



GUTHRIE

Directory of Laboratory Services

A handwritten signature in black ink, appearing to read 'Hani Hojjati'.

Hani Hojjati, MD Laboratory Medical Director

3/15/19

Date

Rev. March 2019

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Laboratory Procedure Catalog

The Laboratory Catalog is updated frequently and should be referred to for current information. The laboratory procedure catalog is available in Guthrie's Electronic Medical Record, EPIC. A printable version is available at www.Guthrie.org/LabServices and is considered accurate only at the date and time it is generated. Printed copy is available upon request. Contact Laboratory Client Services at (844) 617-4719 for assistance. Guthrie and its reference laboratories are constantly increasing their test menus and improving their services. The most significant changes are communicated via technical bulletin.

Laboratory Client Services

Laboratory Location	Office Support Hours of Operation	Phone	Fax
Sayre, PA	Monday – Friday 7:30 AM – 5:00 PM	(570) 887- 4719 (844) 617-4719 toll free	(570) 887- 4729
Corning, NY	Monday – Friday 8:00 AM – 4:30 PM	(607) 937-7271	(607) 937-7851
Cortland, NY	Monday – Friday 8:00 AM – 5:00 PM Saturday 8:00 AM – 12 Noon	(607) 756-3618	(607) 756-3636
Towanda, PA	Monday – Friday 7:30 AM – 5:00 PM	(570) 268-2228 ext. 2466	(570) 268-2399
Troy, PA	Monday – Friday 7:30 AM – 5:00 PM	(570) 297-9289	(570) 297-3910

Guthrie Reference Laboratories

Tests not performed in the Guthrie laboratory system are sent to one of the following New York State accredited laboratories:

- Quest Diagnostics
- LabCorp
- Specialized laboratories

Quality Assurance

Guthrie Laboratory Services is committed to supporting health care providers in our region with high-quality laboratory test results, covering a comprehensive menu of testing services. Guthrie's Quality Assurance (QA) program provides systematic monitoring and evaluation of the pre-analytical, analytical and post-analytical testing process. Performance improvement indicators are monitored regularly. QA is incorporated into every department. Guthrie is accredited by the College of American Pathologists (CAP), The Joint Commission (TJC) and conforms to stringent regulations required by CLIA, OSHA and CMS.

Confidentiality

Guthrie is committed to protecting the confidentiality of individuals' laboratory test results and personal information in compliance with all federal, state and local regulations. Anonymous testing is available through the County Health Department. A complete list of health departments is available on the Guthrie Intranet or by calling the laboratory client services department.

Lab Department Contacts

Medical Director

Medical Director and Department Chair Hani Hojjati, M.D.

Pathologists

Javad Beheshti, M.D.
Perry Bradstreet, M.D.

Dilip Gupta, M.D.
Ricky Hartman, D.O.
Ashit Sarker, M.D.

Administration

Vice President of Laboratory Services George Deratany, MA, MT(ASCP), CHC, CHPC

Sayre

Quality Assurance Manager	Barbara Hayes, MLS (ASCP)
Director of the Clinical Laboratory	Nicole Osman MLS (ASCP)
Regional Office Coordinator	Tonya Wilhelm MT (ASCP)
Point of Care Manager	Karen Updegraff, MLS (ASCP)
Blood Bank Supervisor	Barb Tubby MT (ASCP), SBB
Chemistry / Processing Supervisor	Nikki Wolfe MLS (ASCP)
Anatomic Pathology Supervisor	Sahar Halabi, CT (ASCP)
Hematology Supervisor	Jennifer Lison, MT (ASCP)
Histology Supervisor	Ed Sperduto
Microbiology Supervisor	Maureen Villanti MT, (ASCP) SM
Phlebotomy / Courier Supervisor	

Corning

Assistant Administrator	Patricia Butray-Frey, MT, MS
Quality Coordinator	Mary Ann Plumley, MT
Core Lab Coordinator	Kristy Edwards, HLT (ASCP) QIHC
Blood Bank Coordinator	Melissa Bevins, MT
Microbiology & Send outs	John Haig, MT
Histology Supervisor	Linda Stirpe

Cortland

Administrative Director	Lisa Temple, MT (ASCP)
Quality Systems Supervisor	Robin Puzo
Point of Care Coordinator	David McGowan
Core Lab Supervisor	Elaine Marsella

Towanda

Lab Manager Kellie Perri, MT

Troy

Lab Supervisor Stacy Pond, MS, MLS

FAX Numbers

Laboratory Department	Fax Number
Sayre, PA Laboratory Departments	
Blood Bank	(570) 887-4871
Client Services	(570) 887-4729
Microbiology	(570) 887-5528
Phlebotomy	(570) 887-3904
Off hours	(570) 887-5329
Corning, NY Laboratory	(607) 937-7851
Cortland, NY Laboratory	(607) 756-3123
Towanda, PA Laboratory	(570) 268-2399
Troy, PA Laboratory	(570) 297-3910

Patient Service Centers and Satellite Offices

Patients may have blood specimens collected at most Guthrie's offices. Patients are encouraged to call their local office/draw station to confirm availability and ensure maximum convenience. A laboratory appointment may be required at some locations. Patients must have a laboratory order/requisition for laboratory specimens to be collected. Appendix A, laboratory requisitions.

Hours of Operation

Up-to-date office hours are available on the Guthrie website, www.Guthrie.org/LabServices Phlebotomy sites are closed on Sundays and holidays.

Laboratory Testing Hours of Operation		Address	Phone
Location			
Guthrie Clinical Laboratories	24 hours a day, 7 days per week	PA: Sayre, Towanda and Troy NY: Corning	Refer to client services above
Phlebotomy Service Location		Address	Phone
Sayre, PA	Monday-Friday 7:00 AM - 5:30 PM Saturday 7:00 AM - 12 Noon	Guthrie Medical Office Building 2 nd Floor Phleb. Department 1 Guthrie Square Sayre, PA 18840	(570) 887-2588
Cortland, NY	Monday-Friday 6:00 AM - 5:00 PM Saturday 8:00 AM - 12 Noon	134 Homer Ave Cortland, NY 13045	(607) 756-3618
Cortland, NY	Monday 8:00 AM- 4:00 PM	4077 West Road Cortland, NY 13045	(607) 753-8590
Corning Centerway, NY	Monday-Friday 7:00 AM - 6:00 PM Saturday 7:00 AM - 12 Noon	Guthrie Medical Office Building 1 st Floor Phleb. Department 130 Centerway Corning, NY 14830	(607) 937-7607
Towanda, PA	Monday-Friday 6:00 AM - 8:00 PM Saturday 6:00 AM - 2:00 PM	91 Hospital Drive Towanda, PA 18848	(570) 268-2466
Troy, PA	Monday-Friday 6:00 AM - 7:00 PM Saturday 7:00 AM - 12 Noon	285 Guthrie Drive Troy, PA	(570) 297-9289
*Bath, NY	Monday-Friday 7:30 AM - 3:00 PM	47 West Steuben Street Bath, NY	(607)776-2781
*Erwin, NY	Monday-Friday 7:00 AM- 11:30 AM	9768 Liberty Drive Painted Post, NY	607-973-8000

*Hospital deductibles may apply. Bath and Erwin are hospital phlebotomy sites.

Guthrie New York State Satellite Offices	Guthrie Pennsylvania Satellite Offices
Apalachin	Athens
Bath	Canton
Big Flats	Dushore
Big Flats Southern Tier Pediatrics	Mansfield
Corning Centerway	Mansfield University
Corning Southern Tier Pediatrics	Towanda
Corning Steuben	Troy
Cortland	Tunkhannock
Erwin	Wellsboro
Ithaca	Wyalusing
Owego	
Southport	
Vestal	
Waverly	

Supplies

All supplies required for specimen collection are provided by Guthrie Laboratory Services. Order laboratory supplies using the laboratory supply requisition located in Appendix A. Fax the laboratory supply requisition to the number listed on the supply requisition. Order supplies one week in advance. Guthrie Clinic locations may request low volume supplies using the laboratory supply requisition.

Specimen collection supplies are used for Guthrie Laboratory testing only.

Compliance

Medicare

Medicare is a national health insurance program administered by the U.S. federal government. Medicare provides health insurance coverage to American citizens who are 65 years of age and older, who are under 65 and are permanently physically disabled, who have a congenital physical disability, or who meet other specimen criteria. Guthrie is a Medicare provider and is responsible to defend against fraud and abuse of Medicare and other government programs. The outpatient Medicare guidelines are complex. Understanding the payment rules for laboratory services is required to provide accurate coding and billing.

Medical Necessity

Physician and medical providers are free to order any test they judge appropriate for an individual patient. The Office of the Inspector General (OIG) and the Centers for Medicare and Medicare Services (CMS) require providers of laboratory services to advise physicians when they order tests on Medicare patients. Providers must only order those tests which they believe are medically necessary for patient diagnosis and treatment.

The laboratory services must be properly documented in the patient's medical record to be eligible for Medicare reimbursement. Medical documentation must reflect the services rendered, the extent of the service rendered and why the service is medically necessary. Healthcare providers use the ICD coding system for reporting and billing Medicare and other payment systems. The ICD coding system translates medical terminology into codes.

ICD Diagnosis

All laboratory orders must include an ICD diagnosis code that reflects the signs and symptoms to support medical necessity. The information is required to provide laboratory services. A signed Advanced Beneficiary Notice (ABN) must accompany the test requisition when test requests are not deemed medically necessary or are used for screening of Medicare patients.

Diagnostic coding must be coded to the highest level of specificity possible.

Advance Beneficiary Notice (ABN)

Medicare only pays for services that are determined to be reasonable and necessary for medical treatment and diagnosis under the Medicare law. If Medicare determines that a service is not reasonable or necessary under the Medicare Program Standards, Medicare denies payment for that service. By signing an ABN, the patient or responsible party is confirming agreement to assume financial responsibility for payment of the tests.

The ABN is generated automatically in the EPIC computer system or paper copies are available from the client services department. A signed copy of the ABN listing the test likely to be denied must be given to the patient prior to specimen collection. A second copy of the ABN must accompany the lab requisition and specimen.

An ABN is only obtained when appropriate. Inform the patient that the services are likely to be denied by Medicare. The patient must be given the choice of having or not having the lab specimen collected and understand they may receive a bill for the laboratory services.

Billing and Crediting

Guthrie accepts assignment for Medicare, Medicaid agencies and insurance carriers. To avoid billing errors all lab requisitions must be filled out completely. Guthrie's reference laboratories directly bill the patient or patient's insurance carrier.

Reporting Results

Specimens are processed upon receipt. Reporting times vary depending on the nature of the test, the analytical time required for the procedure and the method of reporting.

Communicating Urgent Results: Critical values are results that are so far below or so far above the reference range that they have life threatening potential. The result must be verified, and the attending physician informed.

Out-patients during normal working hours (8:00 AM-5:00 PM): the laboratory calls the physician's office noting the first and last name of the individual taking and reading back the test result.

Out-patients after normal office hours: the laboratory makes every attempt to notify the ordering provider. The provider's on-call service is notified when the ordering provider is not available. The laboratory attempts to contact the on-call service three times within 30 minutes. Each attempt is documented in the medical record.

Critical Results – Quantitative Results

Critical Results - Quantitative				
CHEMISTRY	Age	Less than or equal to	Greater than or equal to	Units
Glucose	Birth – 7 days	40	120	mg/dl
Glucose	8 days – 16 years	60	200	mg/dl
Glucose	17 years – Adult	50	500	mg/dl
Bilirubin	0 to 24 hours		10	mg/dl
Bilirubin	25 to 48 hours		14	mg/dl
Bilirubin	49 to 96 hours		18	mg/dl
Bilirubin	97 hours to adult		12	mg/dl
Sodium		120	160	mmol/L
Potassium		2.9	6.0	mmol/L
CO2		10	45	mmol/L
Calcium		6	13	mg/dl
Magnesium		1	4	mg/dl
Magnesium – OB		3.9	7.1	mg/dl
Lactic Acid			4	mmol/L
Ammonia*	Birth – 7 days		100	umol/L
Ammonia*	8 days – 30 days		80	umol/L
Ammonia*	31 days – Adult		60	umol/L
Troponin (First elevated value only)			0.12	ng/ml
Troponin iSTAT			0.08	ng/ml
Urine Protein (Female / pregnant patient only)			300mg/24 Hrs	
Hematology	Age	Less than or equal to	Greater than or equal to	Units
* Platelets	Birth – 17 years	50		K/ul
**Platelets	18 years and older	40	1000	K/ul
**WBC	2 days to adult	1	37	K/ul
WBC	0 – 1 day	1	50	K/ul
WBC (Known chronic lymphocytic leukemia)			100	K/ul
Hemoglobin	Birth to 17 years	7	N/A	g/dL
Hemoglobin	18 years +	7	20	g/dL
Hematocrit		22	60	%
**Neutrophil Absolute		0.5		K/uL
PTT			125	Seconds
INR			5	Ratio

** First decreased value only for oncology outpatients reported from Guthrie Lab in the past 7 day

* Reference: Harriet Lane Pediatric Handbook, 20th edition

Critical Results – Therapeutic Drugs

THERAPEUTIC DRUGS	AGE	Less than or equal to	Greater than or equal to	Units
Acetaminophen			100	mcg/ml
Carbamazepine (Tegretol)			15	mcg/ml
Digoxin			2.5	ng/mL
Gentamicin Random			12	mcg/ml
Gentamicin Peak			12	mcg/ml
Gentamicin Trough			2	mcg/ml
Lithium			2	mmol/L
Phenytoin (Dilantin)			40	mcg/ml
Salicylate			30	mg/dl
Theophylline			25	mcg/ml
Tobramycin Random			12	mcg/ml
Tobramycin Peak			12	mcg/ml
Tobramycin Trough			2	mcg/ml
Valproic Acid			125	mcg/ml
Vancomycin Random			40	mcg/ml
Vancomycin Peak			40	mcg/ml
Vancomycin Trough	13 to adult	10	20	mcg/ml
Vancomycin Trough	0 – 12 years	5	20	mcg/ml
Amikacin Random			35	mcg/ml
Amikacin Peak			35	mcg/ml
Amikacin Trough			10	mcg/ml

Critical Values Updated 1/3/2019

Critical Results – Qualitative Results

Hematology

Upon identification of a new leukemia or lymphoma, the pathologist on call notifies the ordering provider:

- First incidence of blasts or auer rods on blood smear
- Presence of blasts or microorganisms and intracellular bacteria in cerebrospinal fluid or body fluids
- Presence of any parasite on peripheral smear (i.e. Babesiosis, Ehrlichia and Malaria)

Microbiology

** Positive for MRSA by PCR

* Positive for C Diff by PCR

Positive results from Gram stain or culture from blood, cerebrospinal fluid or any other internal body fluid or organ.

**Positive results for Influenza A/B virus, Respiratory Syncytial virus (RSV) and Rotavirus.

Positive urinary antigen test for Legionella pneumophila serogroup 1 and Streptococcus pneumoniae

Positive culture for Legionella spp.

Positive culture for Cryptococcus neoformans

*MDRO - Multi Drug Resistant Organisms (MRSA, VRE, ESBL AND KPC)

*Outpatients. Monday-Friday up to 5 pm, as detected, after 5 pm and on Weekends and holidays,
Called on next business day

** Inpatients.

Stat Services

STAT Tests: Select tests are available on a STAT basis. STAT results are reported electronically as soon as possible, usually within 45 minutes. Written and/or electronic reports follow per routine medical report delivery system. STAT tests include:

STAT TEST LIST	
Acetaminophen	HCG Qualitative (serum or urine) [1 hour]
Acetone	HCG Quantitative (serum) [2 hours]
Alcohol	Hemoglobin/Hematocrit
ALT/AST	Influenza - A/B and RSV (1-hour turnaround)
Ammonia	Intra Op Consult – Gross
Amnisure	Lactic Acid
Amylase	Legionella Urinary Antigen (2 hour turnaround)
Antiglobulin Testing: direct and indirect coombs test	Lipase
Bilirubin, Total and Direct, neonatal	Lithium
BMP	Magnesium
BNP (NT Pro BNP)	Mononucleosis Test
Calcium	MRSA screen by PCR (2-hour turnaround)
CBC with Diff	Myoglobin (serum)
C Diff by PCR (2-hour turnaround)	Osmolality (serum or urine)
Chloride	
CMP	Platelet Count
CPK – CK	Potassium
CKMB – MB	PT/INR (Prothrombin Time)
CO2	PTT (Partial Thromboplastin Time)
Creatinine/ eGFR	
D-Dimers	Rapid Strep Screen
Drugs of Abuse Urine Screen	Salicylate
Drugs: Digoxin, Theophylline, Dilantin, Vancomycin, Valproic Acid, Gentamicin, Tobramycin	Sodium
Erythrocyte Sedimentation Rate:	Spinal Fluid Analysis (Cell Count, Glucose, Protein, Gram Stain)
FFN (Fetal Fibronectin)	S. Pneumoniae urinary antigen (2-hour turnaround)
Fibrinogen	Troponin I
Fibrinogen Degradation Products	Transfusion Reaction Investigation Workup
Fluid Cell Count and Glucose	Type & Screen and Prepare Blood Products
Frozen Sections	Urea Nitrogen
Gram Stain	Urinalysis
Glucose	Chlamydia/GC screen by PCR (2-hour turnaround)

Note: Other tests that are on occasion needed as STAT are TSH, Cortisol, Fetaldex (Kleihauer Betke) and special coagulation testing.

STAT List updated 5/15/2018

Patient Preparation

Accurate laboratory results are directly related to the quality of specimen submitted for analysis. Requirements for collection and handling must be followed.

Health and Safety Precautions

Use standard precautions when handling specimens containing blood or other potentially infectious material. Work areas contaminated with potentially infectious material must be disinfected immediately with an appropriate disinfectant such as 10% dilution of household bleach. In the event of an exposure, administer first aid immediately, notify the manager and/or supervisor and seek prompt medical attention. First aid includes washing cuts and needle sticks with soap and water; flushing splashes to the nose, mouth or skin with copious amounts of water and irrigating eyes with clean water, saline or sterile irrigants. Information on health and safety precautions is available from the U.S. Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control and Prevention (CDC). Information is also available on the Guthrie intranet. All specimens must be submitted in sealed, leak-proof, bio-hazard bags.

Patient Preparation

Many tests require specific patient preparation (e.g. fasting, diets, urinary voiding). Consult the Laboratory Procedure Catalog located on Guthrie's website, www.Guthrie.org/LabServices or contact Laboratory Client Services for information.

Fasting Requirements - Fasting specimens are preferred for some laboratory tests. Fasting is defined as no consumption of food or beverage, other than water, for 9-12 hours before testing. When fasting is required as part of patient preparation, the patient must refrain from strenuous exercise during the fasting period. Individuals must not become dehydrated, creating acute inflammation that may alter the test results.

Provocation Tests – Some laboratory tests require consumption of a substance prior to specimen collection. Glucose Tolerance tests require patients to drink a glucose solution. Blood specimens are obtained before ingestion and at various intervals after ingestion to measure blood glucose concentration.

***Important note:** Lactose Tolerance Tests must be scheduled. See contact information above to schedule an appointment.

Proper Patient and Specimen Identification

Patient's identity is confirmed by asking the patient to state and spell his/her name and date of birth. Patient identification bands are used to identify hospital patients and some outpatients. Scan the identification band and confirm the patient's identification by asking the patient to state and spell his/her name and date of birth.

All specimens must be labeled at the time of collection. **The two forms of patient identification must appear on the specimen and requisition.** Pre-labeling specimen containers is unacceptable. Laboratory orders are entered into the laboratory computer system generating a barcode label for each sample that needs to be collected. Immediately after specimen collection, at the patient's bedside/chairside, place the labels on the specimens. Care must be taken not to obscure the patient identification when a barcode label is placed over an existing label. Labels must be placed on the body of the specimen container and not applied to the specimen lid.

Hand-written labels are acceptable when barcode labels are not available. Complete a hand-written specimen label using a ballpoint pen. The label must be legible and contain **two forms of patient identification**. Guthrie specimen labels are available upon request using the laboratory supply requisition or from the Guthrie storeroom.

Specimens must be labeled with the following:

- The patient's first and last name (first form of patient identification)
- Medical Record Number and/or date of birth (second form of patient identification)
- Date and time of specimen collection
- The collector's identification (EPIC logon or collector's name)
- Specimen site and source for non-blood specimens

Receiving Laboratory Specimens

Most laboratory specimens may be received at any Guthrie location. The receiving location must confirm the specimen(s) is properly labeled with the following information:

- The patient's first and last name
- Medical Record Number and/or date of birth
- Date and time of specimen collection
- The collector's identification (EPIC logon or collector's name)
- Specimen site and source for non-blood specimens

Unacceptable Specimens

Specimens that do not meet the acceptance criteria are rejected as per policy. The originating location is notified when a specimen is rejected. Patients are not billed for rejected specimens.

1. **Identification** - Specimen rejection criteria include:
 - Specimen not labeled
 - Labels and information for two patients on the same specimen
 - Site or source not provided for non-blood specimens
 - Wrong or inconsistent specimen information regarding site, source, or patient information
 - Labels placed on the specimen lid
 - Specimen label(s) illegible

Irretrievable specimens (i.e. spinal fluid, surgical specimens) are investigated and every effort is made to determine the appropriate identifying information to process and test the specimen. A Laboratory Unacceptable Specimen Authorization Form, supplied by the laboratory, is required. The individual accepting responsibility for the specimen identification must complete and sign the authorization form.

2. **Needles** - Guthrie Laboratory Services will not accept, transport or test specimens contained in a syringe with a needle attached. Specimens that are submitted in a syringe must have the needle removed and replaced with a Luer Lock cap that is available in the storeroom.
3. **Leaking** - Guthrie Laboratory Services will not accept specimens that are visibly leaking at the time of receipt.
4. **Insufficient Volume** - It is critical that an adequate specimen volume is submitted for analysis. The volume requested must be enough for initial analysis and for any confirmatory tests that are required. Initial, repeat or confirmatory tests cannot be performed, the laboratory reports QNS (Quantity Not Sufficient for testing).

Laboratory Requisition Requirements

Specimens must be accompanied by a paper or electronic laboratory requisition. Paper requisitions must be legible. Place the requisition in the outside pocket of the bio-hazard bag. All laboratory orders must be entered in the laboratory computer system. Requisitions must contain the following information:

1. Adequate patient identification (name, address, telephone number)
2. Medical record number and/or date of birth
3. Name of the ordering provider and provider's address
4. Physician's signature
5. Appropriate ICD diagnosis code
6. Specimen type (site and source)
7. Identity of the collector
8. Date and time of specimen collection
9. Test(s) requested
10. Insurance information
11. Type of infection and/or organism expected when appropriate
12. Special collection requirements (fasting specimen) when appropriate

Transcribing Laboratory Orders

Paper laboratory requisitions must be transcribed into the laboratory computer system.

1. Register the patient/specimen and confirm insurance coverage in the computer system.
2. Enter the laboratory order/s using the Order Entry activity.
3. Change the Order Mode to Transcription.
4. Enter the ordering provider. The Guthrie provider dictionary is available by default. Enter External Provider to activate the non-Guthrie/external provider dictionary.
5. Enter the authorizing provider. The authorizing provider receives laboratory results automatically by fax or within the EPIC computer system. If the external provider is not listed, enter external provider in the authorizing provider field.
6. Results are routed to multiple providers using the Specimen Update Activity. Carbon Copy - CC results to any provider by entering * and free text the provider's name and fax number.
7. Add a small aliquot label to the original laboratory requisition and send the requisition with the specimen to the laboratory. Laboratory Client Services scans the requisition into the patient's record and has the new provider added to the LIS.

Addition of Tests After Submission of Specimen

1. **Internal Electronic Add-On Orders:**
 - a. Adding tests to specimen collected within the last 24 hours - Epic automatically prompts the ordering user if there is another specimen collected within the last 24 hours. Answer yes to the prompt "Do you want to add tests to the existing specimen?"
 - b. Adding tests to specimens greater than 24 hours old – Place a laboratory "Add On" order. Laboratory staff notifies the patient's nurse, unit clerk, or the outpatient office if the test cannot be performed.
2. **External Providers - Verbal Add-On Orders:** Contact the Laboratory Client Services department to add additional tests. Laboratory personnel enter the "Verbal Order" and read back the order. Read back confirmation is documented in the electronic medical record. Written authorization is required for the addition of laboratory tests.
3. **Reflex Testing:** Several laboratory tests may require additional testing. When additional testing is required by law or indicated by good medical practice, the laboratory automatically performs and bills for the additional test(s).

Specimen Collection and Processing

Blood Sample Collection

Most blood specimens are obtained using routine phlebotomy techniques; however, there are exceptions. The use of a tourniquet can cause stress and is not recommended in all cases. Instruct patients not to clench their fists(s) prior to or during the phlebotomy procedure. Fist clenching leads to hemolysis that may alter the patient's laboratory results, such as the concentration of potassium in serum. The patient's posture (sitting, standing or supine), or the time of day of phlebotomy are key factors for some tests (e.g. therapeutic drug monitoring and hormone tests). Consult the Laboratory Procedure Catalog before specimen collection.

Collect blood in the color-coded test tube indicated in the procedure. Collect approximately 2 ½ times the requested blood volume for tests that require serum or plasma. Completely fill the test tube to eliminate dilution from anticoagulant or preservative. Immediately mix the blood by gently and thoroughly inverting the test tube 5-10 times. Serum samples must be allowed to clot in an upright position for at least 30 minutes, but not longer than 2 hours before centrifugation.

Pediatric Collection Volumes:

Consideration must be given when infants and children are drawn for laboratory testing. Collect the necessary and minimum volume required for requested tests. Follow the recommended maximum draw volume in the following table.

Standard Maximum Blood Draw for Patients Under 14 Years

Weight		Maximum Amount Drawn at One Time (mL)	Maximum Amount Drawn at One Month (mL)
(lbs)	(kg)		
6.0-7.9	2.70-3.62	2.5	23
8.0-9.9	3.63-4.53	3.5	30
10.0-15.9	4.54-7.25	5	40
16.0-20.9	7.26-9.52	10	60
21.0-25.9	9.53-11.78	10	70
26.0-30.9	11.79-14.05	10	80
31.0-35.9	14.06-16.32	10	100
36.0-40.9	16.33-18.59	10	130
41.0-45.9	18.60-20.86	20	140
46.0-50.9	20.87-23.12	20	160
51.0-55.9	23.13-25.39	20	180
56.0-60.9	25.40-27.66	20	200
61.0-65.9	27.67-29.93	25	220
66.0-69.9	29.94-32.20	30	240
70.0-75.9	32.21-34.46	30	250
76.0-80.9	34.47-36.73	30	270
81.0-85.9	36.74-39.00	30	290
86.0-90.9	39.01-41.27	30	310
91.0-95.9	41.28-43.53	30	330
96.0-100.9	43.54-45.80	30	350

Adapted from Becan-McBride K: Textbook Of Clinical Laboratory Supervision, New York, Appleton-Century-Crofts, 1982, with permission.
Phlebotomy Handbook, By Diane Garza and Kathleen Becan-McBride. Copyright 1984 By Appleton-Century-Crofts, East Norwalk, CT.
Nelson Textbook of Pediatrics, 16th Edition, Edited by R.E. Behrman, R.M. Kliegman, and H.B. Jenson, © 2000 by W.B. Saunders Co., Philadelphia, PA.
Saunders Manual of Pediatric Practice, Edited by L. Finberg, Copyright 1998 by W.B. Saunders Co., Philadelphia, PA.
Children's Hospital of Seattle Maximum Allowable Blood Draw Volumes, by Rona Jack, Ph.D.
Maximum Amounts of Blood to be Drawn From Patients Younger than 14 Years, available online at DrGreene.com/article/how-much-blood-too-much-guideline

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Hand Washing: Gloves must be worn and changed after each phlebotomy procedure. Hands must be disinfected using soap and water or approved waterless antiseptic between each patient.

Sharps Disposal: Needles, lancets and any other sharps that can easily puncture the skin must be handled with extreme caution. Needles must not be recapped, bent, broken or cut. Needles are not removed from syringes or vacutainer adapters. Dispose of the entire device with the needle attached. Fill red sharps biohazard containers to the indicated level only, do not overfill.

Specimen Processing

Consult the Laboratory Procedure Catalog for individual test requirements.

Whole Blood

Collect an adequate volume of blood, filling the tube to capacity. Partial filling results in distortions caused by the osmolality of the anticoagulant. Blue top sodium citrate anticoagulation test tubes must be completely full. Under filled test tubes are rejected. When collecting test tubes containing additives, i.e. purple and pink-top tubes containing EDTA or blue-top tubes containing sodium citrate, immediately mix the blood by inverting 8 times. Incomplete mixing or delay in mixing after phlebotomy results in microscopic partial clotting that causes inaccurate test results. Unless otherwise directed, never freeze whole blood or place specimens in direct contact with ice packs. Direct contact with ice will cause hemolysis.

Plasma

Plasma separator tubes (PST, light-green top tubes) are recommended for most tests performed using plasma. PST tubes contain anticoagulant however there are many types of anticoagulated test tubes that can produce plasma specimens. Refer to the Laboratory Procedure Catalog for collection requirements. Fill the test tube(s) to capacity. Partial filling results in dilution of the sample.

1. Mix the test tube by gently inverting the tube 5-10 times immediately following blood collection.
2. Centrifuge for at least 10 minutes at 3,300-3,500 RPM within two hours of collection.
3. Tubes must always remain closed and stoppered during the centrifugation process.
4. Transfer the plasma into a properly labeled, clean, plastic, aliquot tube/vial, when indicated.
5. Do not transfer red blood cells to the vial. If red blood cells are transferred, centrifuge the aliquot tube/vial for 10 minutes and repeat step 4. Make certain to properly balance the centrifuge prior to spinning.
6. Seal the aliquot tube/vial and verify the cap is tight to prevent leakage.

Serum

Serum separator tubes (SST, gold-top tubes) are recommended for most tests performed using serum. SST tubes contain clot activator however red top tubes (additive-free tube) can be used for serum specimens. Refer to the Laboratory Procedure Catalog for collection requirements. Fill the test tube to capacity. Partial filling of the test tubes results in higher serum concentrations of tube additives (clot activators) and alters the results of some tests.

1. Mix the test tube by gently inverting the tube 5-10 times immediately following blood collection. Less than 5 inversions may result in incomplete clotting and incomplete separation of red cells from serum. Hemolysis or even a small number of red cells remaining above the gel in contact with serum elevates results of some tests such as serum potassium and LDH.
2. Allow blood to clot in an upright position for at least 30 minutes, but no longer than 2 hours before centrifugation.
3. Centrifuge for at least 10 minutes at 3,300-3,500 RPM within 2 hours of collection.
4. Serum separator tubes must not be refrigerated before centrifugation.
5. Tubes must remain closed and stoppered during the centrifugation process.
6. When indicated, transfer serum to a properly labeled, clean, plastic, tightly capped vial. Do not transfer red cells to the vial. Verify the cap is tightly sealed to prevent leakage.

Therapeutic Drug Monitoring

Therapeutic drug monitoring is performed using red-top, additive-free test tubes that do not contain a gel barrier. SST tubes **are not acceptable for drug monitoring**. The polyester in the separator gel can extract substances and cause a falsely low drug concentration result.

Centrifuge

Operate centrifuges according to the manufacturer's instructions. The centrifuge must be calibrated annually. In the event of a centrifuge malfunction, contact Guthrie Laboratory Service to arrange for a replacement.



Body Fluids (excluding cerebral spinal fluid)

Body fluids must be collected using aseptic technique. Immediately place body fluid specimens into the appropriate specimen container/s to prevent clotting. Invert the test tube 6-10 times to completely mix the anticoagulant and body fluid. Label the specimens noting the body fluid source.

- Body Fluid Cell Counts and Differentials are collected using a lavender-top EDTA test tube. Body fluid is stable up to 48 hours refrigerated.
- Body Fluid Chemistry and Crystals are collected using a white-top – no additive body fluid test tube. Body fluid is stable up to 48 hours refrigerated.
- Body Fluid Culture: refer to the Lab Procedure Catalog, microbiology culture. Body fluids submitted for culture are stable up to 24 hours at room temperature.
- Body Fluid Cytology: refer to cytology section for body fluid collection instructions.

Urine

Normal composition of urine varies considerably during a 24-hour period. Freshly voided, first morning specimens are preferred. First morning specimens have a uniform volume and concentration and a lower pH which helps preserve formed elements. Mid-stream urine collection is best to help prevent contamination. Unpreserved urine specimens **must** be refrigerated within 2 hours of collection for urinalysis testing and within 10 minutes for urine cultures. Patient collection instructions are available in Appendix A and at www.Guthrie.org/LabServices.

URINALYSIS: Collect a mid-stream urine specimen into a clean, dry specimen container.

1. Instruct the patient to begin urinating into the toilet.
2. Midway through urination, use a specimen container to collect urine without stopping the flow of the urine. Fill the specimen container until it is ½ full.
3. Finish urinating into the toilet.
4. Immediately transfer the urine into a urinalysis yellow-stoppered test tube using a needled transfer device (straw).
5. Label the specimen container with the patient's name and date of birth and /or medical record number.
6. Store and transport urinalysis specimens refrigerated.
7. Urinalysis test tube specimens cannot be used for urine culture.

Note: Low volume urine specimens or specimens that cannot be transferred into a test tube may be submitted in the original specimen container if refrigerated within 2 hours of collection. Unpreserved urine must be kept refrigerated.

CULTURE AND SENSITIVITY: Collect a clean-catch urine specimen into a sterile specimen container.

1. Instruct the patient to wash hands with soap and water.
2. Remove the lid of the urine container, taking care not to touch the inside of the container. Keep the container within reach.
3. Females: Gently wash the vulva area well using the provided antiseptic towelette washing from front to back. Keep labia separated with your fingers. Males: Gently wash the tip of the penis using the provided towelette.
4. Pass a small amount of urine into the toilet bowl and stop. *Some people find it difficult to stop urinating once they have started. If this is a problem, do not try to stop. Catch some urine in the cup a few seconds after the stream has begun.
5. Place the empty container in the path of the stream.
6. Restart the urine stream into the container. Stop when the container is approximately ½ full.
7. Finish urinating into the toilet.
8. Immediately transfer the urine into a urine culture preservative tube using a needled transfer device (straw).
9. Label the specimen container with the patient's name and date of birth and /or medical record number.
10. Store and transport preserved urine culture tubes at room temperature. Preserved urine is stable up to 48 hours at room temperature.

Note: Low volume urine specimens or specimens that cannot be transferred into a test tube may be submitted in the original specimen container if refrigerated within 10 minutes of collection. Unpreserved urine must be kept refrigerated up to 24 hours.

URINE PAIN MANAGEMENT PROFILE: Urine must be collected in the office using a temperature sensitive collection container. Document the urine temperature immediately after specimen collection. Urine specimens that do not meet the temperature requirement or are collected outside the office are rejected.

URINE CYTOLOGY: Refer to the cytology section for urine collection instructions.

24-Hour Urine

Proper collection, preservation and volume measurement are essential for accurate 24-hour test results. Instruct patients in proper collection procedure. Patient collection instructions and labels are available in Appendix A and at www.Guthrie.org/LabServices.

In the interest of patient safety – containers are issued without preservative. Instruct patients to keep specimen(s) refrigerated. Preservatives are added upon receipt in the laboratory.

1. Obtain a plain (no additive) or acid washed 24-hour urine from the laboratory or via Guthrie's purchasing system. Contact the laboratory three days in advance of desired collection day. Refer to the Lab Procedure Catalog for preservative requirements. (Acid washed 24-hour urine containers are used for trace metal tests.)
2. Label all containers with a 24-hour urine instruction label. Write the patient's name and medical record number or date of birth, ordering provider and test on the container label.
3. Provide the patient with a toilet inset "hat", labeled 24-urine jug(s), a zip-lock bag for the container(s) and instruction handout.
4. Patient instructions: Unless the physician indicates otherwise, instruct the patient to maintain normal liquid intake. **DO NOT** consume alcoholic beverages.
 - a. On waking, the patient empties his bladder. The urine is discarded. This is the start of the 24-hour collection period. Write the start time on the urine container.
 - b. Collect all specimens voided after the initial specimen into the 24-hour urine container.
 - c. The first specimen voided the following morning at the same time as the previous morning is added to the 24-hour urine container. This is the end of the 24-hour collection. Write the end time on the 24-hour urine container.
 - d. If more than one 24-hour urine collection is ordered and requires an acid washed container, the patient must collect two 24-hour urine samples.
5. 24-hour urine samples must be stored and transported refrigerated.

NOTE: A serum creatinine must be collected during the 24-hour urine collection process, when a creatinine clearance is ordered. Submit the urine specimen accompanied by the serum creatinine. Order both serum and 24-hour urine creatinine test.

24-Hour Urine Preservatives are added once the specimen is received in the laboratory.

- Boric acid (4 Tablets)
- HCl 6 Normal (25 ml)

Sputum

Early morning sputum obtained after a deep cough is preferred. Do not pool sputum samples. Patients rinse his/her mouth with water before sputum is collected. Avoid adding saliva or nasopharyngeal discharges to the sputum sample. Collect sputum in a sterile container. Lower respiratory tract specimens are collected by bronchoscopy or transtracheal aspiration avoiding contamination by oropharyngeal flora. Sputum specimens are stable up to 24 hours refrigerated.

Stool

Provide individual containers for each stool test. Stool that is frozen cannot be thawed and separated. Provide the patient with a stool collection instruction guide available in Appendix A online at www.Guthrie.org/LabServices. Refer to the Laboratory Procedure Catalog for test requirements.

STOOL CHEMISTRY TEST(s): Collect timed specimens (12, 24, 48, 72 hours) in a plastic container available from Guthrie Laboratory Services. Label the container with the date and time of collection, the patient's name and date of birth or medical record number.

STOOL CULTURE (orange cap with additive-Cary-Blair)

Stool must not be contaminated with urine or toilet water. Patients must not take any anti-diarrhea preparations (e.g., Imodium, Pepto-Bismol) or have had a barium enema within the previous 10 days.

1. Add stool to the Cary Blair vial up to the red line using the attached spork.
2. **MIX WELL.** No solid stool pieces should remain. Unmixed specimens are rejected.
3. Label the container with the date and time of collection, patient's name, date of birth and /or medical record number.
4. Store the container refrigerated up to 72 hours after collection.
5. Return the container to your physician's office or a Guthrie Hospital Laboratory.

OVA AND PARASITE EXTENSIVE (black cap with additive)

Stool specimens must not be contaminated with urine or toilet water.

1. Add stool to the vial up to the red line using attached spork.
2. **MIX WELL.** No solid stool pieces should remain. Unmixed specimens are rejected.
3. Label the container with the date and time of collection, patient's name, date of birth and /or medical record number.
4. Store the container at room temperature.
5. Return the container to your physician's office or a Guthrie Hospital Laboratory.

GIARDIA/CRYPTOSPORIDIUM or OVA/PARASITE BASIC (orange cap with additive-Cary-Blair)

Stool specimen must not be contaminated with urine or water.

1. Add stool to the vial up to the red line using the attached spork.
2. **MIX WELL.** No solid stool pieces should remain. Unmixed specimens are rejected.
3. Label the container with the date and time of collection, patient's name, date of birth and /or medical record number.
4. Store the container refrigerated up to 72 hours after collection.
5. Return the container to your physician's office or a Guthrie Hospital Laboratory.

C. DIFFICILE (sterile container)

Stool specimen must not be contaminated urine or toilet water.

1. Collect at least 5 mL (2 tablespoons) of fresh stool and place in a sterile screw-capped container.
2. Label the container with the date and time of collection, patient's name, date of birth and /or medical record number.
3. Store the container refrigerated up to 5 days after collection.
4. Collect no more than one sample within a 24-hour period.
5. Return the container to your physician's office or a Guthrie Hospital Laboratory.

FIT Test – Fecal Immunochemical Test

A stool specimen must be collected using a FIT collection kit available from Guthrie Laboratory Services or via Guthrie's supply system.

Semen

Specimen containers must be labeled with the patient's first and last name and the patient's medical record number or date of birth. Containers without two identifiers are rejected.

Collect seminal fluid by masturbation without aid of a lubricant directly into a clean, dry, room temperature, plastic specimen container. A specimen collected in any way other than masturbation is not acceptable because it may interfere with the test results. The use of a condom for specimen collection is not acceptable because it also may interfere with the test results.

FERTILITY SEMEN SPECIMEN:

1. Abstain from ejaculation (sexual activity/intercourse) for at least 48 hours but not more than 7 days before collecting this specimen.
2. Urinate and wash your hands prior to specimen collection. This will prevent bacterial contamination.
3. Care must be taken to collect the entire specimen in the container. Loss of the first portion of the ejaculate may result in a decreased sperm count. Do not contaminate the specimen.
4. Confirm the specimen container is tightly sealed.
5. The specimen must be received in the hospital laboratory **within 1 hour of specimen collection**.
6. The specimen must remain at body temperature during transport. This can be accomplished by carrying the sample in an inside pocket.

POST VASECTOMY SEMEN SPECIMEN:

1. Abstain from ejaculation (sexual activity/intercourse) for at least 24 hours before collecting this specimen. However, do not abstain for longer than 3 days before specimen collection.
2. Care must be taken to collect the entire specimen in the container. Do not contaminate the specimen.
3. Confirm the specimen container is tightly sealed.
4. The specimen is taken to any Guthrie location within 24 hours of specimen collection.
5. The specimen must be stored at room temperature.

**Fertility or vasectomy reversal semen specimen must be delivered to
Guthrie-Sayre or Guthrie-Corning hospital laboratory immediately.
Satellite offices cannot accept semen for fertility testing.**

Post-vasectomy semen specimens can be received at any satellite location. The source, date and time of specimen collection must be noted on the label. Store and transport at room temperature.

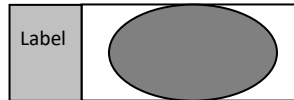
Patient instructions are available in Appendix A and online at www.Guthrie.org/LabServices.

Blood Smear Preparation

Blood smears are required for Complete Blood Counts (CBCs) not performed within 24 hours of specimen collection. A peripheral smear is used to perform the manual differential when significant abnormalities are detected. Fresh blood is required to prepare a smear and cannot be made from blood older than 24 hours.

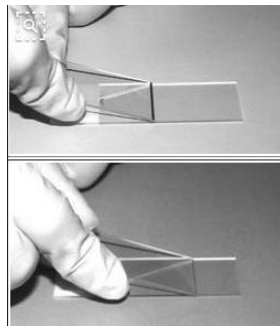
1. Label the frosted-end of the glass slide with a printed Bar-Code label or use a **pencil** to write the patient's full name and date of birth or medical record number.

The bar-code label must be placed on the back of the frosted edge of the slide.



The blood specimen must be on the top of the slide.

2. Don gloves and thoroughly mix the EDTA whole blood specimen by inverting the test tube a minimum of 8 times.
3. Insert a "Diff-Safe" dispenser (available from the Guthrie laboratory) through the rubber stopper of the blood-filled test tube. Hold the test tube upside down and gently press the Diff-Safe dispenser onto the labeled slide dispensing a small drop of blood (approximately 5-7 mm in diameter) ½ inch from the frosted end of the slide.
4. Hold a second slide at a 30° angle. Maintain contact with the bottom of the slide. Pull the top slide back into contact with the drop of blood. The blood spreads by capillary action.
5. Maintain firm contact with the bottom slide and push the top slide in one motion to produce a thin smear.



6. A feathered edge must be observed at the end of the smear. The smear cannot contain any lines, ridges or bubbles. The entire smear must not cover more than 2/3 of the slide area.
7. Allow the smear to air dry.
8. Place the dry slide in a slide holder. Store and transport the slide at room temperature.

Troubleshooting poor blood smears

1. The drop of blood is too large or too small.
2. The spreader slide is pushed across the slide in a jerking manner.
3. Failure to keep the entire edge of the spreader slide against the slide while making the smear.
4. Failure to keep the spreader slide at a 30° angle. Increasing the angle results in a thick smear and a smaller angle yields a thin smear.
5. Failure to push the spread slide completely across the slide.
6. Glass slides must be scrupulously clean, do not reuse glass slides
7. Failure to make the smear immediately after placing the drop of blood on the slide.



Good quality

Poor quality smears

Flow Cytometry

Immunophenotyping is performed at Guthrie's reference laboratories. Refer to the Laboratory Procedure Catalog for specimen collection requirements.

Flow Cytometry Tests Include:

- T-cell Subsets
- T&B-cell Subsets
- Leukemia/Lymphoma Panel

Common synonyms include:

T&B cell quantitation (total), Helper/suppressor T cells (CD4/CD8), Natural Killer Cells, CD4 Count, T&B Lymphocyte Subset Assay, Lymphocyte Receptor Studies, Lymphocyte Subset Identification, T&B Lymphocyte Analysis, Assay, Lymphocyte Marker Studies, Lymphocyte Subset Analysis, Typing, T&B Cell Typing, T&B Lymphocyte Assay.

Anatomic Pathology/ Surgical Specimens

Anatomic pathology services are provided by Guthrie Sayre Laboratory. The hours of operation are Monday through Friday, 8:00 am - 5:00 pm. All specimens received after 4:00 pm or on weekends are processed the next working day. An on-call pathologist is available by contacting Guthrie's telephone operator, (570) 888-6666.

Routine Specimens:

Immediately place tissue specimen(s) in a tightly secured container with 10% neutral buffered formalin. The specimen must be completely submerged in formalin. Do not allow the specimen to dry. Use a separate container for each separately identified specimen. Do not force a large specimen into a small container. Formalin must surround the tissue. Label specimens with the correct patient label, noting the site and source of each specimen. Place the labels on the body of each container. Labeling the lid(s) is unacceptable.

- Site - where the specimen was removed (left foot)
- Source - what the specimen is (mole, lesion, CSF)

Intraoperative Consultation (IOC):

Specimens submitted for IOC must be delivered to the lab fresh (without formalin) and as soon as possible. Contact the histology department at (570) 887-4173 during normal business hours to arrange for an IOC specimen. Notify the on-call pathologist through the Guthrie telephone operator for IOC that occur after normal business hours.

Specimens that Require Special Handling:

Specimens that require special handling and collection must be sent fresh (without formalin). Special handling specimens include:

- Breast Tissue (biopsy, excision, partial or total mastectomy)
- Lymph Nodes or Other Tissue for Flow Cytometry (biopsy or excision)
- Calculi for Chemical Analysis
- Gross Only Specimens (medical devices, medical/legal cases, teeth, etc.)
- Tissue for Immunofluorescence (fresh or saline)
- Tissue for Gout
- POC for Cytogenetics
- Large Specimens that cannot fit in the largest container available (for example total colon, leg amputation, etc.)

Refer to the Surgical Pathology Specimen Collection and Handling Policy located on Guthrie's intranet or contact laboratory client services at (570) 887-4719 for a copy of the policy.

Transfusion Services (Blood Bank)

Patients who require blood or blood product transfusion must have pre-transfusion testing. Blood specimens are collected at any Guthrie Hospital location. Specimens must be collected where the patient will receive the possible transfusion. Patients receive an identification wristband that must remain in place from the time the blood sample is collected until the blood transfusion is complete.

Autologous (self) blood collection requests are referred to the local American Red Cross.

Therapeutic Phlebotomy

Therapeutic phlebotomy is performed to remove excess blood from a patient for his or /her health benefit. This blood is discarded. All therapeutic phlebotomies are scheduled with the Guthrie infusion center.

Virology

Guthrie Laboratory Services offer:

- Influenza A and B
- Respiratory Syncytial Virus (RSV)
- Rotavirus antigen tests

Other viral tests/cultures are referred to reference laboratories.

Virology Specimen Storage and Transport

Specimens for viral isolation must be collected when the virus is at its highest concentration, during the acute phase of the illness. Routine testing (Influenza and RSV) is not recommended outside of the respiratory virus season due to low specificity. Conventional viral culture can routinely detect the following viruses: adenovirus, cytomegalovirus (CMV), enterovirus, herpes simplex virus, varicella-zoster which can take up to 4 weeks for final test results.

Viral collection kits are available from Guthrie's send out department and may be ordered using the laboratory supply requisition located in appendix A or www.Guthrie.org/LabServices.

- Cervical
- Lesion/other
- Nasopharynx mini-tip
- Urethral

Confirm the expiration date of the viral kit(s) prior to specimen collection. All virology specimens Must be placed into viral culture media (VCM) IMMEDIATELY after collection. Store and transport viral cultures refrigerated. Specimens must be received in the laboratory within 48 hours of collection. All specimens must be properly labeled noting the specimen site and source. Refer to the Lab Procedure Catalog for specific specimen requirements regarding viral testing. Store the VCM media at room temperature until inoculated.

Microbiology Bacteria Cultures

Successful isolation of potential pathogens depends upon proper specimen collection, transport and timely delivery to the laboratory. Refer to the Lab Procedure Catalog for collection instructions. Specimens must be collected prior to the administration antimicrobial therapy and early in the disease for best results. Always collect enough quantity, use appropriate transport devices (tightly sealed, sterile, leak-proof containers), deliver promptly or preserve the specimen if processing is delayed. Note the specimen site and source on the specimen and requisition.

Handle all microbiologic specimens as potentially hazardous and follow standard precautions.

Refer to the *Microbiology Specimen Collection Guide* available in Appendix B and at www.Guthrie.org/LabServices -

AEROBIC CULTURE

Refer to the Laboratory Procedure Catalog, culture and sensitivity for collection requirements. Properly label specimens noting the specimen site and source on all samples.

ANAEROBIC CULTURE

Use an E-Swab Regular to collect specimens for anaerobic culture. Anaerobic cultures include an aerobic culture. Confirm the E-Swab expiration date. Do not use an expired device.

Tissue for anaerobic culture - Submit tissue specimens for anaerobic culture in sterile containers and IMMEDIATELY transported to the laboratory.

Body Fluids for anaerobic culture - Collect large volume, non-bloody, body fluids (> 3ml) in a plastic syringe. Remove the needle, expel air and re-cap the syringe using a Luer lock cap and transport to the laboratory IMMEDIATELY.

Store and transport all anaerobic cultures at room temperature.

Specimens Acceptable for Anaerobic Culture:

- Abscess aspirates
- Blood Culture
- Body fluids
- Bone
- Bronchial brush
- CSF (cerebrospinal fluid)
- Deep wounds
- Genital specimens from culdocentesis or abscess
- Suprapubic bladder aspiration
- Tissue
- Transtracheal aspiration

Blood Cultures

Refer to the Laboratory Procedure Catalog for collection instructions.

- Blood Culture – Adult
- Blood Culture – Pediatric
- Blood Culture – Fungal
- Blood Culture – Mycobacterium

Fungal Culture

Hair, skin and nail fungal cultures must include both abnormal hairs removed with forceps and scales collected by scraping. Take nail specimens from the proximal portion of the nail plate. Do not submit initial nail clippings (tips of nails). Nail clippings of at least 3 mm in length must be obtained. Submit all hair, nail and skin specimens in a sterile container.

Fungal specimens must be stored and transported at room temperature. Label specimens noting the specimen source. Do not submit specimens if the patient is currently undergoing antifungal therapy

Mycobacteria / TB Culture

Mycobacterial cultures are sent to reference laboratories. Allow 8 weeks for final test results. Refer to the Laboratory Procedure Catalog for specimen collection instructions.

Parasites

Refer to the Laboratory Procedure Catalog for collection instructions. No more than 2 -3 specimens (one every two or three days) are accepted for extensive parasite exam or for antigen testing.

Acceptable specimens for Parasite Detection:

- Stool
 1. Basic Ova and Parasite Test (performed at Guthrie) includes:
Giardia and Cryptosporidium Antigen
 2. Extensive Ova and Parasite Test includes
Giardia and Cryptosporidium Antigen (performed at Guthrie)
Microscopic examination (performed at reference laboratory)
- Perianal region - pinworm detection
- Vaginal – Trichomonas detection
- Various – Worm / Insect identification (performed at reference laboratory)

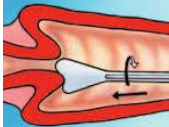
Cytology

Cytology services are offered at Guthrie-Sayre only. Hours of operation: Monday thru Friday 7:00 AM – 4:30 PM. Questions are addressed by contacting the Cytology Department (570) 887-5610. Complete a cytology lab requisition for all Cytology lab orders. Requisitions available electronically in EPIC or upon request

Specimen Collection: The quality of the cytology diagnosis depends in equal measure to the excellence of the clinical procedure that is used to secure the sample. The best quality smears especially from fine needle aspirates are those obtained with the cytologists in attendance.

ThinPrep Pap Collection

Plastic Spatula:

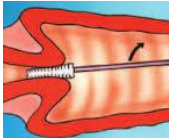


Obtain an adequate sampling from the ectocervix using a *plastic* spatula



Rinse the spatula as quickly as possible into the PreservCyt® Solution vial by swirling the spatula vigorously in the vial 10 times. Discard the spatula.

Endocervical Brush:

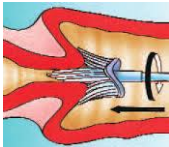


Obtain an adequate sampling from the endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottom-most fibers are exposed. Slowly rotate $\frac{1}{4}$ or $\frac{1}{2}$ turn in one direction. **DO NOT OVER ROTATE.**



Rinse the brush as quickly as possible in the PreservCyt® Solution by rotating the device in the solution 10 times while pushing against the vial wall. Swirl the brush vigorously to further release the material. Discard the brush.

Broom-Like Device:



Obtain an adequate sampling from the cervix using a broom-like device. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the endocervix. Push gently and rotate the broom in a clockwise direction 5 times.



Rinse the broom as quickly as possible into the PreservCyt® Solution vial by pushing the broom into the bottom of the vial 10 times, forcing the bristles apart. The last step; swirl the broom vigorously to further release material. Discard the collection device.

Labeling and Transportation:



Tighten the cap so that the torque line on the cap passes the torque line on the vial.



Record the patient's name and MRN on the vial. Record the patient information and medical history on the cytology requisition form. Place the vial and requisition in a specimen bag for transport to the laboratory.

Cytology FNA Smear Preparation:

Label frosted-end glass slides using a **pencil or Leica marking pen**, noting patient's first and last name, medical record number (MRN), and site of specimen.

Retrieve the needle from the physician performing the FNA and place a small drop on one labeled microscope slide. Immediately place a second labeled clean microscope slide (face down) over the small drop of specimen on the first slide and pull apart. Immediately spray one microscope slide with BD Clay Adams™ Brand Spray-Cyte Water Soluble Fixative or with **Surgipath** Cytology Fixative by Leica and set the second slide aside to air dry. The fixed slide can also be fixed by immersing the slide into 95% Ethyl Alcohol for 3-5 minutes, then removed and allowed to dry. Label the slide fixed or air-dried by writing "Air" or "Fixed" on the frosted-end with a pencil or Leica marking pen. The "Fixed" slide is sprayed with spray fix or immersed in alcohol, while the "Air" is not fixed. The slides, once dried, can be placed in a slide container for transport. The remaining contents of the FNA needle are rinsed into a ThinPrep CytoLyt® container (labeled with last name, first initial, MRN, and site of specimen) by drawing the CytoLyt® fluid into the needle hub and expelling it back into the CytoLyt® container. Once completed, the needle can be discarded into a sharps container. Submit 1-5 passes of material from any source that can be evaluated cytologically. Cyst contents are submitted as fluids, not smears. Slides in the slide container, CytoLyt® container, along with hand written or computer-generated requisition form placed in a biohazard bag and brought to the laboratory. Specimens that are placed in CytoLyt® can be left at room temperature (15°C-30°C) during transport and overnight. Slides can be store at room temperature (15°C-30°C) or refrigerated (2°C-8°C).

Cytology Respiratory Tract Specimens:

Sputum:

Sputum's are obtained fresh from a spontaneous deep expectoration or obtained using an aerosol method. Regardless of the method of collection, the specimen is expelled into a sterile container without fixative. The specimen container is labeled with the patient's first and last name, medical records number, and source of specimen. This information can be hand written, using the Leica Black marking pen, or can be labeled with a computer-generated label. The labeled container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens collected and brought to the lab during Cytology business hours can be room temperature (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Bronchial Washing:

Bronchial washings are obtained fresh during bronchoscopy procedures. The specimen is put into a sterile container with the patient's first and last name, medical records number, and source of the specimen. This information can be hand written, using the Leica Black marking pen, or can be labeled with a computer-generated label. The labeled container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens collected and brought to the lab during Cytology business hours can be room temperature (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Bronchial Brushing:

Bronchial brushings are obtained during bronchoscopy procedures. Once the brush has a patient's specimen, it is agitated into a sterile container with sterile saline or agitated into a ThinPrep CytoLyt® Solution 30ml container. The agitation assures the cells are sloughed into the solution and not stuck on the brush. The specimen container is labeled, using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of the specimen. The container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens collected and brought to the lab during Cytology business hours can be room temperature (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C. Specimens placed in CytoLyt® can be left at room temperature (15°C-30°C) during transport and overnight.

Cytology Gastrointestinal Tract Specimens:

(Includes Esophagus, Stomach, Duodenum, and Colon)

Endoscopic brushings:

Brushings are obtained during endoscopic procedure where a targeted specimen is obtained. Once the brush has a patient's specimen, it is removed from the endoscope and agitated into a sterile container with sterile saline or agitated into a ThinPrep CytoLyt® Solution 30ml container. The agitation assures the cells are sloughed into the solution and not stuck on the brush. The specimen container is labeled, using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of the specimen. The container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens collected and brought to the lab during Cytology business hours can be room temperature, (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C. Specimens placed in CytoLyt® can be left at room temperature (15°C-30°C) during transport and overnight.

Cytology Body Fluids:

(Pleural, Pericardial, Ascitic, Peritoneal Washing, and Cyst fluids)

Specimens are collected in a 500ml empty evacuated container, tubes, or syringes. Preferably, body cavity fluids are sent fresh to the cytology laboratory. The specimen is labeled using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of the specimen. The container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens collected and transported to the lab during Cytology business hours can be stored at room temperature (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Cerebrospinal Spinal Fluids:

CSF is collected via a spinal tap or through a shunt in the patient. The specimen is labeled using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of specimen. The specimen in a biohazard bag is sent to the laboratory fresh, (room temperature which is 15°C-30°C) and as quickly as possible. After hours, which are after 4:30 Monday-Friday and all-day Saturday and Sunday, the specimen is to be sent to the Hematology department where two air-dried smears and two spray fixed smears (with BD Clay Adams™ Brand Spray-Cyte Water Soluble Fixative) are prepared (Regardless of Cytology requests/orders).

Cytology Urine:

Urine Voided:

Cleanse the opening of the urethra before collecting the urine. A sterile container is used to catch the urine as it voids from the urethra. It is preferred to obtain enough urine to cover the bottom of the container. The specimen is labeled, using the Leica Black marking pen or computer-generated label, with the patient's first and last name, medical record number, and source. The labeled container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens that are collected and brought to the lab during Cytology business hours can be room temperature, (15°C-30°C), however; if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Urine Catheterized:

A urine sample is collected from a patient's catheter and placed in a sterile container. The specimen is labeled using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of the specimen. It is important to note on the requisition that the urine is collected from a catheter. The container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens that are collected and brought to the lab during Cytology business hours can be room temperature, (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Bladder Washing/Bladder Barbotage:

Urine that is collected during a cystoscopy, where the cystoscope is inserted into the bladder and washed to obtain urine directly from the bladder, is placed in a sterile container. The specimen is labeled using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of the specimen. It is important to note on the requisition that the urine is collected from a cystoscopy. The container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens that are collected and brought to the lab during Cytology business hours can be room temperature, (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Kidney/Renal Pelvis Washing/Brushing:

Urine that is collected during a cystoscopy is placed in a sterile container. The specimen is labeled using the Leica Black marking pen or a computer-generated label, with the patient's first and last name, medical records number, and source of the specimen. It is important to note on the requisition that the urine is collected from a cystoscopy. The container and requisition forms are placed in a biohazard bag and brought to the laboratory. Fresh specimens that are collected and brought to the lab during Cytology business hours can be room temperature, (15°C-30°C); however, if collection is outside of Cytology business hours, the specimen is refrigerated at 2°C-8°C.

Cytology Breast Secretions:**Nipple Discharge:**

Complete a cytology lab requisition for request in EPIC.

The specimen is to be collected by applying a clean labeled microscopic slide directly to the nipple. The slide is labeled on the frosted-end glass using a pencil or Leica marking pen, noting patient's first and last name, medical record number (MRN), and source of the specimen. The slide is immediately spray fixed with BD Clay Adams™ Brand Spray-Cyte Water Soluble Fixative and allowed to dry. Label the slide fixed by writing "Fixed" on the frosted-end with a pencil or Leica marking pen. Once the slides are dried, they are placed in a slide container for transport. Slides in a slide container, with hand written or computer-generated requisition form are placed in a biohazard bag and brought to the laboratory. Slides can be store at room temperature (15°C-30°C) or refrigerated (2°C-8°C).

Breast Secretions:

Complete a cytology lab requisition for request in EPIC.

The specimen is collected via a swab or spatula and agitated directly into a ThinPrep CytoLyt® Solution 30ml sterile container. The agitation assures the cells are sloughed into the solution and not stuck on the collection device; the collection device can be discarded. The specimen is labeled using the Leica Black marking pen or computer-generated label, with the patient's first and last name, medical record number, and source of the specimen. The specimen is placed in a biohazard bag and transported to the laboratory. Specimens that are placed in CytoLyt® can be left at room temperature (15°C-30°C) during transport and overnight.

Specimen Storage

Appropriate storage and transport temperatures are essential for accurate laboratory testing. Temperature of specimen storage areas must be monitored and documented each day of use using a calibrated thermometer.

Room Temperature Storage	15.0°C- 30.0°C
Refrigerated Storage	2.0°C - 8.0°C
Frozen Storage	0.0°C - -20.0°C
Humidity	20.0% - 80.0%

Refer to the Laboratory Procedure Catalog for specific storage and transport requirements. Specimens must be placed into biohazard bags.

Room Temperature

Specimens that require room temperature storage and transportation must be kept between 15.0°- 30.0°C and not placed in an environment where they are exposed to extreme heat or cold. Transport the specimens in an insulated biohazard cooler. The cooler must not contain cool packs.

Refrigerated:

Specimens that require refrigerated storage and transport must be kept between 2.0°- 8.0°C using a household or commercial refrigerator not used for food storage. Store refrigerated blood specimens upright in a test tube rack. Insert the entire test tube rack into a biohazard bag for transport. Refrigerated specimens must be transported using an insulated, biohazard cooler with ice packs. Wrap ice packs with paper toweling to avoid direct contact with the blood samples. **Blood samples must never come in direct contact with ice.** Direct contact may cause hemolysis and may cause inaccurate test results.

Frozen:

Freeze specimens when indicated. It is essential to freeze plasma or serum as soon as it is separated from the red blood cells. Transfer plasma or serum into a plastic vial using a pipet. Allow 1-2 mL of space for expansion during freezing. Do not freeze glass tubes. Freeze specimens in plastic vials unless instructed otherwise. Samples are stored in non-frost-free freezers at 0.0°C – -20.0 °C or a dry ice container until transported to the laboratory. Use frost-free freezers is prohibited. Automatic defrost cycles cause specimens to partially thaw and refreeze. Test results are affected by freeze-thaw cycles.

Note: Divide specimens prior to freezing when more than one test is requested on a specimen. Frozen specimens cannot be thawed and divided.

Insert the specimen or entire test tube rack into a biohazard bag and transport frozen specimens using an insulated cooler that contains dry ice.

Temperature logs are located on the Guthrie Laboratory Department Intranet site or by contacting the laboratory client services department.

Specimen Packing and Transport

Specimens are packaged and transported in a manner to minimize personnel or public exposure to infectious or biohazardous material. Storage and transport conditions are listed in the Procedure Catalog and printed on the LIS Packing List. All specimens are transported to the laboratory for examination as quickly as reasonably practicable. Specimens are maintained at the correct temperature and under conditions recommended for examination as per the individual assay requirements and procedure catalog. Temperature requirements print on the LIS Packing List.

- Ambient 15.0° to 30.0°C
 - Refrigerated 2.0° to 8.0°C
 - Frozen 0.0°C or colder
1. Specimen transport containers are labeled with the name of the patient service center and/or clinical laboratory name and address. Transport containers are labeled with a biohazard symbol.
 2. Primary specimen containers (test tubes, vials, swabs) are labeled with the patient's name, date of birth or medical record number and date/time of collection. Seal primary containers securely.
 3. Place primary containers into biohazard bags. Remove the excess air and seal.
 4. Mark the exterior of the bio-hazard with the appropriate storage temperature and store the specimen at that temperature until the specimen is picked up for transport.
 5. External client specimens are tracked using Medical Courier Elite, MCE.

Guthrie Medical Group Practices:

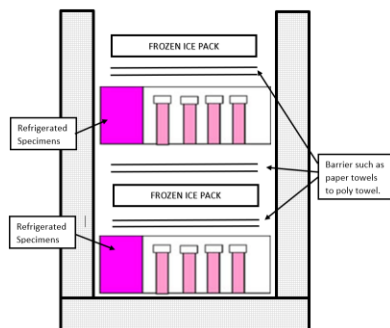
6. Use the LIS to create a packing list for all specimens transported to the laboratory for testing. Specimens are tracked using the LIS packing list. Refer to Beaker Daily Tasks Procedure GMG 700-500 and instructions below.
7. Place specimens into a secondary leak-proof, container labeled biohazard. The secondary container traps the specimen if the primary container breaks or leaks in transit. Secondary containers include biohazard specimen bags or any suitable leak-proof container labeled biohazard. Once the specimen is sealed in a secondary container, the container may be handled without gloves.
8. Place specimens into a tamper-proof biohazard bag according to storage temperature. Refrigerated specimens into one bag, room temperature specimens into a second bag and frozen specimens into a third bag.
9. Match the LIS packing list to the tamper-proof bag. Assure all specimens are listed on the packing list.
10. Remove all the air from the bag and seal. Mark the storage temperature on the outside of the tamper-proof bag (refrigerate, room temperature or frozen).
11. Insert the packing list(s) into the outer sleeve of the appropriate tamper-proof bag. Any additional paperwork pertaining to the laboratory specimens (lab requisitions, printed instructions) maybe inserted into the outer sleeve of the biohazard bag.
12. Refrigerators or freezers storing specimens prior to transport, must be labeled biohazard and located in restricted areas.
13. Breakage or spilling of specimens is promptly cleaned using a biohazard spill kit and standard precautions.

Guthrie Courier Specimen Transport

Guthrie couriers transport specimens to and from laboratories using transport totes. Specimens are packed into coolers according to the storage temperature marked on the outside of the tamper-proof biohazard bags.

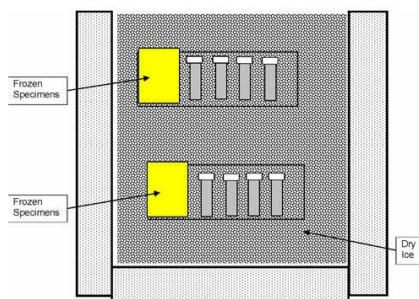
Packing Refrigerated Specimens Keep specimens refrigerated before transporting unless otherwise indicated.

1. Prior to specimen pickup, prepare the refrigerated cooler by placing 8-10 ice packs into the empty cooler.
2. Place the bag of refrigerated specimens in the bottom of a transport cooler.
3. Place an insulation barrier over the specimens. Barriers include poly-towels, 3-4 layers of paper towels or the tamper-proof bag wrapped around the specimens.
4. Place frozen cool packs on top of the insulation barrier.
5. Immediately close the transport cooler lid.



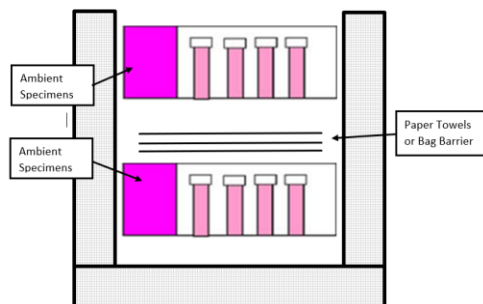
Packing Frozen Specimens- Keep specimens frozen before transporting unless otherwise indicated. Frozen specimen must be stored in plastic containers. Containers should be filled no more than $\frac{3}{4}$ full to avoid tube breakage and to eliminate caps from popping off.

1. Prepare the frozen transport cooler by adding a 2-inch layer of pellet dry ice in the bottom of the cooler. *Avoid burns, always wear cloth gloves and safety glasses when handling dry ice.*
2. Insert the bagged specimen into the dry ice.
3. Immediately close the transport cooler lid.



Packaging Ambient Room Temperature Specimens

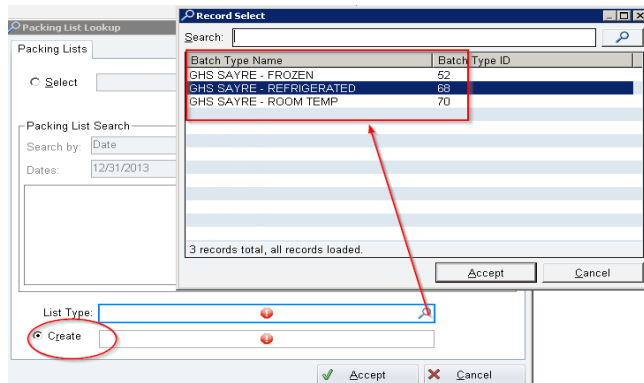
1. Prepare the ambient transport cooler (confirm the cooler contains no ice packs).
2. Open the lid of the ambient transport cooler.
3. Insert the bagged specimens into the ambient cooler and close the lid.



LIS Packing List Creation

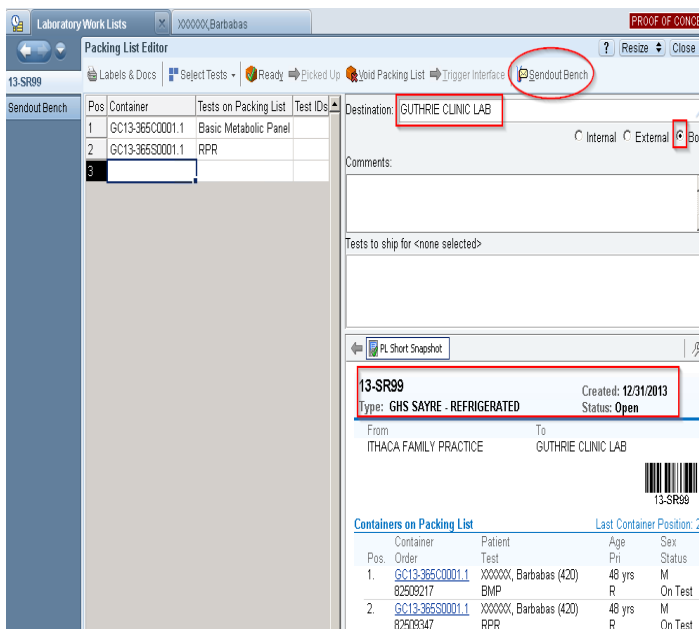
A packing list is a list of specimens that are sent for testing and are based on shipping conditions. Types of packing lists include refrigerated, room temperature, frozen, cytology and anatomic pathology. Specimens must appear on the appropriate packing list.

1. Click the **Epic button > Packing List Editor**.
2. On the Packing List Lookup window, select the **Create** option.
3. In the **List Type** field, select the type of packing list you're creating (for example, a refrigerated list)
4. The computer system generates an ID for that list.



Example: Satellite office packing list with specimens traveling to Sayre.

4. Click **Accept. The Packing List Editor opens.**
5. **Scan the specimen barcodes to add the specimens to the list.**
6. If you want to see if there are other specimens that could be added to the list, click **Send out Bench** to find specimens. If there is a specimen, add it to the packing list.




Send out Bench Activity: Is used to find specimens that have not been scanned onto a packing list. After scanning all specimens onto the appropriate packing list, the send out bench should be empty.

Any specimen displayed in Send out Bench must be investigated, and the appropriate action taken:



1. Click **Add Test(s)** if there is a specimen. The test selected disappears from the send out bench list on the left and is added to the report on the right.
2. Click specimen update and order a redraw if the specimen could not be collected.
3. Tests are canceled only when the provider no longer wants test results.

Send A Packing List to Another Lab: After adding all the appropriate containers to a packing list, indicate that the list is complete and that the associated containers are ready for pickup.

To do this, click  **Ready**. Marking a packing list Ready, triggers the following:

1. The packing list is locked in the system, meaning no more containers can be added. This ensures that no extra containers get added to the list accidentally.
2. The packing list's status changes to Ready for pickup.
3. The packing list prints.



Clicking  **Ready** locks the packing list, meaning no more containers can be added. If you need to add more tests, you can unlock the packing list again by clicking  **Unready**.

When the package is picked up, click  **Picked Up**. The packing list is closed and can no longer be unlocked for editing.

Packing List Editor: The actual specimen in your hand ready to scan

Send Out Bench Activity: Search for samples to add to a packing list before sending

Packing List Troubleshooting:

Specimens that do not scan onto a packing list-

1. Receive the specimens into the current lab to place them onto a packing list. Go to the Receiving activity (located under the Epic dropdown) and receive the samples.
2. Confirm the Epic Log-In Department. Specimens that are collected in the collection activity using the wrong log-in department, do not scan onto the packing list.
3. Confirm specimen storage temperature matches the packing list temperature.

Computer Downtime:

Complete a paper laboratory requisition available at www.Guthrie.org/LabServices and Appendix A during computer downtime and laboratory orders cannot be entered in the LIS. Refer to Laboratory requisition requirements. Laboratory prescription orders are acceptable but not preferred.

Specimens are labeled immediately after specimen collection in presence of the patient using hand-written, or label created from the patient wristband. Specimen labels may be ordered using the Guthrie Laboratory Services supply requisition form. Hand-written labels are also available from Guthrie's supply ordering system.

Guthrie Practices:

Complete a paper Laboratory Requisition, document the specimen on a downtime packing list and hand-label specimens with the following information:

1. Patient's name
2. Medical record number or date of birth
3. Date and time of collection and collector ID
4. Laboratory Test

Laboratory Requisitions and downtime packing lists may be ordered using the Laboratory Services supply requisition form. Refer to the office Downtime computer for laboratory orders entered prior to downtime.

Computer Remains Down After Courier Pick-Up

Guthrie Laboratory services enters the laboratory order in the computer system. Satellite offices do not enter orders of specimens that have been shipped to the Guthrie Laboratory to eliminate duplicate lab orders.

Document specimens on the paper packing list. Retain a copy in the office and send a copy with the courier.

Computer Becomes Operational Before Courier Pick-Up

Document specimens on the paper packing list. Enter Laboratory orders into the computer system. Label all specimens using the computer-generated bar-code labels.

Downtime Packing List is available on the Guthrie Laboratory Intranet. See Appendix B.

Cytology Specimens during downtime:

All pap-smear cytology requests and specimens are held in the office until the computer system becomes operational.

All other cytology specimens (urine, sputum, etc.) are sent to the lab without delay with a completed cytology requisition. Retain a copy of the cytology request to enter the cytology test in the computer system once it becomes operational.

Questions regarding down time procedures are directed to the laboratory Client Services Department (570)887-4719.


Appendix A

- General Lab Requisition
- Toxicology Requisition
- Lab Supply Requisition
- Patient Specimen Collection Instructions

		1 Guthrie Square, Sayre, PA 18840 Toll Free Phone (844) 617-4719 Fax (570) 887-4729		Bill To: Client <input type="checkbox"/> Insurance <input type="checkbox"/> Patient <input type="checkbox"/>		Request Date: ___/___/___			
GMG General Laboratory Requisition Medical Director: Hani Hojjati, MD		INSURANCE BILLING INFORMATION (PLEASE PRINT IN BLACK INK)		PRIMARY <input type="checkbox"/> Medic <input type="checkbox"/> Medicaid <input type="checkbox"/> Other Ins <input type="checkbox"/> S <input type="checkbox"/> Sp <input type="checkbox"/> e Child <input type="checkbox"/>		Subscriber Last Name <input type="text"/> First <input type="text"/> M <input type="checkbox"/> F <input type="checkbox"/>			
PATIENT INFORMATION (PLEASE PRINT IN BLACK INK)		Pt Last Name <input type="text"/> First <input type="text"/> M <input type="checkbox"/> I <input type="checkbox"/>		Beneficiary/Member # <input type="text"/> Group # <input type="text"/>		Claims Address <input type="text"/> City <input type="text"/> ST <input type="text"/> ZIP <input type="text"/>			
Address <input type="text"/> Birth Date <input type="text"/> <input type="checkbox"/> bx <input type="checkbox"/> M <input type="checkbox"/>		City <input type="text"/> Pt. SS# or MRN <input type="text"/>		(Please attach a copy of the patient's insurance information)		SECONDARY <input type="checkbox"/> Medic <input type="checkbox"/> Medicaid <input type="checkbox"/> Other Ins <input type="checkbox"/> S <input type="checkbox"/> Sp <input type="checkbox"/> e Child <input type="checkbox"/>			
ST <input type="text"/> ZIP <input type="text"/> Home Phone <input type="text"/>		Employer <input type="text"/> Work Phone <input type="text"/>		Subscriber Last Name <input type="text"/> First <input type="text"/> M <input type="checkbox"/>		Beneficiary/Member # <input type="text"/> Group # <input type="text"/>			
Work Address <input type="text"/> City <input type="text"/> ST <input type="text"/> ZIP <input type="text"/>		Claims Address <input type="text"/> City <input type="text"/> ST <input type="text"/> ZIP <input type="text"/>		(Please attach a copy of the patient's insurance information)		COLLECTION / REPORTING INFORMATION			
CLIENT INFORMATION - REFERRING PHYSICIAN		Client Address: <input type="text"/> <input type="text"/>		<input type="checkbox"/> FAX Results to <input type="text"/> Copy to: <input type="text"/> <input type="checkbox"/> CALL Results to <input type="text"/>		Date Collected: <input type="checkbox"/> Non-Fasting <input type="checkbox"/> Time Collected: <input type="checkbox"/> AM <input type="checkbox"/> PM <input type="checkbox"/> Fasting (8 Hour)			
Phone: <input type="text"/> Fax: <input type="text"/>		Physician Signature (legible - No Stamp) → (Required for Medicare & Medicaid patient orders) Physician Signature (legible - No Stamp) → HIV Testing - I attest I have counseled the patient about the HIV test. Contact Laboratory Medical Director (570-887-4719) with questions concerning medical necessity.		For Lab Use Only <input type="checkbox"/> Signed ABN Obtained <input type="checkbox"/> Venipuncture Draw Fee Phlebotomist Initials <input type="text"/>		Place Label Here			
PHYSICIAN NOTICE		When ordering tests, the physician is required to make an independent medical necessity decision with regard to each test the laboratory will bill. The physician also understands he or she is required to (1) submit ICD-10 diagnosis supported in the patient's medical record as documentation of the medical necessity or (2) explain and have the patient sign an ABN.							
ICD-10 Code(s) Diagnosis		ORGAN / DISEASE PANELS		GENERAL LABORATORY		GENERAL LABORATORY		BLOOD TYPE & ANTIBODIES	
<input type="checkbox"/> Basic Metabolic Panel (Na, K, Cl, CO ₂ , Gluc, BUN, Creat, Ca)		<input type="checkbox"/> Amylase <input type="checkbox"/> ANA (titer if indicated) <input type="checkbox"/> Bilirubin, Direct <input type="checkbox"/> Bilirubin, Neonatal <input type="checkbox"/> Bilirubin, Total <input type="checkbox"/> BNP (B-type Natriuretic Peptide) <input type="checkbox"/> CA 125 <input type="checkbox"/> CA 19-9 <input type="checkbox"/> CA 27-29 <input type="checkbox"/> Calcium <input type="checkbox"/> Carbamazepine (Tegretol) <input type="checkbox"/> Carbon Dioxide (CO ₂) <input type="checkbox"/> CBC (w/PLT & Differential) <input type="checkbox"/> CBC w/o diff (Hemogram) <input type="checkbox"/> CEA <input type="checkbox"/> Cholesterol <input type="checkbox"/> CK (CPK) <input type="checkbox"/> CRP (high sensitivity) <input type="checkbox"/> Digoxin (Lanoxin) <input type="checkbox"/> Dilantin (Phenytoin) <input type="checkbox"/> Ferritin <input type="checkbox"/> Folate, serum <input type="checkbox"/> GGT <input type="checkbox"/> Glucose <input type="checkbox"/> Glucose Tolerance _____ hrs. <input type="checkbox"/> HCG, Qual. <input type="checkbox"/> HCG, Quant. <input type="checkbox"/> HDL <input type="checkbox"/> Hepatitis A Virus, IGM Ab <input type="checkbox"/> Hepatitis B Core Ab IgM <input type="checkbox"/> Hepatitis B Core Ab (Total) <input type="checkbox"/> Hepatitis B Surface Ab <input type="checkbox"/> Hepatitis B Surface Ag <input type="checkbox"/> Hepatitis C Antibody <input type="checkbox"/> Hgb A1C (Glycohemoglobin) <input type="checkbox"/> HIV-1 / HIV-2 Ab (w/conf) <input type="checkbox"/> Homocystine (serum) <input type="checkbox"/> Insulin <input type="checkbox"/> Iron <input type="checkbox"/> Iron Bind. Capacity (Inc. Iron) <input type="checkbox"/> LDL, Direct <input type="checkbox"/> Lipase		<input type="checkbox"/> Luteinizing Hormone (LH) <input type="checkbox"/> ANA (titer if indicated) <input type="checkbox"/> MonoTest <input type="checkbox"/> Phosphorus <input type="checkbox"/> Platelet Count <input type="checkbox"/> Potassium <input type="checkbox"/> Protein, Electrophoresis, serum (SPEP) <input type="checkbox"/> PSA <input type="checkbox"/> PSA, Free <input type="checkbox"/> PT / INR <input type="checkbox"/> PTH, Intact <input type="checkbox"/> PTT <input type="checkbox"/> Retic Count <input type="checkbox"/> Rheumatoid Factor <input type="checkbox"/> RPR (w/confirmation if indicated) <input type="checkbox"/> Sed Rate (ESR) <input type="checkbox"/> T3, Total <input type="checkbox"/> T4 (Thyroxine) <input type="checkbox"/> T4, free (Free Thyroxine) <input type="checkbox"/> Transferrin <input type="checkbox"/> Triglycerides <input type="checkbox"/> TSH <input type="checkbox"/> Uric Acid <input type="checkbox"/> Vitamin B12 <input type="checkbox"/> Vitamin D, 25 Hydroxy <input type="checkbox"/> Vitamin D, 1,25-DiHydroxy		<input type="checkbox"/> ABO & RH <input type="checkbox"/> Magnesium <input type="checkbox"/> RhoGam <input type="checkbox"/> Direct Antiglobulin Test (DAT)			
<input type="checkbox"/> Comp. Metab. Panel (Na, K, Cl, CO ₂ , Gluc, BUN, Creat, Ca) <input type="checkbox"/> Electrolyte Panel (Na, K, Cl, CO ₂) <input type="checkbox"/> Hepatic Function Panel (Alb, TBili, APhos, TP, AST, ALT) <input type="checkbox"/> Acute Hepatitis Panel (Hb Ab (IGM), HbC Ab (IGM), HbS Ab, HCAB) <input type="checkbox"/> Lipid Panel (Chol, Trig, HDL, calc. LDL) <input type="checkbox"/> Renal Function Panel (Na, K, Cl, CO ₂ , Gluc, BUN, Creat, Ca, Alb, PO ₄) <input type="checkbox"/> Obstetric Panel (non-Medicare) (CBC w/plt & diff, HBSAg, Rubella, RPR, Blood Type, Antibody Sc)		MEDICARE SCREENING (ABN Required) <input type="checkbox"/> Cardiovascular Screen w/ABN Includes - Cholesterol, Triglycerides and HDL Freq. - Covered every 5 years Dx - Check the option applicable to this patient: <input type="checkbox"/> V13.6 Screening for cardiovascular disease <input type="checkbox"/> Diabetic Screen w/ABN (x) one below Fasting glucose and 2 hr post-glucose Glucose Tol. Test (3 spec. incl. fasting) Freq. - Individ. w/pre-diabetes - Twice yearly; Individ. w/o diag. pre-diabetes - Once yearly Dx - Z13.1 Screening for Diabetes mellitus <input type="checkbox"/> Occult Blood Screen w/ABN (1-3 specimens) CARD Freq. - 1 Covered Annually Dx - See Medicare for specific ICD10 Requirement <input type="checkbox"/> PSA Screen w/ABN Freq. - Covered Annual (50 & Older) Dx - Z12.5 Scm. for Malig. Neoplas., Prostate <input type="checkbox"/> HIV Screen w/ABN (Prior HIV Dx Not Eligible) Adult & Adolescent - Covered Annually Dx - V73.89 Scm for HIV <input type="checkbox"/> Pregnant - (3 Covered Per Pregnancy) Dx - V73.89 Scm for HIV PLUS (Circle one below) Z34.00 Z34.01 Z34.02 Z34.03 Z34.80 Z34.81 Z34.82 Z34.83 Z34.90 Z34.91 Z34.92 Z34.93 Z34.94 Z34.95 Z34.96 Z34.97 Z34.98 Z34.99 O09.90 O09.91 O09.92 O09.93 <input type="checkbox"/> Hepatitis C Virus Ab		<input type="checkbox"/> Creatinine Clearance Green & 24 Hr UR <input type="checkbox"/> Microalbumin, Urine (x) one below Random w/creatinine UR Cup 24 Hour 24 Hr UR <input type="checkbox"/> Protein, Total, quant. (x) one below Random w/creatinine UR Cup 24 Hour 24 Hr UR <input type="checkbox"/> Urinalysis (w/ microscopic if indicated) UR Cup <input type="checkbox"/> Urinalysis (w/ microscopic) UR Cup <input type="checkbox"/> Urinalysis (w/reflex culture ind. source) UR Cup Source Clean catch C Foley URINE <input type="checkbox"/> Creatinine Clearance Green & 24 Hr UR <input type="checkbox"/> Microalbumin, Urine (x) one below Random w/creatinine UR Cup 24 Hour 24 Hr UR <input type="checkbox"/> Protein, Total, quant. (x) one below Random w/creatinine UR Cup 24 Hour 24 Hr UR <input type="checkbox"/> Urinalysis (w/ microscopic if indicated) UR Cup <input type="checkbox"/> Urinalysis (w/ microscopic) UR Cup <input type="checkbox"/> Urinalysis (w/reflex culture ind. source) UR Cup Source Clean catch C Foley		<input type="checkbox"/> Culture, Body fluid w/gram stain Sterile Cont. <input type="checkbox"/> Culture, Fungus Culturette or Sterile <input type="checkbox"/> Culture, Herpes VCM (viral culture media) <input type="checkbox"/> Culture, Wound Aerobic w/gram Culturette <input type="checkbox"/> Culture, Wound Anaerobic/Aer. w/gram Anaerobe Culturette <input type="checkbox"/> Culture, Grp B-Strep vag/rectal Culturette <input type="checkbox"/> Penicillin Allergic <input type="checkbox"/> Culture, Sputum (w/gram) Sterile Cont. <input type="checkbox"/> Culture, Stool Para Pak <input type="checkbox"/> (w/Campy, Sal/Shig, E. Coli 157, and Shiga Tox) <input type="checkbox"/> Beta-Strep Screen, Throat Culturette <input type="checkbox"/> Rapid Strep Screen (Reflex Cult if neg) Throat Swab <input type="checkbox"/> Culture, Urine (ind. source) UR Cup / Gray Tube Source Clean catch C Foley <input type="checkbox"/> FLU A&B (Nasopharynx) Special Kit <input type="checkbox"/> RSV (Nasopharynx) Special Kit <input type="checkbox"/> MRSA (nasal) Copan Swab <input type="checkbox"/> Chlamydia/GC End Vag (Pt Coll) Special Kit <input type="checkbox"/> Urine Urine Cup <input type="checkbox"/> Candida/Gardnerella/Trichomonas (vag) Special Kit			
		MISCELLANEOUS TESTS		STOOL (FECAL)		<input type="checkbox"/> C-Difficile PCR Specimen Cup <input type="checkbox"/> Giardia / Crypto Para Pak <input type="checkbox"/> H. Pylori Ag Specimen Cup <input type="checkbox"/> Occult Blood (1-3 spec - Non-Medicare) CARD <input type="checkbox"/> Fecal Immunochemical Test (FIT) Special Kit <input type="checkbox"/> Ova & Parasite OP Kit <input type="checkbox"/> NIH Pinworm Collector Vial			
		Patient Signature (Required for HIV testing) → HIV Testing - I have been counseled by my doctor about the HIV test and wish to have it performed.							

PATIENT INFORMATION (PLEASE PRINT IN BLACK INK)			INSURANCE BILLING INFORMATION (PLEASE PRINT IN BLACK INK)			
Pt Last Name	First	M I	PRIMARY <input type="checkbox"/> Medica <input type="checkbox"/> Me <input type="checkbox"/> aid <input type="checkbox"/> Other Ins. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> se Child
Address	Birth Date	<input type="checkbox"/> Sex <input type="checkbox"/>	Subscriber Last Name	First	M	
City	Pl. SS# or MRN		Beneficiary/Member #	Group #		
ST	ZIP	Home Phone	Claims Name and Address	City	ST	ZIP
Employer	Work Phone		(Attach a copy of the patient's insurance card and information)			
Work Address	City	ST	ZIP	SECONDARY <input type="checkbox"/> Medica <input type="checkbox"/> Me <input type="checkbox"/> aid <input type="checkbox"/> Other Ins. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> se Child
				Subscriber Last Name	First	M
				Beneficiary/Member #	Group #	

CLIENT INFORMATION - REFERRING PHYSICIAN			COLLECTION / REPORTING INFORMATION			
Client Address:			Claims Name and Address	City	ST	ZIP
Phone:			(Attach a copy of the patient's insurance card and information)			
Fax:			<input type="checkbox"/> FAX Results to Copy to:			
			<input type="checkbox"/> CALL Results to			
			Date Collected:	Time Collected: <input type="checkbox"/> AM <input type="checkbox"/> PM		
			Specimen Type: <input type="checkbox"/> Urin <input type="checkbox"/> S <input type="checkbox"/> a <input type="checkbox"/> Other _____			

Physician Signature (legible - No Stamp)  (Required for Medicare & Medicaid patient orders)	For Lab Use Only <input type="checkbox"/> Signed ABN Obtained	Place Lab Label Here
	Contact Laboratory Medical Director (570-887-4719) with questions concerning medical necessity	

PHYSICIAN NOTICE When ordering tests, the physician is required to make an independent medical necessity decision with regard to each test the laboratory will bill. The physician also understands he or she is required to (1) submit ICD-10 diagnosis supported in the patient's medical record as documentation of the medical necessity or (2) explain and have the patient sign an ABN.

ICD-10 Code(s) Diagnosis 1) 2) 3) 4) 5) 6)

Section 1 - Patient Prescribed Medications	Section 2 - Individual Drug Class Screen
<input type="checkbox"/> No Medications Prescribed <input type="checkbox"/> Medication(s) Prescribed Below <input type="checkbox"/> Medication(s) Prescribed Below (confirm all prescribed drugs that screen negative)	<input type="checkbox"/> Drug Screen (without reflex to quantitation includes validation testing) <input type="checkbox"/> Drug Screen (with reflex to quantitation includes validation testing) Specimen Validity Includes Spec. gravity, pH, Creatinine, General Oxidants
Opioids: <input type="checkbox"/> Buprenorphine (Suboxone, Subutex) <input type="checkbox"/> Codeine (Tylenol 3, Tylenol 4) <input type="checkbox"/> Fentanyl (Actiq, Fentora) <input type="checkbox"/> Hydrocodone (Hycodan, Lorcet, Lortab, Norco, Vicodin, Vocoprofen) <input type="checkbox"/> Hydromorphone (Dilaudid, Meperidine, Demerol) <input type="checkbox"/> Methadone's (Dolophine) <input type="checkbox"/> Morphine (Avinza, Kadian, MS Contin, MSIR) <input type="checkbox"/> Oxycodone (Oxy IR, OxyContin, Tylox Percocet, Percodan, Roxicodone) <input type="checkbox"/> Oxymorphone (Opana ER, Opana IR) <input type="checkbox"/> Propoxyphene's (Darvocet, Darvon) <input type="checkbox"/> Tapentadol (Nucynta) <input type="checkbox"/> Tramadol (Ryzolt, Ultracet, Ultram)	<input type="checkbox"/> Amphetamines Amphetamine, quant Methamphetamine, quant MDMA, quant <input type="checkbox"/> Barbiturates Amobarbital, quant Butalbital, quant Pentobarbital, quant Phenobarbital, quant Secobarbital, quant <input type="checkbox"/> Benzodiazepines alpha-OH-alprazolam, quant Hydroxymidazolam, quant Hydroxytriazolam, quant Lorazepam, quant Nordiazepam, quant Oxazepam, quant Temazepam, quant <input type="checkbox"/> Buprenorphine Buprenorphine, quant Norbuprenorphine, quant <input type="checkbox"/> Cannabinoids Delta-9 THC 11-Hydroxy Delta-9 THC 11-Nor-9 Carboxy THC
Benzodiazepines <input type="checkbox"/> Alprazolam (Xanax) <input type="checkbox"/> Clonazepam (Klonopin) <input type="checkbox"/> Diazepam (Valium) <input type="checkbox"/> Nordiazepam (Tranxene) <input type="checkbox"/> Lorazepam (Ativan) <input type="checkbox"/> Oxazepam (Serax) <input type="checkbox"/> Prazepam (Centrax) <input type="checkbox"/> Temazepam (Restoril)	<input type="checkbox"/> Cocaine Benzoylcegonine, quant <input type="checkbox"/> Marijuana Metabolites Marijuana Metabolites, quant <input type="checkbox"/> Methadone EDDP, quant Methadone, quant <input type="checkbox"/> Opiates Codeine, quant Hydrocodone, quant Hydromorphone, quant Morphine, quant <input type="checkbox"/> Oxycodone Oxycodone, quant Oxymorphone, quant <input type="checkbox"/> 6-Monoacetylmorphine 6-Monoacetylmorphine, quant <input type="checkbox"/> Phencyclidine Phencyclidine, quant <input type="checkbox"/> Propoxyphene's Norpropoxyphene, quant
Stimulants: <input type="checkbox"/> Amphetamine (Adderall, Vyvanse) <input type="checkbox"/> Methylphenidate (Concerta, Ritalin) Datura, Metadate)	
Other: <input type="checkbox"/> Amitriptyline (Elavil) <input type="checkbox"/> Butalbital (Esgic, Floricet) <input type="checkbox"/> Chlordiazepoxide (Librium) <input type="checkbox"/> Carisoprodol (Soma) <input type="checkbox"/> Meprobamate (Equanil, Miltown)	

Section 3 - Drug Screen Panel
<input type="checkbox"/> 16260: Pain Management Base Profile without Confirmation, Urine (Benzodiazepines, Cocaine, Opiates, Oxycodone, Specimen Validity)
<input type="checkbox"/> 16259: Pain Management Base Profile with Confirmation, Urine (Benzodiazepines, Cocaine, Opiates, Oxycodone, Specimen Validity)
<input type="checkbox"/> Urine Drug Screen without Confirmation, Urine (Amphetamines, Barbiturates, Benzodiazepine, Cannabinoids, Cocaine, Methadone, Opiates, Oxycodone, Phencyclidine, Propoxyphene)
<input type="checkbox"/> 21866: Pain Mgmt Screen w/ Fentanyl, Alcohol without Confirmation, Urine (Opiate, Oxycodone, Buprenorphine, Carisoprodol/Meprobamate, Methadone, Tramadol/Desmethyltramadol, Amitriptyline, Gabapentin, Pregabalin, Ritalinic Acid, Zolpidem, Amphetamine, MDMA, Methylphenidate, 6mam, Barbiturate, Benzodiazepine, Cocaine, THC, PCP, Alcohol, Fentanyl, Specimen Validity)
<input type="checkbox"/> 21168: Pain Mgmt Screen w/ Fentanyl and Alcohol, with Confirmation, Urine (Opiate, Oxycodone, Buprenorphine, Carisoprodol/Meprobamate, Methadone, Tramadol/Desmethyltramadol, Amitriptyline, Gabapentin, Pregabalin, Ritalinic Acid, Zolpidem, Amphetamine, MDMA, Methylphenidate, 6mam, Barbiturate, Benzodiazepine, Cocaine, THC, PCP, Alcohol, Fentanyl, Specimen Validity)

Section 4 - Quantitative Drug Test Menu	
<input type="checkbox"/> Alcohol, quant <input type="checkbox"/> Barbiturates, quant <input type="checkbox"/> Bath Salts (MDPV), quant <input type="checkbox"/> Buprenorphine, quant <input type="checkbox"/> Carisoprodol (Soma), quant <input type="checkbox"/> Fentanyl, quant <input type="checkbox"/> Meperidine, quant <input type="checkbox"/> Meprobamate, quant <input type="checkbox"/> Methylphenidate, quant <input type="checkbox"/> Norbuprenorphine, quant	<input type="checkbox"/> Norfentanyl, quant <input type="checkbox"/> Normeperidine, quant <input type="checkbox"/> O-desmethyl-cis-tramadol, quant <input type="checkbox"/> O-des-methyl-tapentadol, quant <input type="checkbox"/> Ritalinic acid, quant <input type="checkbox"/> Tapentadol, quant <input type="checkbox"/> Tramadol, quant
Testosterone Abuse Screening <input type="checkbox"/> Testosterone / Epitestosterone Ratio	
Other Test(s) Requested	

Laboratory Supply Requisition - Guthrie Medical Group



Office Name: _____ Location: _____

Laboratory Services

Office Contact Name: _____ Phone #: _____

Order Date: _____

**Ordering Instructions: Allow up to 1 week for approval and supply replacement.
 Fax the completed supply requisition to Guthrie Laboratory Services at (570) 887- 4729.
 Guthrie laboratory supplies are used for Guthrie Laboratory Testing Only.**

Quantity Ordered	# Approved / Denied	Quantity Supplied	ITEM	Lab Use only Item	Unit of Measure
Swabs					
			Affirm® VP/III Swab Collection Kit - Candida/Gard/Trich	28316	each pkg=10
			APTIMA® Unisex Kit - GC/Chlamydia for Males	sendouts	each
APTIMA® Urine Kit - see urine supplies below					
			Eswab Regular Collection Kit (aerobic and anaerobic culture)	75042	each pkg=50
			Eswab Flexible Mini-Tip Collection Kit	1607	each pkg=50
			GeneXpert® CT/NG (GC/Chlamydia) for Females	574	each pkg=50
			Influenza / RSV Kit (UTM)	71487	each pkg=100
			MRSA Swab - Copan Swab	64911	each
			Nasopharyngeal VCM Kit - Bordetella pertussis	sendouts	each
			Swab - Culturette Dual Swab Strep Swab (red cap)	1997	each pkg=50
Viral Culture Kits / Herpes Kits - select kit type below					
			cervical swab and V-C-M media	sendouts	each
			lesion swab and V-C-M media	sendouts	each
			nasopharyngeal swab and V-C-M media	sendouts	each
			urethral swab and V-C-M media	sendouts	each
Stool Supplies					
			Stool Culture - Orange Cary Blair Para Pak	2265	each pkg=25
			Stool Ova and Parasite Black Total Fixative	sendouts	each
			Stool Ova and Parasite Pink/Gray Pack	sendouts	each
Supplies - General					
			Biohazard Bags	1089	pkg=100
			Formalin Pathology Container	45451	each pkg=20
			Labels - Specimen	5482	box=roll of 250
			Laboratory Test Requisition Tablet	lab	each
			Specimen Log Sheet Tablet	lab	each
			Specimen Sterile Container	1530	each
			Thin Prep Papsmear containers		
Urine Supplies					
			APTIMA® Urine Collection Kit - Trichomonas	sendouts	each
			Pain Management Profile Container (temperature strip)	sendouts	each
			Urine Collection Kit (needled cup/culture and urinalysis tubes)	28279	each pkg=50
			Urine Culture Kit (gray test tube and transfer straw)	17496	each pkg=50
Additional Items/Comments					

Order Approved/Denied By: _____ Date: _____

Order Filled By: _____ Date: _____

Clean Catch Urine Specimen Collection Instructions

Important Note: All specimen containers must be labeled with both the patient's first and last names as well as a second identifier such as the patient's medical record number or date of birth. Containers without two identifiers will be rejected.

A clean-catch urine specimen is necessary when your health care provider wants to test your urine for bacteria, which may be causing an infection. A clean-catch specimen is a way of collecting urine that does not contain a lot of bacteria from the skin. Please follow these instructions to collect a clean-catch midstream urine specimen:

1. Wash your hands with soap and water.
2. Remove the lid of the urine container, taking care not to touch the inside of the container. Keep the container within reach.
3. **Female Patients:** Gently wash the vulva area well using the provided antiseptic towelette washing from front to back. Keep labia separated with your finger.
4. **Male Patients:** Gently wash the tip of the penis using the provided towelette.
5. Pass a small amount of urine into the toilet bowl and stop. *Some people find it difficult to stop urinating once they have started. If this is a problem, do not try to stop. Catch some urine in the cup a few seconds after the stream has begun.
6. Place the empty container in the path of the stream.
7. Restart the urine stream into the container. Stop when the container is approximately half full.
8. Finish urinating into the toilet.
9. Tightly screw the lid on to the urine container, taking care not to touch the inside of the container.
10. Store the container refrigerated and return to the lab within 24 hours of collection.
11. Label the container with the date and time of collection, the patient's name and date of birth and /or medical record number. Return the container to your physician's office or a Guthrie Hospital Laboratory.



Attachment: Urine Clean Catch Collection GMG-708-0011 Rev 2/17/17

Guthrie Laboratory Services – (570) 887-4719; 1 Guthrie Square, Sayre PA 18840
Toll free: 844-617-4719

24-Hour Urine Specimen Collection Instructions

Important Note: All specimen containers must be labeled with both the patient's first and last names as well as a second identifier such as the patient's medical record number or date of birth. Containers without two identifiers will be rejected.

A 24-hour urine specimen is a large sample of urine. Please follow these instructions to collect a 24 hour urine specimen:

1. Maintain normal liquid intake unless the physician instructs otherwise.
2. Do not consume alcoholic beverages.
3. Store the 24-hour urine specimen in the REFRIGERATOR to prevent growth of microorganisms and urine decomposition.
4. On waking, empty the bladder directly into the toilet. Discard the first morning urine. This starts the 24 hour collection period. Write the start time and date on the urine container.
5. Collect all urine specimens for the next 24 hours using the toilet insert. Carefully pour the urine from the insert into the 24 hour urine jug.
6. Include the first morning urine voided the following morning, collected at approximately the same time of day as the previous morning. Write the date and time of urination on the container label. This ends the 24-hour collection.
7. Do not void directly into the 24 hour urine container. Collect the urine using a disposable container and dispense the urine into the 24 hour urine jug.
8. Place the 24-hour urine specimen container into a sealed zipper bag.
9. Return the 24-hour urine specimen to any Guthrie satellite location or Guthrie hospital lab on the same day the collection is complete; the end date.
10. Store and transport the specimen refrigerated.



Attachment: 24 Hour Collection GMG-708-0011 Rev 2/17/17

Guthrie Laboratory Services – (570) 887-4719; 1 Guthrie Square, Sayre PA 18840
Toll free: (844) 617-4719

Stool Collection Instructions

There is no special preparation for this test/s. Tell your healthcare provider if you have recently completed a round of antibiotics or if you have traveled out of the country. Patients should not take any anti-diarrhea preparations (e.g., Imodium, Pepto-Bismol) or have had a barium enema within the previous 10 days.

****Label your specimen** containers with the following information. Specimen may be rejected if any information is omitted.

- your full name
 - date of birth or medical record number
 - date and time of specimen collection
1. Urinate before collecting the stool sample. Stool must not come in contact with urine or toilet-water.
 2. Collect stool in a clean, dry container provided by your healthcare provider. Toilet inserts "hats" may be obtained from laboratory services to aid in collection.
 3. Fill vials one at a time begin careful not to switch the color of the lids. When filling more than one container, add stool to the containers without liquid first. Liquid in the vial is poisonous. Keep out of reach of children and do not ingest the liquid.
 - Remove the cap on the vial. Use the scoop on the cap to add enough stool to bring the liquid level in the vial to the red fill line.
 - Choose fecal material that appears bloody and/or has mucous.
 - Replace the cap on the vial and shake it gently to mix the contents.
 - Stool must be added to the vials within 2 hours of collection.
 4. Return the container to your physicians office or Guthrie Laboratory.



Or

Stool Culture, Ova and Parasite Basic: Store the container **Refrigerated** and return to the lab within 72 hours of collection. Routine ova and parasite tests consist of one specimen tests for cryptosporidium and giardia. If you are immunocompromised or have traveled to a foreign country or worms are suspected, an extensive ova and parasite test may be ordered.



Extensive Ova and Parasite=international travel: Store the container at **Room Temperature** and return to the office or laboratory within 72 hours.



Clostridium difficile (C. diff.), Rotavirus, Chymotrypsin
Collect at least 2 tablespoons of fresh stool and place in a specimen container. **Refrigerate** the container and return to the office or laboratory within 72 hours.



H. Pylori, IBD Panel, Lactoferrin, Electrolytes
Place at least 2 tablespoons of fresh stool in each specimen container/s. **Freeze** the container/s and return to the office or laboratory within 72 hours. Frozen stool can not be thawed and divided.



Attachment: Stool Collection GMG-708-0014 Rev 2.. 3/11/2019

Guthrie Laboratory Services – (570) 887-4719: 1 Guthrie Square, Sayre PA 18840
Toll free: 844-617-4719

Semen Specimen Collection Instructions

Important Note: All specimen containers must be labeled with both the patient's first and last names as well as a second identifier such as the patient's medical record number or date of birth. Containers without two identifiers will be rejected.

Collect seminal fluid by masturbation without aid of a lubricant directly into a clean, dry, room temperature, plastic specimen container. A specimen collected in any way other than masturbation is not acceptable because it may interfere with the test results. The use of a condom for specimen collection is not acceptable because it also may interfere with the test results.

Fertility Semen Specimen: Please call the Sayre 570-887-4719 or Corning 607-937-7271 laboratories to schedule an appointment for specimen drop-off.

- Abstain from ejaculation (sexual activity/intercourse/masturbation) for at least 48 hours but not more than 7 days before collecting this specimen.
- Urinate and wash your hands prior to specimen collection. This will prevent bacterial contamination.
- Care must be taken to collect the entire specimen in the container. Loss of the first portion of the ejaculate may result in a decreased sperm count. Do not contaminate the specimen.
- Confirm the specimen container is tightly sealed.
- The specimen must be received in the hospital laboratory within 1 hour of specimen collection.
- The specimen must be maintained at body temperature during transport. This can be accomplished by carrying the sample in an inside pocket.
- Complete the following questions and return this form with the specimen to the laboratory:

1. Patient's Name / Date of Birth: _____ / _____
2. How many days did you abstain before collecting this specimen? _____
3. How was the specimen collected? Masturbation, Other _____
4. Did you have any problems collection the specimen? Yes No
5. Is the entire specimen in the container? Yes No
6. Collection Date: _____ Time _____
7. Was the specimen exposed to cold temperatures during transport? Yes No

Post Vasectomy Semen Specimen:

- Abstain from ejaculation (sexual activity/intercourse) for at least 24 hours before collecting this specimen. However, do not abstain for longer than 3 days before specimen collection.
- Care must be taken to collect the entire specimen in the container. Loss of the first portion of the ejaculate may result in a decreased sperm count. Do not contaminate the specimen.
- Confirm the specimen container is tightly sealed.
- The specimen may be taken to any Guthrie location within 24 hours of specimen collection.
- The specimen may be stored at room temperature.



Attachment: Semen GMG-704-0191 Rev 2. 3/11/2019



























Guthrie Laboratory Services – (570) 887-4719; 1 Guthrie Square, Sayre PA 18840
Toll free: 844-617-4719 Corning (607) 937-7271

Appendix B

- Blood Collection Order of Draw
- Microbiology Collection Guide
- Guthrie Panels and Profile
- Packing List

Test Tube Guide and Order of Draw

		Test Tube	Alternate Test Tube	Additive	Vol.	Epro Item #	Laboratory Use
* O R D E R * O F * D R A W	blood cultures			Bactec Aerobic grey cap Bactec Anaerobic orange cap Bactec Peds pink cap		9617 10595 9616	Make certain to follow the blood culture procedure using ChloroPrep One-Step - Item #22960
	royal blue			Trace Element Serum	6 mL	see lab supply request	Serum Trace element test: chromium, cobalt, copper, selenium Serum: Carefully pour, do not pipet, serum into a serum trace element vial.
	blue			Sodium Citrate Tube Fill test tube completely Proper mixing prevents clot formation	4.5 mL	89	Coagulation testing. PT, PTT, TPT, Protein S, Protein C, Anti-Thrombin III, Lupus Anti-Coagulant
	red			Serum Tube with clot activator Allow 30 min. for clot formation Spin and separate serum into a plastic vial	4 mL 10 mL	2219 2222	Serum chemistry tests: Digoxin, Dilantin, Drug Levels, Homocystine, Lithium, Tegretol, Theophylline, PTH Intact (Quest)
	gold			SST Gel Separator w/ clot activator Allow 30 minutes for clot formation OR Red tiger top tube.	5 mL	1234	Serum chemistry tests: CA 125, CA 15-3, CA 19-9, Free-PSA (sendout), Hepatitis, T3, T4, Free T4, TSH, FSH, LH, B12, B12 Folate
	dk.green			Sodium Heparin Tube	10 mL	94	Amino Acids, HLA B27, Comprehensive Drug Screen, Flow Cytometry
	green			Lithium Heparin PST Separator Tube OR Green tiger top tube. Proper mixing prevents clot formation	4.5 mL	2033	Plasma chemistry tests: Ammonia, BMP, CMP Electrolytes, PTH Intact (NON-OR specimen), Lipid Profile Hepatic Function, Homocystine, PSA (Guthrie)
	dk green			Lithium Heparin without gel	9 mL	see lab supply request	T-SPOT
	lavender			EDTA Tube Proper mixing prevents clot formation	3 mL	1012	Primarily Whole blood testing: CBC, Glyco, Retic, Sed. Rate Mono, RBC Folate, Cyclosporin, Histamine, Cystic Fibrosis (INTRAOPERATIVE PTH - Operating Room. Use Only)
	pink			K2 EDTA	6 mL	40075	Whole blood blood bank tests: Type and Screen, Type and Cross, Direct Antiglobulin (DAT)
	royal blue			K2 EDTA Trace Element Plasma and/or Whole Blood	5 mL	see lab supply request	Trace elements: arsenic, cadmium, heavy metal screen, zinc Plasma: Carefully pour, do not pipet, plasma into a plasma trace element vial.
	white			K2 EDTA	6 mL	see lab supply request	Hepatitis C - Heptimax
	gray			Sodium Fluoride Potassium Oxalate	5 mL	see lab supply request	Alcohol, Lactic Acid
	yellow			ACD solution B	6 mL	see lab supply request	HLA typing - oncology patients - # of tubes depends on the patient's WBC count. Call the Blood Bank for assistance. (570) 887-4218
U R I N E	urine chemistry			No additive, urine chemistry only	6 mL	70838 ???	Urine microalbumin, urine drug screen, urine osmolality, urine chemistry tests.
	urinalysis			No additive, conical tube urinalysis only	8 mL	17522 28279 - tube & straw kit	"V" shaped conical tube is used for urinalysis testing only. The cone shape allows for microscopic examination. Urinalysis with reflex culture requires 2 test tubes, a conical and preservative tube.
	urine culture			Preservative, urine culture, legionella	4 mL	63417 17496 - tube & straw kit	Urine culture. Store and transport at room temperature up to 48 hours.

Specimen Collection Guide					
SPECIMEN SITE (where) & SOURCE (what) are REQUIRED on NON-BLOOD SPECIMENS					
Laboratory Intended Use	Description	Swab / Transport Media	Lab	Store and Transport Temperature	Supply Ordering Info.
Aerobic Cultures Rectal, Aerobic Wounds, Urogenital Culture (not viral) Strep A - PCR Assay (Sayre Campus)	E-Swab - Regular White Cap Liquid Amies		Sayre	RT or Refrig up to 48 hours	75042 E-Swab Regular Collection Kit Cello Pack = Each
Rapid Strep Screen: 2nd swab used to culture negative strep screens *Double swab is acceptable for aerobic cultures.	BBL CultureSwab - Double Swab Red Cap - Liquid Stuart		Sayre	RT up to 48 hours	1997 Swab Culturette II Box=50
Aerobic Cultures where a small "mini-tip" swab is required, sinus Unacceptable for Chlamydia, Gonorrhea, Herpes and Unacceptable for Viral Culture or Gram Stain	E-Swab - Flexible Minitip Blue Cap Liquid Amies		Sayre	RT or Refrig up to 48 hours	1607 E-Swab Flexible Minitip Collection Kit Cello Pack = Each
Anaerobic Culture Panel (includes aerobic culture): Deep wounds	E-Swab - Regular		Sayre	RT or Refrig up to 48 hours	75042 E-Swab Regular Collection Kit Cello Pack = Each
Bordetella pertussis (Whooping Cough) PCR Swab nasopharynx. Place in M4 or V-C-M Transport Media immediately.	Nasopharynx V-C-M Kit		Reference Laboratory	Refrig up to 7 days in V-C-M media	Guthrie Sendout Dept
Candida, Gardnerella and Trichomonas* FEMALE PATIENTS Vaginal specimens only	Affirm* VP/III Swab Collection Kit		Sayre	RT or Refrig up to 72 hours	28316 Affirm VP/III Swab Box=10
Candida, Gardnerella and Trichomonas* MALE PATIENTS Urethral specimens	APTIMA* Unisex Collection Kit		Reference Laboratory	RT or Refrig up to 60 days	Guthrie Lab Sendout dept.
Trichomonas Only: Urine Urine is acceptable for Trichomonas Testing	APTIMA Urine Collection Kit		Reference Laboratory	Refrig up to 30 days	Guthrie Lab Sendout dept.
Chlamydia and Gonorrhoeae FEMALE PATIENTS Vaginal, Patient collected or Endocervical provider collect	GeneXpert* CT/NG Vaginal Endocervical *CAUTION - The GeneXpert* kit looks similar to the UTM influenza kit pictured below.		Sayre	Room Temp or Refrig up to 60 days	574 Xpert CT/NG Swab Kit Box=50
Chlamydia and Gonorrhoeae URINE Urine NOT clean catch held in the bladder > 1 hour 20-50 mls of urine required. Store and transport refrigerated up to 8 days.	Urine Specimen Container		Sayre	Urine Refrig up to 8 days	1530 Specimen container
Chlamydia and Gonorrhoeae MALES and NON-GENITAL SITES Urethra, eye conjunctiva, anorectal, oral Not intended for the evaluation of suspected sexual abuse.	APTIMA* Unisex Collection Kit		Reference Laboratory	Refrigerate up to 30 days	Guthrie Lab Sendout dept.
Influenza A&B, RSV (Method-Rapid Antigen) Nasal Wash: (preferred) Collect nasal wash into a specimen container and transport to the lab immediately. Swab: (secondary) Collect nasal/nasopharyngeal mini-tip swab. Place in sterile saline and transport to lab immediately.	Nasal Wash - Specimen Container Swab- Sterile saline and a green capped mini-tip swab.		Coming Towanda Troy	Refrig up to 24 hours	68137 (100/box) or individually from the hospital laboratories.
Influenza A&B, RSV (Method-PCR) Collect a UTM FLOQ Nasopharyngeal Swab and place it into transport media immediately.	UTM Kit for Influenza Viruses *CAUTION - The UTM Influenza kit looks similar to the Chlamydia GeneXpert* kit pictured above.		Sayre Only	Refrig up to 7 days	71487 Nasopharyngeal Collection Kit for Influenza/RSV
MRSA SCREEN (Method-PCR) Using both swabs at a one time, swab both nostrils using the COPAN dual swab. Site = Nostrils Only.	COPAN dual swab with scored tips *CAUTION - The COPAN swab differs from the dual-swab culturette pictured above.		Sayre	Refrig up to 5 days	64911 MRSA Swab
Sputum Culture	Specimen Container		Sayre	Refrig up to 24 hours	1530 Specimen Container
Stool Tests: NOT for Culture (1 container for each test) C. difficile (refrigerate up to 5 days) Rotavirus (refrigerate up to 72 hours) H. Pylori (frozen) Lactoferrin (frozen) Sudan (frozen) Wright's Stain (refrigerate) Chymotrypsin (refrigerate up to 72 hours) Electrolytes (frozen) Fecal Fat 24, 48, 72 hour (frozen) *Fecal Fat Specimen container varies by reference lab. Call laboratory to confirm collection container.	Specimen Container Provide 1 labeled container per test. Frozen specimens may not be thawed and divided.		Varies	Refrig up to 72 hours Frozen up to 14 days	1530 Specimen Container
Stool Culture: Salmonella & Shigella (enteric pathogens) Campylobacter, E. coli 0157, Yersinia/Vibros/Shiga Toxin	Orange Para-Pak C&S		Sayre	Refrig up to 72 hours	2265 Cary Blair Media Fecal Transport
Stool Ova and Parasite BASIC Basic Ova & Parasite = Giardia & Cryptosporidium					
Stool Ova and Parasites EXTENSIVE Intestinal Parasites Test on immunocompromised patients or patients w/recent international travel.	Black=Total Fix (fixative) Pink and Gray Para-Pak Pink=10% buffered neutral formalin Gray=Zinc Sulfate		Reference Laboratory	RT up to 2 months	Guthrie Lab Sendout dept.
Urine Testing Urinalysis with Reflex Culture & Sensitivity	Conical Urinalysis tube and a Gray preservative tube		Sayre	Gray - RT up to 48 hours Yellow Urinalysis Refrig up to 24 hours	63998 Complete Kit - Urine Cup with both test tubes 17496 C&S Transfer Kit - Gray test tube and straw 17522 Urinalysis Tube
Urine Culture and Sensitivity Only	C&S Transfer Straw Kit		Sayre	Gray C&S - RT up to 48 hours	17496 C&S Transfer Kit - Gray test tube and straw
Legionella Antigen / Strep pneumoniae Urine fungal and acid fast cultures are submitted in sterile containers	Specimen Container		Sayre	Refrig up to 24 hours	1530 Specimen Container 28127 Urine Straws (100)
Viral Cultures and Herpes Swabs must be transferred into V-C-M media immediately. If a herpes AND a viral culture are ordered, TWO swabs are required, each swab in it's own V-C-M media kit.	V-C-M Media kit		Reference Laboratory	Refrig up to 3 days in V-C-M media	Guthrie Lab Sendout dept.
Yeast / Fungal Culture Material or fluid from any body site	BBL CultureSwab - Single Swab WHITE Cap - Liquid Amies		Sayre	RT up to 48 hours	1395 Swab Culture
Skin/Hair/Nails = Yeast Dermatophyte Screen	Specimen Container		Sayre	RT up to 48 hours	1530 Specimen container

Refrig = Refrigeration (2.0°C - 8.0°C) RT = Room Temp (15.0°C - 30.0°C) Frozen = (0.0°C - -20.0°C)

Rev. 3, 1/2019

Guthrie Clinic Laboratories: Panels and Profiles

Basic Metabolic Panel (BMP) CPT Code 80048	Hepatic (Liver) Function Panel CPT Code 80076
BUN	Albumin
Calcium	ALK Phos.
Carbon Dioxide	ALT / SGPT
Chloride	AST / SGOT
Creatinine	Bilirubin, Direct
GFR	Bilirubin, Total
Glucose	Total Protein
Potassium	
Sodium	
	Hepatitis Acute Panel CPT Code 80074
	Hep. B Surface Ag
	Hep. B Core Ab IgM
	Hep. A Ab IgM
	Hep. C Ab
Complete Metabolic Panel (CMP) CPT Code 80053	Renal Function Panel CPT Code 80069
Albumin	Albumin
ALK Phos.	BUN
ALT / SGPT	Calcium
AST / SGOT	Carbon Dioxide
Bilirubin, Total	Chloride
BUN	Creatinine
Calcium	Glucose
Carbon Dioxide	GFR
Chloride	Potassium
Creatinine	Sodium
Glucose	Total Protein
GFR	
Potassium	
Sodium	
Total Protein	
	Lipid Panel CPT Code 80061
Electrolytes (lytes) CPT Code 80051	Cholesterol
Carbon Dioxide	HDL
Chloride	LDL
Potassium	Triglyceride
Sodium	
Renal Failure Panel CPT Codes: 80053, 84100, 84550	Pre-Natal Package CPT Code 86592
Albumin	CBC
ALK Phos.	RPR
ALT / SGPT	Blood Type & Rh
AST / SGOT	Antibody Screen
Bilirubin, Total	Rubella
BUN	Hepatitis B Surface Ag
Calcium	
Carbon Dioxide	
Chloride	Pre-Natal Screen CPT Codes: 86900, 86901, 86850
Creatinine	CBC
Glucose	1-Hr gestational Glucose
GFR	DIC Panel (DICP) CPT Codes: 85610, 85730, 85384, 85049, 85378
Phosphorous	D-Dimer
Potassium	PT
Sodium	PTT
Total Protein	Fibrinogen
Uric Acid	Platelet Count
Hereditary Hypercoagulability (HCP) CPT Code 55012	VonWillebrand's Panel (VWIL) CPT Code 5501260
Antithrombin	VonWillebrand's Factor Antigen
Protein S- functional	Factor 8 Assay
Protein C- functional	Closure Time
Factor V Leiden	Blood Type & Rh
MTHFR	
Prothrombin 20210	

OFFICE: _____ GUTHRIE MEDICAL GROUP PACKING LIST

Packing List Created by: _____ Date: _____ Time: _____

Courier Pick-Up Signature: _____ Date: _____ Time: _____

Lab Processor Signature: _____ Date: _____ Time: _____

	Patient Name (Last, First)	MRN# or DOB	Diag. Code	Doctor	Draw Time	CBC	CBC (No Diff)	PT	PTT	A1C	BMP	CMP	Liver	TSH	CK	Amylase	Lipase	UA w/ Rflx	Mic roalbumin	Additional Tests or Comments	Initials		
1																							
2																							
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