containers are available from the Hospital, WMA or MMA laboratory.

DO NOT URINATE DIRECTLY INTO THE CONTAINER

Urine should be collected in another clean container and then carefully poured into the 24 hour collection container.

TO COLLECT A 24 HOUR URINE SPECIMEN:

1. Follow your physician’s directions regarding food, drink, or drugs before and during collection.
2. Label the urine bottle with the patient’s name and date of birth.
3. Empty bladder completely on awakening in the morning and discard this urine specimen. On the label provided with the container, record date and time under “start” and begin the test. (Example: 6/24/07, 7:00 a.m.)
4. All urine passed during the rest of the day and night for the next 24 hours must be poured into the container. **NOTE: Keep container refrigerated during collection.**
5. Make final collection the next morning at the exact time under start below. On the label provided with the container, record the date and time under “finish”. (Example: 6/25/07, 7:00 a.m.)
6. Take the 24 hour specimen to the laboratory as soon as possible.
Instructions to Collect a Midstream Clean Catch Urine Sample

Read each step carefully before beginning to clean and collect the urine sample.

- If you do not understand these directions or have any questions, please ask for help.
  - If the sample is not collected properly, the test results will not give the provider the correct information needed.

1. Wash Hands.
   - If assisting a patient, gloves are available for use.

2. Open the cleansing wipe packet.

3. Clean the urethra (urinary opening), using each wipe only once.
   - Females:
     - Start with parting the skin (labia) around the vagina.
     - Use the 1st wipe to clean one side of the skin (labia).
       - Wipe from front to back.
     - Use the 2nd wipe to clean the other side of the skin (labia).
       - Wipe from front to back.
     - Use the 3rd wipe to clean over the area where the urine comes out (urethra).
       - Wipe from front to back.
   - Circumcised Males:
     - Clean the head of the penis with the wipe provided.
   - Uncircumcised Males
     - Retract the skin (foreskin).
     - Clean the head of the penis with the wipe provided.

4. Throw used wipes in the garbage; please do not throw wipes in the toilet.

5. Be careful when picking up the specimen cup.
   - DO NOT put your fingers in the specimen cup.
   - DO NOT touch inside the blue ring.

6. Hold the blue tab on the outside of the cup and begin urinating in the toilet.

7. While urinating, pass the cup into the stream of urine and hold the cup until it is about ½ full.

8. Remove cup from stream of urine and finish urinating into the toilet.
   - Uncircumcised Males: be sure to replace the skin (foreskin).

9. Unscrew the blue ring and replace it with the white lid.
   - DO NOT touch the inside of the white lid.

10. Throw the blue ring in the trash.

11. Wash hands and return the specimen cup to the staff person.
PATIENT INSTRUCTIONS

SPUTUM COLLECTION FOR CYTOLOGY

Each patient is given a sputum cytology kit which includes:
…specimen container with 50% ethyl alcohol fixative
…cytology requisition
…zip-lock bag

COLLECTION:

1. Thoroughly cleanse mouth with water before collection.
2. Cough deeply and expel sputum into specimen container.
3. Close container and tighten cap.
4. Write your name and date of collection on the specimen container.
5. Complete the cytology requisition.
6. Place specimen container and requisition inside the zip-lock bag and seal.
7. Deliver the specimen to Saratoga Hospital Laboratory.

Note: If a physician orders sputum for cytology x 3, repeat steps 1-5 for three consecutive mornings; be sure to write date of collection, name and date of birth on each specimen container. Refrigerate each specimen and deliver to laboratory upon completion of three specimens.

Day(s) and time(s) test performed:
   Monday – Friday 7:00 AM – 3:00 PM

PATIENT INSTRUCTIONS

VOIDED URINE COLLECTION FOR CYTOLOGIC EXAMINATION

Each patient is given a urine cytology kit which includes:
…specimen container with 50% ethyl alcohol fixative
…cytology requisition
…plastic cup
…zip-lock bag

COLLECTION:

1. Specimen should NOT be first morning collection.
2. Start urinating into the toilet. Then move the plastic cup into the urine stream and collect sample.
3. Immediately pour urine sample into container with 50% alcohol fixative. Tighten cap.
4. Write your name, date of birth, and date of collection on the container.
5. Complete the cytology requisition.
6. Place specimen container and requisition inside the zip-lock bag and seal.
7. Deliver the specimen to Saratoga Hospital Laboratory.

Note:
1. It may be helpful for the patient to be well hydrated (drink several glasses of water 30 minutes to one hour prior to collection).
2. If a physician orders urine for cytology x 3, repeat steps 1-5 for three consecutive mornings; be sure to write date of collection on each specimen container. Refrigerate each specimen and deliver to laboratory upon completion of three specimens.

Day(s) and time(s) test performed:
Monday – Friday 7:00 AM – 3:00 PM