

**THE DELTA PATHOLOGY GROUP, L.L.C.**

**Specimen Service Manual**



Patient Preparation  
Specimen Collection  
Labeling  
Fixation  
Handling  
Transportation

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# Contact Information

## Client Services:

Location	Address	Phone
Shreveport	2915 Missouri	318-621-8820
Alexandria	211 Fourth St.	318-796-3180
Alexandria	3330 Masonic Drive	318-561-4154
Monroe	309 Jackson Street	318-966-7800
W. Monroe	503 McMillan Road	318-329-8830
Lafayette	4801 Ambassador Caffery	337-470-4383
Lafayette	4600 Ambassador Caffery	337-521-9363
Gretna	1141 Whitney Ave., Bldg. 3	504-361-3757
Marrero	1101 Medical Center Blvd.	504-349-1415
Meridian	1512 20 <sup>th</sup> Ave., Meridian, MS	601-483-8300

## **Billing Information: 318-841-9526**

**Director: Debbie Rhodes**

**Assistant Director: Becky Hunter**

## **Supply Orders:**

<b>Shreveport</b>	<b>Fax: 318-621-0108</b>	<b>Phone: 318-364-2087</b>
<b>Alexandria</b>	<b>Fax: 318-769-3907</b>	<b>Phone: 318-769-3219</b>
<b>Monroe</b>	<b>Fax: 318-966-4423</b>	<b>Phone: 318-966-4886</b>
<b>West Monroe</b>	<b>Fax: 318-329-8833</b>	<b>Phone: 318-329-8830</b>
<b>Lafayette</b>	<b>Fax: 337-470-4051</b>	<b>Phone: 337-470-4638</b>
<b>Gretna</b>	<b>Fax: 504-361-3132</b>	<b>Phone: 504-361-3757</b>
<b>Meridian, MS</b>	<b>Fax: 601-484-7776</b>	<b>Phone: 601-483-8300</b>

## **Websites:**

**[www.deltapathology.com](http://www.deltapathology.com)**

**[www.deltamdx.com](http://www.deltamdx.com)**

# Medical Staff Directory

The Delta Pathology Group, L.L.C., is an independent pathology group with services and laboratories throughout Louisiana. The group is comprised of pathologists with boards in anatomic and clinical pathology. Specialties represented in the group include Dermatopathology, Cytopathology, Hematopathology, Breast and GI Pathology providing extensive diagnostic abilities for clinicians and patients.

The Delta Pathology Group, L.L.C. provides services for hospitals throughout Louisiana. The pathologists serve as Laboratory Directors and provide twenty-four hour coverage for the needs of staff, physicians and patients.

The Delta Pathology Group, L.L.C. facilities are accredited by the College of American Pathologists and/or CLIA accrediting bodies. The pathologists also serve as inspectors for other laboratories through the CAP peer review program.

## **Shreveport:**

Delta Pathology Group, LLC, 2915 Missouri St., Shreveport, LA 71109  
CAP # 20113-02      CLIA # 19D0463379

Delta Pathology Group, LLC, 2219 Line Avenue, Shreveport, LA 71104  
CAP # 20101-01      CLIA # 19D0664460

Delta Pathology Group, LLC @ Shreveport Surgery, 745 Olive Street, Shreveport, LA 71104  
CAP # 7225076      CLIA # 19D1099427

Abreo, Fleurette – Anatomic and Clinical Pathology

Ferguson, Jill – Cytopathology, Anatomic and Clinical Pathology

Heard, J. Steven – Cytopathology, Anatomic and Clinical Pathology

Khare, Vivek – Dermatopathology, Anatomic and Clinical Pathology

Koehler, Jonathan – Anatomic and Clinical Pathology

McLaren, Bernadette – Anatomic and Clinical Pathology, Fellowship Training Breast Pathology

Mastrodomenico, Matthew – Hematopathology, Anatomic and Clinical Pathology

Owings, Richard – Anatomic and Clinical Pathology, Fellowship Training Breast Pathology

Patel, Kirtesh – Hematopathology, Anatomic and Clinical Pathology

Sardenga, Louis – Anatomic and Clinical Pathology

Sholl, Andrew B. – Cytopathology, Anatomic and Clinical Pathology

Siskron, F., III – Anatomic and Clinical Pathology

Wellman, Gregory – Anatomic and Clinical Pathology, Fellowship Training GI & Liver  
Pathology

Wesche, William – Dermatopathology, Anatomic & Clinical Pathology

## **Monroe/ W. Monroe:**

Delta Pathology Group, LLC @ St. Francis Medical, 309 Jackson St., Monroe, LA 71201  
CAP # 7204273      CLIA # 19D1075141

Delta Pathology Group, LLC @ Glenwood Regional Medical Center, 503 McMillan Road, West  
Monroe, LA 71291

CAP # 2013902      CLIA # 19D0966840

Blanchard, Richard – Anatomic and Clinical Pathology

Blanchard, Stephen – Anatomic and Clinical Pathology

Kidd, Laura R. – Anatomic and Clinical Pathology, Fellowship Training Renal Pathology

Liles, William, Jr. – Anatomic and Clinical Pathology

Maxwell, John, II – Anatomic and Clinical Pathology

Pankey, Lee – Anatomic and Clinical Pathology

Smith, Nancy – Anatomic and Clinical Pathology

## **Alexandria:**

Delta Pathology Group, LLC @ Rapides Regional, 211 Fourth St., Alexandria, LA 71301  
CAP # 2014404      CLIA # 19D0935738

Delta Pathology Group, LLC @ St. Francis Cabrini, 3330 Masonic Dr., Alexandria, LA 71301  
CAP # 7523234      CLIA # 19D2014888

Barker, Jared – Anatomic and Clinical Pathology, Fellowship Training GI & Liver Pathology

Collins, George R. – Anatomic and Clinical Pathology, Dermatopathology

Eggers, Jordan – Anatomic and Clinical Pathology

Herrington, Bruce – Cytopathology, Anatomic and Clinical Pathology

Marrazzo, Joseph C. – Anatomic and Clinical Pathology

Miguez, Michael – Cytopathology, Anatomic and Clinical Pathology

Redfield, Samantha – Hematopathology, Anatomic and Clinical Pathology

## **Lafayette:**

Delta Pathology Group, LLC @ Our Lady of Lourdes, 4801 Ambassador Caffery, Lafayette, LA 70508

CAP # 7520585      CLIA # 19D2010173

Delta Pathology Group, LLC @ Women's and Children Hospital, 4600 Ambassador Caffery, Lafayette, LA 70508

CAP # 7524918      CLIA # 19D2014889

Crosier, M'Liss – Anatomic and Clinical Pathology

Hanson, Stephanie – Anatomic and Clinical Pathology

Langford, Erin – Hematopathology, Cytopathology, Anatomic and Clinical Pathology

Williams, R. Bruce – Anatomic and Clinical Pathology

## **Lake Charles:**

Delta Pathology Group, LLC @ Lake Charles Memorial Hospital, 1701 Oak Park Blvd., Lake Charles, LA 70601

CAP # 2004301      CLIA # 19D0461791

Best, Anna – Anatomic and Clinical Pathology

Thibodeaux, Joel – Anatomic and Clinical Pathology

## **Covington/Slidell:**

Delta Pathology Group @ Lake View Hospital, 95 Judge Tanner Blvd., Covington, LA 70433  
CLIA # 19D2050551

Delta Pathology Group, LLC @ St. Tammany Parish Hospital, 1202 S. Tyler St., Covington, LA  
70433  
CLIA # 19D0663180

Delta Dermatopathology, 229 West Causeway Approach, Ste. 209, Mandeville, LA 70448  
CLIA #19D1056551

Delta Pathology Group, LLC @ Slidell Memorial Hospital, 1001 Gause Blvd., Slidell, LA  
70458  
CLIA# 19D2160872

Bartholomew, Pamela – Anatomic and Clinical Pathology  
Henderson, Jeremy – Hematopathology, Anatomic and Clinical Pathology  
Loose, Jeffrey – Anatomic and Clinical Pathology  
Nicotri, Thomas, Jr. – Dermatology, Dermatopathology  
Roberts, Jordan A. – Anatomic and Clinical Pathology, Fellowship Training in GI Pathology  
Candal, Rebecca – Anatomic and Clinical Pathology

## **Gretna/NOLA:**

Delta Pathology Group, LLC, 1141 Whitney Ave., Bldg. #3, Gretna, LA 70056  
CAP # 7209452      CLIA # 19D0458894

Delta Pathology Group, LLC @ West Jefferson Medical Center, 1101 Medical Center Blvd.,  
Marrero, LA 70072  
CAP # 8037427      CLIA # 19D2036128

Delta Pathology Group, LLC @ Touro Infirmary, 1401 Foucher St., New Orleans, LA 70115  
CAP# 8236658      CLIA# 19D2135612

Brown, James, Jr. – Anatomic and Clinical Pathology  
Casey, Terence T. – Hematopathology, Anatomic and Clinical Pathology  
Farris, K. Barton – Anatomic and Clinical Pathology  
LeRoy, Michael A. – Anatomic and Clinical Pathology, Blood Banking/Transfusion Medicine  
Long, William Paul – Dermatopathology, Anatomic and Clinical Pathology  
Luer, William – Anatomic and Clinical Pathology

**Meridian/Laurel, MS:**

DTCG - Delta Pathology Group, LLC, 1512 20<sup>th</sup> Ave., Meridian, MS 39301  
CAP# 1606811      CLIA# 25D0651894

DTCG - Delta Pathology Group, LLC @ Anderson Regional Medical Center, 2124 14<sup>th</sup> St.,  
Meridian, MS 39301  
CAP# 7183429      CLIA# 25D1011258

DTCG - Delta Pathology Group, LLC @ South Central Regional Medical Center, 1220 Jefferson  
St., Laurel, MS 39440  
CLIA# 25D0980061

Brents, Melissa J. – Anatomic and Clinical Pathology  
Hicks, Karen – Cytopathology, Anatomic and Clinical Pathology  
Hughes, III, R. Condon – Dermatopathology, Anatomic and Clinical Pathology  
Sims, Hillary Brooke – Cytopathology, Anatomic and Clinical Pathology  
Sprabery, A. Patrick – Cytopathology, Anatomic and Clinical Pathology  
Wilkinson, Brian L. – Anatomic and Clinical Pathology



# Scope of Services

## Diagnostic Services and Consultation

- Anatomic and clinical pathology
- Full service anatomic pathology laboratory serving local and regional clients
- Advanced testing methodologies available in-house
- Rapid test reporting through our electronic reporting system
- Rapid turn-around time of test results

## Anatomic Pathology Service

- Breast Pathology
- Cytopathology, including thin layer technology
- Dermatopathology
- Gastrointestinal Pathology
- Genitourinary Pathology
- Gynecologic Pathology
- Hematopathology
- Pediatric Pathology
- Surgical Pathology
- Veterinary Pathology
- Flow Cytometry Service
- Immunohistochemistry and FISH Technology
- Molecular & Cytogenetic testing

## Support Service

- Consultative Services through Pathology Resource Network, L.L.C.
  - Administrative Consultation
  - Management
  - Compliance Service
  - Billing Services
  - Accounting /Payroll
  - Human Resources
- Stat Service
- Courier Representative
- Client Service
- Client Representative
- Pathologist availability 24/7
- Laboratory Directorship
- Information Technology
- Connectivity
- EMR
- Web Portal

# **Quality Control and Quality Assurance Practice**

## **Anatomic Pathology:**

- I. Quality Assessment
  - Random review of all surgical pathology diagnoses.
  - 100% review of all frozen section diagnoses.
  - 100% review of consultations from outside sources.
- II. Daily intradepartmental consultations.
- III. Clinical information and previous test results are compared with the current testing for internal quality assurance.
- IV. Pathologists participate in the College of American Pathologists proficiency testing surveys and Performance Improvement Program (PIP).

## **Cytology:**

- I. The quality control rescreen of negative PAP smears exceeding the CLIA mandated minimum of 10%.
- I. Continuous monitoring of cytotechnologists' performance with appropriate remedial actions including reassessment of workload limits and focused quality control procedures resulting in quality improvement.
- III. Clinical information and previous test results are compared with the current testing for internal quality assurance.
- IV. The cytotechnologists and pathologists participate in two national glass slide programs designed by cytopathology educators and professionals to provide diagnostic assessment, continuing education, and quality assurance within the laboratory. Workshops, seminars, and ASCP teleconferences are also attended.

## **Flow Cytometry and MDx:**

- I. Extensive procedural and instrumental quality control.
- II. Subscribe to College of American Pathologists proficiency testing service to ensure competency of staff and quality of results.
- III. Clinical information and previous test results are compared with the current testing for internal quality assurance



**NOTICE OF PRIVACY PRACTICES (Effective 8-19-13)**  
**THIS NOTICE DESCRIBES HOW MEDICAL INFORMATION ABOUT YOU MAY BE USED AND DISCLOSED AND HOW YOU CAN GET ACCESS TO THIS INFORMATION. PLEASE READ IT**

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**CHANGES TO THIS NOTICE**

The Delta Pathology Group, L.L.C. may change policies and privacy practices at any time. Changes will apply to your protected health information (PHI) we already have, as well as new information obtained after the change occurs. You will receive a copy of this notice each time you register at one of our sites for laboratory services

**HOW WE MAY USE AND DISCLOSE YOUR PROTECTED HEALTH INFORMATION**

Business Associates of Delta must now also comply with these same privacy practices. We may use and disclose medical and billing information about you for treatment (such as sending medical information about you to a specialist as part of a referral); to obtain payment for treatment (such as sending billing information to your insurance company or Medicare); and to support our health care operations (such as comparing patient data to improve treatment methods).

We may use or disclose medical and billing information about you without your prior authorization for several other reasons, subject to certain requirements for: public health purposes, abuse or neglect reporting, health oversight audits or inspections, research studies, funeral arrangements, organ donation, workers/ compensation purposes, or during emergencies. We may also disclose PHI when required by law, such as in response to a request from law enforcement officials in specific circumstances, or in response to valid judicial or administrative orders.

We may disclose medical and billing information about you to a friend or family member who is involved in your medical care or to disaster relief authorities so that your family can be notified of your location and condition.

**OTHER USES OF MEDICAL INFORMATION**

In any other situation not covered by this Notice, we will ask for your written permission before using or disclosing your PHI; disclosures for marketing purposes or that constitute a sale of PHI will require your authorization. If you choose to authorize our use or disclosure of your PHI, you can later revoke that permission by notifying us in writing of your decision.

**YOUR RIGHTS REGARDING MEDICAL INFORMATION ABOUT YOU**

You may opt out of receiving fundraising communications, restrict certain PHI disclosures to a health plan when you pay out of pocket in full for the health care item or service, and you will be notified if there is any breach of unsecured PHI.

In most cases, you have the right to look at or obtain a copy of your medical and billing information contained in the designated record set that we use. If you request copies, we may charge the cost of copying, related supplies or postage. If we deny your request to review or obtain a copy, you may submit a written request for a review of that decision.

If you believe information in your record is incorrect or if important information is missing, you have the right to request that we correct the record. Your request may be submitted in writing. A request for amendment must provide your reason for the amendment. We could deny the request to amend a record if the information was not created by us, if it is not part of the medical or billing information maintained by us, or if we determine that the record is accurate. You may appeal, in writing, a decision by us not to amend a record.

You have the right to a list of those instances where we have disclosed medical and billing information about you, other than treatment, payment, health care operations, or where you specifically authorized a disclosure. When you submit a written request, the request must state the time period desired for the accounting, which must be less than a 6 year period. You may receive the list in paper or electronic form. The first disclosure list request in a 12 month period will be provided to you at no cost; other requests will be charged in accordance with our cost to produce the list and we will inform you of the cost before you incur any charges.

You have the right to request that your medical and billing information be communicated to you in a confidential manner, such as sending mail to an address other than your home. You must notify us in writing of the specific way or location for us to use to communicate with you. You may request, in writing, that we not use or disclose PHI about you for treatment, payment or healthcare operations or to persons involved in your care except when specifically authorized by you, or when required by law, or in an emergency. We will inform you of our decision. You may request additional restrictions on the use or disclosure of information for treatment, payment or healthcare operations. We are not required to agree to the requested restriction except in the limited situation in which you or someone on your behalf pays in full for an item or service, and you request that information concerning such items or service not be disclosed to a health insurer.

**COMPLAINTS**

If you have any questions or if you are concerned that your privacy rights may have been violated, or you disagree with a decision we made about access to your records, you may contact our Privacy Office at 318-364-2042. You may send a written complaint to the U.S. Department of Health and Human Services Office of Civil Rights; the address will be given to you upon request. Under no circumstances will you be penalized or retaliated against for filing a complaint.

**OUR PLEDGE TO YOU**

We understand that medical and billing information about you is personal. We are committed to protecting the privacy of your medical and billing information. We create test report records and information needed to provide quality care and to comply with legal requirements. This Notice applies to all of your records we maintain, whether created by our staff, your personal physician, or reference laboratory. Your physician may have different policies or Notices regarding the doctor's use and disclosure of your medical and billing information created in his/her office. We are required by law to:

- Keep medical and billing information about you private
- Give you this Notice of our legal duties and privacy practices with respect to your PHI
- Follow the terms of the Notice currently in effect

# Release of/or Burial of Fetal Demise Tissue

**Release of Fetal Demise Tissue DOES NOT APPLY to a fetus of >20 weeks or >350 grams. Those must be buried by law.**

## **Policy & Procedure Summary:**

1. The law allows parents to dispose of any products of conception or fetal remains, if they so choose.
2. The Act **requires** the **facility in which the delivery occurred** to notify the parent(s) of this right.
  - The facility must provide a Notice of Parental Rights form to the parent(s) within 24 hours of the miscarriage/fetal demise.
  - That form must be returned by the parent(s) to the facility within 48 hours of receipt of the notification if the parent(s) wish to arrange for disposition of the remains.

**Note: If the form is not received within 48 hours, disposal of the remains will be in accordance with LA Dept. of Health & Hospitals rules and regulation.**
3. A copy of the Parental Rights Form **must be given to Delta Pathology** if the parent(s) completes and wishes to make arrangements with the funeral home.
  - If it is received after the specimen is sent to pathology, the Parental Rights Form should be delivered personally to Delta.
  - If the Delta site is off site from the hospital and can't be delivered personally, the form should be faxed and a phone call made to Delta (the next business day if after hours) that they are faxing/having faxed the Parental Rights Form.
  - If the form is incomplete, the facility will be contacted and the form returned to the facility to be properly completed.

## **Burial of the remains may be returned to the family, but if through a funeral home:**

- Delta will contact the funeral home when the specimen is ready for pick up (after completion of the pathology report).
- If there are no POC in the specimen, Delta will notify the physician and the facility.
- If only blocks remain after the gross, Delta will notify the facility that no tissue remains for interment.
- If the funeral home does not pick up the specimen within 72 hours of notification that the remains are ready to be released, the specimen(s) is disposed of by the normal process.

# Client Instructions for Completing Requisition

The information required is essential to assure positive patient identification, improve diagnostic accuracy, compare clinical information, and to compare the current findings with other test results. ***Italics text = Required Information***

The histology requisition requirements are as follows:

1. The *patient's legal name* (no nicknames). If prior specimens have been submitted with another name within the past ten years, please include this information in parentheses.
2. Patient's address and phone number.
3. The *Social Security Number, if available or other unique identifier such as the patient medical record number* (vital for positive patient identification).
4. The *date of birth* (vital for positive patient identification).
5. *Sex* of patient.
6. Name and address of the *physician, legally authorized person ordering the test, or name and address of the laboratory referring the specimen.*
7. *Date of collection* and time. (Time of collection must be entered for breast tissue due to regulations regarding proper fixation time.)
8. *Mark test requested.* (Refer to specified testing sections of Service Manual)
9. *Specimen Source*
10. Individual responsible for bill.
11. *Insurance information* for billing.
12. *Any pertinent medical history.*

Additional cytology requisition requirements are as follows:

1. The *source of the specimen* is essential when assessing specimen adequacy of PAP smears (i.e., vaginal, cervix, endocervix, vaginal cuff, cervical stump). The specimen source must also be provided for non-gynecological specimens.
2. Indicate if a Pap is a conventional glass slide or a liquid based methodology.

3. If special stains are required on non-gynecological specimens, specify the type under "other."
4. *Advanced Beneficiary Notice (ABN)* is a separate form required for a *Medicare patient* that does not have a diagnosis placing them at risk for gynecological cancer.
5. *Applicable clinical information* and the *LMP (last menstrual period)*.
6. *Medicare information regarding the type of PAP* under MEDICARE ONLY.
7. *High risk factors for gynecological cancer*.
8. *Previous abnormal PAP(s), treatment, or gynecological biopsies* (this includes chemotherapy, radiation, and history of cancer).
9. *Any pertinent patient history*.

**Custom printed requisitions available are:**

- **Histology**
- **Cytology**
- **Dermatopathology**
- **Gastroenterology**
- **Breast**

**Always verify your hospital/ clinic/ physician name on your custom printed requisitions upon receipt to ensure you have the correct account information. This ensures that patient reports are directed back to the correct account.**

# Client Specimen Labeling Requirements

Surgical pathology specimens must be labeled and requisitions prepared in the room where the surgical procedure is performed at the time of collection.

This applies to labeling for:

- All surgical pathology
- All non-gynecological cytology specimens
- All gynecological cytology specimens
- HPV, GC, CT testing
- All flow cytometry
- All cytogenetics and molecular testing, as applicable

The specimen container may be in the form of a pathology specimen container, collection tube, a cup, swab, slide or other form of specimen storage.

The patient's name is a mandatory requirement. The patient's name and second identifier should match the information on the submitting requisition. Secondary identifiers include:

- Date of birth
- Social security number
- Unique random identifier (i.e. patient medical record number)

**Personnel must positively identify the patient by checking at least two identifiers at the time of specimen collection.** Identify specimen by clearly labeling the specimen container(s) with patient's first and last name and second identifier, in addition to the specimen site (as applicable).

Multiple containers should be identified with the specimen site (as applicable) and **TWO** identifiers.

**IMPORTANT NOTE: If preprinted labels are utilized, verify patient information before specimen labeling. The identifying label with two patient identifiers must be attached to the specimen container(s) AT THE TIME OF COLLECTION. DO NOT PRE-LABEL SPECIMEN CONTAINER(S).**

## **Client Slide Labeling**

Personnel must positively identify the patient by checking at least two identifiers at the time of specimen collection. Write the patient's first and last name and a second identifier on the frosted end of a glass slide with a #2 lead pencil **AT THE TIME OF COLLECTION. DO NOT PRE-LABEL SLIDE(S).**

**NOTE: Prepared slides submitted to the laboratory - if the slides only contain one identifier, they MUST BE securely submitted in a container labeled with two identifiers.**

**Labeling of cardboard slide holder IS NOT acceptable labeling; be sure that the slide is labeled.**



# Surgical Pathology

## Preparation, Collection, Fixation and Transportation

### Universal Precautions Required

#### PATIENT PREPARATION

Patient preparation for all histology specimens is according to the instructions specified by the patient's physician, unless otherwise specified in the procedure for each specimen type.

#### REQUISITION REQUIREMENTS

Refer to instructions for completing requisition section.

#### SPECIMEN LABELING

1. Identify tissue specimens by clearly labeling the specimen containers with patient's first and last name and another identifier. Each container must have two patient identifiers. These identifiers must be documented on the requisition. **SEE CLIENT SPECIMEN LABELING REQUIREMENTS SECTION IN THIS MANUAL.**
2. Containers must be identified with the specimen site on the container and the corresponding information on the requisition.
3. Use facility guidelines for obtaining proper patient identification.

#### COLLECTION, HANDLING, FIXATION AND TRANSPORTATION

**NOTE: Unfixed specimens and/or specimens held overnight should be refrigerated.**

#### Gross and Microscopic Examination

1. Surgical specimens for routine gross and microscopic examination are submitted in 10% neutral buffered formalin (NBF). The amount of 10% formalin should be 10 times the amount of tissue.
2. **DO NOT ADD 10% formalin** to cytology, flow, cytogenetics, and frozen section specimens, cultures, or specimens tested by another methodology that may require another fixative or no fixative.
3. Label specimen according to labeling instructions. Complete requisition according to requirements. Place the specimen container in the large section of a biohazard transport bag and seal the completed requisition in the outer section. Submit specimen to the laboratory.

<b>Test Name:</b>	<b>Surgical Pathology</b>
<b>Methodology:</b>	Standard Histology Process(es)
<b>Performed:</b>	Monday-Saturday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually within 24-48 hours of receipt. Special studies may require more time
<b>Specimen Collection Supplies:</b>	10% Neutral Buffered Formalin If Flow Cytometry is requested on a surgical pathology specimen, please refer the Flow Cytometry section in this manual. If DIF is requested, please refer below.
<b>Specimen Collection:</b>	Surgical collection as deemed by appropriate physician/surgeon
<b>Handling:</b>	Immediately place biopsy in 10% NBF. Maintain at room temperature; unfixed specimens or specimens held overnight should be refrigerated
<b>Specimen Requirements:</b>	Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

<b>Test Name:</b>	<b>Frozen Section</b>
<b>Methodology:</b>	Diagnosis of tissue by pathologist while surgery is being performed
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “contact information” section. Schedule with laboratory prior to procedure
<b>Reporting time:</b>	Evaluation of routine specimens within 20 minutes of receipt
<b>Specimen Collection Supplies:</b>	Petri dish (sterile preferred)
<b>Specimen Collection:</b>	Specimen submitted fresh
<b>Handling:</b>	See above. Immediately transport to laboratory or frozen section site. Notify personnel of delivery
<b>Specimen Requirements:</b>	Fresh tissue or submitted in saline; two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature unless delayed transport then refrigerate
<b>Rejection Criteria:</b>	Formalin fixation
<b>Department:</b>	Histology

**\*Note: If frozen section is transported to the lab, place tissue in a saline filled container.**

<b>Test Name:</b>	<b>Amputated Limbs</b>
<b>Methodology:</b>	Standard Histology Process(es)
<b>Performed:</b>	Monday-Saturday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually within 24-48 hours of receipt. Special studies may require more time
<b>Specimen Collection Supplies:</b>	Absorbent cloth, large biohazard bag x2
<b>Specimen Collection:</b>	Surgical collection as deemed by appropriate physician/surgeon
<b>Handling:</b>	Maintain at room temperature; specimens held overnight should be refrigerated
<b>Specimen Requirements:</b>	Ensure specimen is contained with no leakage and properly labeled; two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature; see above for delays
<b>Rejection Criteria:</b>	Unlabeled specimen
<b>Department:</b>	Histology

<b>Test Name:</b>	<b>Bone Marrow Aspiration and biopsy</b>
<b>Methodology:</b>	Microscopic examination by pathologist
<b>Performed:</b>	Monday-Saturday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually within 24-48 hours of receipt. Special studies may require more time
<b>Specimen Collection Supplies:</b>	10% Neutral Buffered Formalin, slides
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Immediately place biopsy in 10% NBF</li> <li>• Minimum of six smears from aspirate.</li> <li>• 1 cc of bone marrow aspirate in sodium heparin (green top) or EDTA (purple top), if flow cytometry is requested</li> <li>• 1 cc of bone marrow aspirate in sodium heparin (green top), if cytogenetics are requested</li> <li>• Allow aspirate to clot and then place in 10% NBF</li> <li>• Submit at least two peripheral blood smears and most recent CBC</li> </ul>
<b>Handling:</b>	Maintain bone marrow, peripheral blood and solid tissue at room temperature.
<b>Specimen Requirements:</b>	See above for minimum volumes. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology, Flow Cytometry and MDx (cytogenetics)

**Surgical Procedure performed by Pathologist- Nursing instructions:**

- Schedule by telephone at least 18-24 hours in advance when possible.
- Provide a surgery permit form signed by patient.
- Order necessary medication and bone marrow tray from hospital central supply.

<b>Test Name:</b>	<b>Breast Tissue</b>
<b>Methodology:</b>	Standard Histology Process(es)
<b>Performed:</b>	Monday-Saturday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually within 24-48 hours of receipt. Special studies may require more time
<b>Specimen Collection Supplies:</b>	10% Neutral Buffered Formalin (10x the amount of tissue)
<b>Specimen Collection*:</b>	Specimen should be immersed in fixative within one hour of excision. Time of collection and time placed in fixative must be clearly written on the breast requisition.
<b>Handling:</b>	A minimum of six hours and a maximum of 72 hours fixation for valid results. Maintain at room temperature.
<b>Specimen Requirements:</b>	Excision time and time placed in formalin. See above for minimum and maximum fixation time. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

**\*Note: If delivery of a resection specimen to pathology is delayed the tumor should be bisected prior to immersion in fixative.**

<b>Test Name:</b>	<b>DIF (Direct Immunofluorescence) Tissue Examination</b>
<b>Methodology:</b>	Immunofluorescence Microscopy examination
<b>Performed:</b>	Monday-Saturday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually after 24-48 hours of receipt.
<b>Specimen Collection Supplies:</b>	Saline
<b>Specimen Collection:</b>	Immediately cover with saline
<b>Handling:</b>	A minimum of six hours and a maximum of 48 hours fixation for valid results. Maintain at room temperature.
<b>Specimen Requirements:</b>	Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

<b>Test Name:</b>	<b>Kidney Biopsy</b>
<b>Methodology:</b>	Light, electron, and immunofluorescence Microscopy examination
<b>Performed:</b>	Referred to designated reference facility
<b>Reporting time:</b>	Two weeks after receipt of specimen
<b>Specimen Collection Supplies:</b>	Saline or provided renal biopsy kit (University Health/LSU/Arkana)
<b>Specimen Collection:</b>	Immediately place in saline soaked gauze
<b>Handling:</b>	Specimen will be forwarded, unaltered to designated reference facility
<b>Specimen Requirements:</b>	Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

<b>Test Name:</b>	<b>Muscle Biopsy</b>
<b>Methodology:</b>	Light, electron, and immunofluorescence Microscopy examination
<b>Performed:</b>	Referred to designated reference facility
<b>Reporting time:</b>	Two weeks after receipt of specimen
<b>Specimen Collection Supplies:</b>	Saline
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Dampen two gauze sponges (4x4)</li> <li>• Remove one to three muscle tissue specimens approximately 1cm in length and 0.5 to 1.0 cm in diameter - do not traumatize specimen</li> <li>• Place muscle biopsy between wet gauze sponges</li> <li>• Place in Petri dish/ screw cap container and put in a container of WET ice</li> </ul>
<b>Handling:</b>	Submit to laboratory immediately. See above for correct amount of tissue
<b>Specimen Requirements:</b>	See above for correct amount of tissue. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Collection instructions not followed. Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

**Surgical Procedure instructions:**

- Schedule by telephone at least 24 hours in advance. Monday-Wednesday preferred.

<b>Test Name:</b>	<b>Nerve Biopsy</b>
<b>Methodology:</b>	Light, electron, and immunofluorescence Microscopy examination
<b>Performed:</b>	Referred to designated reference facility
<b>Reporting time:</b>	Two weeks after receipt of specimen
<b>Specimen Collection Supplies:</b>	Saline
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Dampen two gauze sponges (4x4)</li> <li>• Remove a 2- 3 cm sural nerve tagged at proximal end – do not traumatize specimen</li> <li>• Place nerve biopsy between wet gauze sponges</li> <li>• Place in Petri dish/screw cap container and put in a container of WET ice</li> </ul>
<b>Handling:</b>	Submit to laboratory immediately. See above for correct amount of tissue
<b>Specimen Requirements:</b>	See above for correct amount of tissue. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

**Surgical Procedure instructions:**

**Schedule by telephone at least 24 hours in advance, Monday-Wednesday preferred.**

<b>Test Name:</b>	<b>Prostate Biopsy</b>
<b>Methodology:</b>	Standard histology process(es)
<b>Performed:</b>	Monday-Saturday. After hours and weekends, next business day
<b>Reporting time:</b>	24-48 hours after receipt of specimen
<b>Specimen Collection Supplies:</b>	10% Neutral Buffered Formalin
<b>Specimen Collection:</b>	Prostate biopsy collections kits
<b>Handling:</b>	Immediately place biopsy in 10% NBF. Maintain at room temperature
<b>Specimen Requirements:</b>	Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

<b>Test Name:</b>	<b>Enzyme (Disaccharidase) Deficiency testing</b>
<b>Methodology:</b>	Specialized testing
<b>Performed:</b>	Referred to designated reference facility
<b>Reporting time:</b>	Two weeks after receipt of specimen
<b>Specimen Collection Supplies:</b>	Fresh in Sterile container
<b>Specimen Collection:</b>	Place at least two biopsies on the inside surface of a sterile container
<b>Handling:</b>	Notify Delta Pathology at least one week in advance. This is a STAT specimen
<b>Specimen Requirements:</b>	Fresh tissue. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Histology

<b>Test Name:</b>	<b>Crystal Identification</b>
<b>Methodology:</b>	Microscopic Examination of Fluid/Tissue to determine presence and type of crystals
<b>Performed:</b>	Monday-Friday
<b>Reporting time:</b>	Typically 24 hours upon receipt, unless STAT protocol requested
<b>Specimen Collection Supplies:</b>	Clean dry tube and/or container
<b>Specimen Collection:</b>	Fluid is placed in a clean, dry tube. Tissue is placed in a clean, dry container
<b>Handling:</b>	Routine
<b>Specimen Requirements:</b>	Fluid samples are to be received in the fresh state. Tissue samples are to be received FRESH or in 100% Alcohol
<b>Transport:</b>	Room Temperature if same day delivery is expected. Refrigerate otherwise
<b>Rejection Criteria:</b>	If tissue is received in formalin, the test cannot be performed
<b>Department:</b>	Histology

# Non-gynecological Cytology

## Preparation, Collection, Fixation and Transportation

### Universal Precautions Required

#### PATIENT PREPARATION

Patient preparation for all non-gynecological specimens is according to the instructions specified by the patient's physician, unless otherwise specified in the collection, fixation, and handling and transportation procedure for each specimen type.

#### REQUISITION REQUIREMENTS

Refer to instructions for completing requisition section.

#### SPECIMEN LABELING

##### Smears on Glass Slides

1. Write the patient's first and last name and second identifier on the frosted end of a glass slide with a #2 lead pencil. Labeling the slide holder is not properly labeling the specimen, since it is discarded upon receipt in the laboratory. **SEE CLIENT SPECIMEN LABELING REQUIREMENTS SECTION.**
2. Use facility guidelines for obtaining proper patient identification (patient name, social security number).
3. If smears are taken from different anatomic sites (i.e., right and left), identify the site on the frosted end of the slide with the corresponding information on the requisition.
4. Refer to fixation instructions.
5. Label specimen according to labeling instructions. Complete requisition according to requirements. Place the specimen container in the large section of a biohazard transport bag and the completed requisition in the outer section. Submit to the laboratory

##### Specimen Containers

1. Identify fluid specimens by clearly labeling the specimen containers with patient's name and second identifier. A printed label with patient's name and second identifier can be affixed to the container.  
**SEE CLIENT SPECIMEN LABELING REQUIREMENTS SECTION.**



2. Use facility guidelines for obtaining proper patient identification
3. Multiple containers must be identified with the specimen source on the container and the corresponding information on the requisition.
4. Label specimen according to labeling instructions. Complete requisition according to requirements. Place the specimen container in the large section of a biohazard transport bag and the completed requisition in the outer section. Submit to the laboratory.

## **COLLECTION, HANDLING, FIXATION AND TRANSPORTATION**

### **FIXATION FOR NONGYNECOLOGICAL SPECIMENS**

#### **Smears on glass slides:**

1. **Immediately spray fix smear** with cytology spray fixative. **Do not spray fix smears for Diff Quik staining.**
2. Allow specimen to dry before closing slide holder.
3. Close cover and secure with rubber band.

#### **Fluids and Aspirations:**

1. Use only CytoLyt fixative (for all fluid specimens) or PreservCyt.
2. If CytoLyt or PreservCyt is not available, **DO NOT** add any other type of fixative. **If you do not have CytoLyt, call the lab for fixation instructions.**
3. **DO NOT ADD FIXATIVE TO SPECIMENS THAT MAY REQUIRE MICROBIOLOGIC TESTING.**

<b>Test Name:</b>	<b>Body Cavity, Joint, and Cerebrospinal</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Syringe and needle; clean 100ml-1000ml container
<b>Specimen Collection:</b>	Collect in a container with 3 units of Heparin per ml
<b>Handling:</b>	<ul style="list-style-type: none"> <li>• Pleural fluids and synovial fluids can be refrigerated</li> <li>• Do not submit more than 200ml</li> <li>• Tighten lids securely to prevent leakage</li> </ul>
<b>Specimen Requirements:</b>	If a delay in processing (more than 8 hours), refrigerate. Do not add a fixative. Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Breast Fluids</b>
<b>Methodology:</b>	Cytology
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Touch Preps: Glass slides; spray fixative or 95% alcohol Aspirations: Syringe and Needle; CytoLyt
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Touch preparation on glass</li> <li>• Immediately place slide in a container of 95% alcohol or spray fix. Slide should not air dry.</li> <li>• Place slides in a slide holder and close securely</li> <li>• If aspirated, collect a minimum of 2ml</li> <li>• Place in a CytoLyt vial Tighten lid securely to prevent leakage</li> </ul>
<b>Handling:</b>	<ul style="list-style-type: none"> <li>• See Above</li> </ul>
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Brushings- bronchial, esophageal, gastric &amp; ureteropelvic</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	CytoLyt fixative; brush
<b>Specimen Collection:</b>	Brush is passed through the scope. After brush is withdrawn, if conventional smears are desired, rapidly rotate the brush onto a slide and immediately place smear in a container of 95% alcohol or spray fix. Slide should not air dry. The brush may be placed in CytoLyt fixative and submitted
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Cerebrospinal Fluid</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	CytoLyt fixative
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect 2-5 ml</li> <li>• Do NOT add fixative to specimen that may require microbiologic testing or flow analysis</li> <li>• Tighten lid securely to prevent leakage</li> </ul>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Fine Needle Aspirate</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Needle (22 gauge or smaller recommend); 10-20 cc syringe; slides; spray fixative; slide folder; CytoLyt fixative
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Perform 2 to 4 “passes” from the lesion, expel a small droplet opposite the frosted end. Place another slide over the droplet. Quickly pull the top and bottom slides apart to spread. Prepare ONE spray fixed and ONE air-dried slide per pass. Prepare no more than 6-8 total slides on any site.</li> <li>• Immediately spray fix one slide and allow the other slide to air dry.</li> <li>• Rinse remaining material from syringe in a small container of CytoLyt or RPMI (for Flow Cytometry) for thin layer preparation and/or cell block</li> <li>• Tighten lid securely</li> </ul> <p>SPECIAL NOTE: If Afirma is needed on a Thyroid FNA, expel the third or fourth pass totally in the Afirma vial.</p>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Urine</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Urine container or CytoLyt fixative
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Catheterized or voided specimens as directed by physician</li> <li>• Collect 50-100 ml</li> <li>• Add CytoLyt to specimen in equal volume</li> <li>• Tighten lid securely to prevent leakage</li> </ul>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Sputum</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Cytolyt Fixative
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Overnight accumulation yield the best diagnostic results</li> <li>• Collect one specimen a day for 3 consecutive days to ensure maximum of diagnostic accuracy</li> <li>• Post bronchoscopy sputum are more likely to contain diagnostic material</li> </ul>
<b>Handling:</b>	<ul style="list-style-type: none"> <li>• Add CytoLyt to the specimen – <b>Do not add CytoLyt if microbiology tests are ordered.</b></li> <li>• Tighten lid securely</li> <li>• If only one container and cultures are ordered send to microbiology first</li> </ul>
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Tzanck Smear</b>
<b>Methodology:</b>	Cytology
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Slides; wooden spatula or tongue blade; spray fixative; slide folder
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Scrape lesion with wooden spatula or tongue blade and spread cellular material obtained on glass slide</li> <li>• Immediately spray fix smears with cytology fixative</li> <li>• Place in cardboard cover and allow to dry before closing cover</li> </ul>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Washing- bronchial, esophageal, gastric &amp; ureteropelvic</b>
<b>Methodology:</b>	Cytology, Hologic ThinPrep
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2 days
<b>Specimen Collection Supplies:</b>	Sterile specimen container
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect in sterile container</li> <li>• Use separate containers for cytology and microbiology (include site)</li> <li>• Do not add fixative to specimens</li> <li>• Tighten lids securely to prevent leakage</li> <li>• Include special stain information when requested</li> </ul>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

# Gynecological Cytology – PAP Test

## Preparation, Collection, Fixation and Transportation

### Universal Precautions Required

#### PATIENT PREPARATION

For an optimal Pap test the patient should be instructed to:

1. Schedule the appointment at mid-cycle.
2. Do not use vaginal medication, vaginal contraceptives, or douches for 48 hours prior to appointment.
3. Do not have intercourse for 24 hours before the appointment.

#### REQUISITION REQUIREMENTS

Refer to instructions for completing requisition section. **Verify that the patient requisition information is for the correct patient just prior to specimen collection.**

#### SPECIMEN LABELING

##### Conventional Smears

1. **Personnel must positively identify the patient by checking at least two identifiers at the time of specimen collection. Write the patient's first and last name and second identifier on the frosted end of a glass slide with a #2 lead AT THE TIME OF COLLECTION. DO NOT PRE-LABEL SLIDE.**
2. Labeling the slide holder **is not** proper labeling, since the holder is discarded upon receipt in the laboratory.

##### Liquid Based Methodology

**Personnel must positively identify the patient by checking at least two identifiers at the time of specimen collection. Identify specimen by clearly labeling the specimen vial with patient's first and last name and second identifier. If preprinted labels are utilized, verify patient information before specimen labeling. The identifying label with two patient identifiers must be attached to the specimen vial(s) AT THE TIME OF COLLECTION. DO NOT PRE-LABEL SPECIMEN VIAL(S).**

## **SPECIMEN COLLECTION AND FIXATION**

### **CONVENTIONAL SMEARS**

#### **Spatula and Cervical Brush Combination, Smear Preparation, and Fixation**

##### **Spatula**

1. Begin rotation of the spatula starting and ending at the 9 o' clock (or counterclockwise rotation starting and ending at 3 o' clock) to position the spatula so that collected material is retained on the upper horizontal surface as the instrument is removed.
2. Rotate the spatula 360° around the circumference of the cervical os and ectocervix, while maintaining firm contact with the epithelial surface.
3. To prepare a one slide smear, do not smear and spray fix the spatula specimen at this time.
4. Rest the spatula, specimen side down, on the labeled glass slide.

##### **Cervical Brush**

1. To prevent drying of the first specimen, collect the brush specimen immediately.
2. Insert the cervical brush into the os with gentle pressure and rotate only 90° to 180° to minimize bleeding.

**Note:** Cervical brushes are not approved for use on pregnant patients or inflamed tissue.

##### **Broom Collection, Smear Preparation and Fixation**

1. Insert central bristles into os until lateral bristles bend against the ectocervix.
2. Maintaining gentle pressure, rotate broom 360° three to five times in the same direction.
3. Transfer sample to a labeled glass slide using one paint stroke with each side of brush in the same direction to exact same area of slide.
4. Holding the spray nozzle about 12 inches from the slide, immediately spray fix the smear with a cytology spray fixative.



5. Place in a cardboard slide holder.
6. Do not cover cardboard slide holder until specimen has dried.

### **Liquid Based Methodology**

1. Patient should not douche for 24hrs before the PAP smear is obtained.
2. Ideally the smear should be obtained at mid cycle because morphology is most easily interpreted at this time, although it is not essential.
3. Always avoid the use of lubrication jellies. These materials significantly obscure cellular detail.
4. Materials listed may be obtained from the cytology laboratory upon request.

<b>Test Name:</b>	<b>Conventional PAP</b>
<b>Methodology:</b>	Cytology
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	95% in 3-5days
<b>Specimen Collection Supplies:</b>	Spatula; Cervical brush
<b>Specimen Collection:</b>	<p><b>Spatula and Cervical brush</b></p> <ul style="list-style-type: none"> <li>• With a single stroke, spread material with spatula evenly</li> <li>• Start from the frosted area to the end of slide</li> <li>• Cover only half of slide - leave the remainder for the brush specimen</li> <li>• On remaining half of slide, roll brush across by twirling handle</li> <li>• Immediately spray fix the smear with cytology spray fixative holding 12 inches away</li> <li>• Place in cardboard holder</li> <li>• Do Not cover cardboard slide holder until specimen has dried</li> </ul> <p><b>Broom</b></p> <ul style="list-style-type: none"> <li>• Insert until bristles bend against ectocervix</li> <li>• Maintain gentle pressure, rotate 360 degrees, three to five times in same direction</li> <li>• Transfer sample to glass slide using paint stroke with each side of brush in same direction to same area of slide</li> <li>• Immediately spray fix the smear with cytology spray fixative</li> <li>• Place in cardboard slide holder</li> <li>• Do Not cover cardboard slide holder until specimen has dried</li> </ul>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>ThinPrep</b>
<b>Methodology:</b>	Liquid based Hologic ThinPrep Pap Test
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	95% in 3-5 days
<b>Specimen Collection Supplies:</b>	Spatula; cervical brush; broom
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect cervical specimen according to collection specification</li> <li>• Rinse cellular material off collection device by pressing the bristles of brush on the bottom of vial about ten times</li> <li>• Twirl the brush between thumb and forefinger to assure complete rinsing of specimen into PreservCyt</li> <li>• If spatula/brush combination is used, swish brush and spatula in the same vial enough times to completely dislodge cellular material</li> <li>• Cap vial by lining torque mark on lid and vial</li> </ul>
<b>Handling:</b>	See above
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or inappropriate fixative
<b>Department:</b>	Cytology

# HPV-DNA

## Preparation, Collection, Fixation and Transportation

### Universal Precautions Required

#### PATIENT PREPARATION

For an optimal PAP and HPV-DNA test the patient should be instructed to:

1. Schedule the appointment at mid-cycle.
2. Do not use vaginal medication, vaginal contraceptives, or douches for 48 hours prior to appointment.
3. Do not have intercourse for 24 hours before the appointment.

#### REQUISITION REQUIREMENTS

Refer to instructions for completing requisition section.

#### SPECIMEN LABELING

1. Identify specimen by clearly labeling the specimen vial with patient's first and last name and a second identifier. **SEE CLIENT SPECIMEN LABELING REQUIREMENTS SECTION.**
2. A printed label with patient's name and second identifier can be affixed to the vial.

#### SPECIMEN COLLECTION AND FIXATION

##### Liquid Based Vial for PAP Test

Collect the PAP specimen according to instructions in GYN-PAP section of this manual and add supplemental HPV testing orders to the GYN cytopathology requisition.

If the HPV testing sample is to be collected at the time of colposcopy, collect the sample before acetic acid or any other type of solution is applied.

## **ORDERING, HANDLING, AND TRANSPORTATION**

1. Under COLLECTION METHOD on GYN cytology requisition, indicate Liquid Based.
2. Under REQUEST FOR CYTOLOGY, indicate if testing is for PAP & HPV-DNA (regardless of diagnosis) or HPV-DNA only.
3. Note: Only High Risk HPV testing with Reflex to 16/18 genotype will be performed unless Low Risk testing is indicated by the clinician on the requisition in the space labeled as "Other".
4. For reflex testing check for HPV only if Pap is ASCUS or ASCUS/Low Grade.
5. Reflex Orders for HPV-DNA testing on all ASCUS, ASCUS/Low Grade PAPS can be requested.
6. Label specimen according to labeling instructions. Complete the requisition according to requirements. Place the specimen container in the large section of a biohazard transport bag and the completed requisition in the outer section. Submit to the laboratory.

<b>Test Name:</b>	<b>HPV-DNA</b>
<b>Methodology:</b>	Roche Cobas 4800
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business
<b>Reporting time:</b>	Usually two days from order time unless it is a reflex order
<b>Specimen Collection Supplies:</b>	Spatula, Cervical brush
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect cervical specimen according to collection specification</li> <li>• Rinse cellular material off collection device by pressing the bristles of brush on the bottom of vial about ten times</li> <li>• Twirl the brush between thumb and forefinger to assure complete rinsing of specimen into PreservCyt</li> <li>• If spatula/brush combination is used, swish brush and spatula in the same vial enough times to completely dislodge cellular material</li> <li>• Cap vial by lining torque mark on the lid and vial</li> <li>• One aliquot from the vial will be used</li> </ul>
<b>Handling:</b>	Indicate liquid based
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen or out of date vial
<b>Department:</b>	Cytology

# **ADDITIONAL ANCILLARY TESTING**

## **Gonorrhea & Chlamydia Bacterial Vaginosis Panel Trichomonas HSV 1&2**

### **Preparation, Collection, Fixation and Transportation**

#### **Universal Precautions Required**

#### **PATIENT PREPARATION**

1. Schedule the appointment at mid-cycle.
2. Do not use vaginal medication, vaginal contraceptives, or douches for 48 hours prior to appointment.
3. Do not have intercourse for 24 hours before the appointment.

#### **REQUISITION REQUIREMENTS**

Refer to instructions for completing requisition section.

#### **SPECIMEN LABELING**

1. Identify specimen by clearly labeling the specimen vial with patient's first and last name and a second identifier. **SEE CLIENT SPECIMEN LABELING REQUIREMENTS SECTION.**
2. A printed label with patient's name and second identifier can be affixed to the vial.

## **SPECIMEN COLLECTION AND FIXATION**

### **Liquid Based Vial for PAP Test**

Collect the PAP specimen according to instructions in GYN-PAP section of this manual. One aliquot from the vial will be used for each of the ancillary testing that is requested.

## **ORDERING, HANDLING, AND TRANSPORTATION**

1. Under COLLECTION METHOD on GYN cytology requisition, indicate Liquid Based.
2. Under REQUEST FOR CYTOLOGY, indicate the additional ancillary testing that is being requested.
3. If ordering Trichomonas, be sure to indicate if the submitted specimen is a ThinPrep vial or urine. If submitting urine, submit a fresh urine specimen according to the urine collection instructions in the Non-GYN section of this manual.



<b>Test Name:</b>	<b>Gonorrhea &amp; Chlamydia</b>
<b>Methodology:</b>	Roche Cobas 4800
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day. Run batch daily
<b>Reporting time:</b>	Usually 2 days from the date of receipt
<b>Specimen Collection Supplies:</b>	ThinPrep vial
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect cervical specimen according to collection specification</li> <li>• Rinse cellular material off collection device by pressing the bristles of brush on the bottom of vial about ten times</li> <li>• Twirl the brush between thumb and forefinger to assure complete rinsing of specimen into PreservCyt</li> <li>• If spatula/brush combination is used, swish brush and spatula in the same vial enough times to completely dislodge cellular material</li> <li>• Cap vial by lining torque mark on the lid and vial</li> <li>• One aliquot from the vial will be used</li> </ul>
<b>Handling:</b>	Indicate liquid based. Urine specimen must be submitted within 24 hours
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen; out of date vial
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Bacterial Vaginosis Panel (BVP)</b>
<b>Methodology:</b>	Referred to designated reference facility
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 2-3 days from the date of receipt
<b>Specimen Collection Supplies:</b>	ThinPrep vial
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect cervical specimen according to collection specification</li> <li>• Rinse cellular material off collection device by pressing the bristles of brush on the bottom of vial about ten times</li> <li>• Twirl the brush between thumb and forefinger to assure complete rinsing of specimen into PreservCyt</li> <li>• If spatula/brush combination is used, swish brush and spatula in the same vial enough times to completely dislodge cellular material</li> <li>• Cap vial by lining torque mark on the lid and vial</li> <li>• One aliquot from the vial will be used</li> </ul>
<b>Handling:</b>	Indicate liquid based
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen; out of date vial
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>Trichomonas</b>
<b>Methodology:</b>	Referred to designated reference facility
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 3-4 days from the date of receipt
<b>Specimen Collection Supplies:</b>	ThinPrep vial; urine cup
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect cervical specimen according to collection specification</li> <li>• Rinse cellular material off collection device by pressing the bristles of brush on the bottom of vial about ten times</li> <li>• Twirl the brush between thumb and forefinger to assure complete rinsing of specimen into PreservCyt</li> <li>• If spatula/brush combination is used, swish brush and spatula in the same vial enough times to completely dislodge cellular material</li> <li>• Cap vial by lining torque mark on the lid and vial</li> <li>• One aliquot from the vial will be used</li> </ul>
<b>Handling:</b>	Indicate liquid based. Urine specimen must be submitted within 24 hours
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen; out of date vial
<b>Department:</b>	Cytology

<b>Test Name:</b>	<b>HSV 1&amp;2</b>
<b>Methodology:</b>	Referred to designated reference facility
<b>Performed:</b>	Monday-Friday. After hours and weekends, next business day
<b>Reporting time:</b>	Usually 3-4 days from the date of receipt
<b>Specimen Collection Supplies:</b>	Thin prep vial
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect cervical specimen according to collection specification</li> <li>• Rinse cellular material off collection device by pressing the bristles of brush on the bottom of vial about ten times</li> <li>• Twirl the brush between thumb and forefinger to assure complete rinsing of specimen into PreservCyt</li> <li>• If spatula/brush combination is used, swish brush and spatula in the same vial enough times to completely dislodge cellular material</li> <li>• Cap vial by lining torque mark on the lid and vial</li> <li>• One aliquot from the vial will be used</li> </ul>
<b>Handling:</b>	Indicate liquid based
<b>Specimen Requirements:</b>	Label according to labeling instructions. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature
<b>Rejection Criteria:</b>	Unlabeled specimen; out of date vial
<b>Department</b>	Cytology

# **Flow Cytometry**

## **CD4 Panel (CD4/CD8/CD3) Leukemia/Lymphoma Immunophenotyping**

**Flow cytometry utilizes the most up to date instrumentation available to sort and analyze cells from peripheral blood, bone marrow and tissue specimens.**

Cell surface markers present in suspected leukemia/lymphoma cases may aid in identifying the tumor lineage for diagnostic and prognostic purposes. Identification of cell types present can give an adequate assessment of a patient's immune status.

The testing personnel and pathologists participate in the College of American Pathologist Proficiency Testing program that is designed to provide diagnostic assessment, continuing education, and quality assurance within the laboratory. Workshops, seminars, and teleconferences are attended.

# **Flow Cytometry**

## **Preparation, Collection, Fixation and Transportation**

### **Universal Precautions Required**

#### **PATIENT PREPARATION**

Patient preparation for all flow cytometry specimens is according to the instructions specified by the patient's physician.

#### **REQUISITION REQUIREMENTS**

1. Refer to the requisition requirements for Histopathology requisition.
2. Include both date and time of collection.

#### **SPECIMEN LABELING**

1. Use facility's guidelines for obtaining proper patient identification.
2. Use facility's guidelines for specimen labeling, but must include patient name, second identifier, date and time collected.
3. Collector's initials are required on label if a blood specimen.

#### **COLLECTION, HANDLING, FIXATION AND TRANSPORTATION**

1. Collect specimen according to each of the following sections.
2. Mix specimen according to each of the following sections.
3. Label specimen according to labeling instructions, complete requisition according to requirements, place the specimen container in the large section of a biohazard transport bag and the completed requisition in the outer section and submit to the laboratory.
4. Transport to the laboratory at room temperature as soon as possible.

<b>Test Name:</b>	<b>CD4 Panel (CD4/CD8/CD3)</b>
<b>Methodology:</b>	Flow Cytometry
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	Usually within 24 hours of receipt
<b>Specimen Collection Supplies:</b>	EDTA (lavender top)
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect one EDTA tube of blood</li> <li>• Mix by inverting tube 6-10 times</li> <li>• Minimum draw or 0.5 ml is adequate, if patient has normal WBC parameters (full draw preferred)</li> </ul>
<b>Handling:</b>	Do not refrigerate
<b>Specimen Requirements:</b>	See above. Follow all requirements. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature; transport immediately
<b>Rejection Criteria:</b>	Clotted; refrigerated; hemolyzed; frozen; wrong anticoagulant; collected more than 48 hours
<b>Department:</b>	Flow Cytometry

<b>Test Name:</b>	<b>Blood - Leukemia/Lymphoma Immunophenotyping</b>
<b>Methodology:</b>	Flow Cytometry
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	Usually within 48 hours of receipt
<b>Specimen Collection Supplies:</b>	EDTA (lavender top)
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect two EDTA tubes of blood</li> <li>• Mix by inverting tube 6-10 times</li> <li>• Minimum draw of 3 ml is adequate, if patient has significant abnormal cell population present (full draw preferred)</li> </ul>
<b>Handling:</b>	Do not refrigerate
<b>Specimen Requirements:</b>	See above. Follow all requirements. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature, transport immediately
<b>Rejection Criteria:</b>	Clotted; refrigerated; hemolyzed; frozen; wrong anticoagulant collected; insufficient cell recovery; samples too old for adequate cell viability
<b>Department:</b>	Flow Cytometry

<b>Test Name:</b>	<b>Bone Marrow Aspirate - Leukemia/Lymphoma Immunophenotyping</b>
<b>Methodology:</b>	Flow Cytometry
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	Usually within 48 hours of receipt
<b>Specimen Collection Supplies:</b>	<u>SODIUM HEPARIN</u> (green top)
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Collect 1ml of bone marrow aspirate</li> <li>• Minimum volume is dependent upon the cell count of the specimen. The processed cell count should be at least <math>0.5 \times 10^6</math> mononucleated cells for setup of a complete monoclonal battery.</li> <li>• Place in Sodium Heparin (green top) tube (<i>EDTA-lavender top may be used if Sodium Heparin is not available</i>)</li> <li>• Mix tube 6-10 times to inhibit coagulation</li> </ul>
<b>Handling:</b>	Do not refrigerate
<b>Specimen Requirements:</b>	See above. Follow all requirements. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature; transport immediately
<b>Rejection Criteria:</b>	Clotted; refrigerated; hemolyzed; frozen; wrong anticoagulant collected; insufficient cell recovery; samples too old for adequate cell viability
<b>Department:</b>	Flow Cytometry

<b>Test Name:</b>	<b>Tissue (node) - Leukemia/Lymphoma Immunophenotyping</b>
<b>Methodology:</b>	Flow Cytometry
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	Usually within 48 hours of receipt
<b>Specimen Collection Supplies:</b>	RPMI or equivalent medium Note: Sterile saline without a preservative is acceptable for short term usage and transport; must be received in the lab within 2 hours
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• At least <math>0.5 \times 10^6</math> to the sixth mononucleated cells (<i>as a general rule, the equivalent of a 3mm cube of tissue with abundant lymphocytes is adequate</i>).</li> <li>• Maximum cell viability obtained within 24 hours</li> <li>• Store in a 2-8 degree centigrade refrigerator</li> </ul>
<b>Handling:</b>	Store in a 2-8 degree centigrade refrigerator
<b>Specimen Requirements:</b>	See above. Follow all requirements. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Wet ice ; transport immediately
<b>Rejection Criteria:</b>	Incorrect or inadequate storage and/or preservative; insufficient cell recovery; sample too old for adequate cell viability
<b>Department</b>	Flow Cytometry

<b>Test Name:</b>	<b>Cerebral Spinal Fluid - Leukemia/Lymphoma Immunophenotyping</b>
<b>Methodology:</b>	Flow Cytometry
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	Usually within 48 hours of receipt
<b>Specimen Collection Supplies:</b>	Tube provided by client laboratory or hospital
<b>Specimen Collection:</b>	<ul style="list-style-type: none"> <li>• Minimum volume dependent on the cell count</li> <li>• 1.5 ml of CSF is usually sufficient</li> <li>• Smaller volumes may be used if there is a high cell count</li> </ul>
<b>Handling:</b>	Specimen cannot be frozen
<b>Specimen Requirements:</b>	When cell counts are low the analysis may not be successful. See above. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature; transport immediately
<b>Rejection Criteria:</b>	Frozen
<b>Department</b>	Flow Cytometry

<b>Test Name:</b>	<b>Body Fluids - Leukemia/Lymphoma Immunophenotyping</b>
<b>Methodology:</b>	Flow Cytometry
<b>Performed:</b>	Monday-Saturday. After hours and weekends: see table of contents for “directory” section
<b>Reporting time:</b>	Usually within 48 hours of receipt
<b>Specimen Collection Supplies:</b>	Specimen is sent neat (undiluted)
<b>Specimen Collection:</b>	20 ml of pleural fluid is usually sufficient
<b>Handling:</b>	Specimen cannot be frozen
<b>Specimen Requirements:</b>	Minimum volume of body fluid needed dependent on the cell count in specimen. Smaller volumes may be used if there is a high cell count. When cell counts are low the analysis may not be successful. Two patient identifiers; see client specimen labeling requirements in this manual
<b>Transport:</b>	Room temperature; transport immediately
<b>Rejection Criteria:</b>	Frozen
<b>Department</b>	Flow Cytometry



# **Delta MDX Molecular & Cytogenetic Testing**

**CYTOGENETIC ANALYSIS  
FISH  
BCR/ABL  
EGFR  
JAK2 V617F  
KRAS  
BRAF  
THROMBOPHILIA RISK PANEL**

Delta MDX provides comprehensive cytogenetic analysis of neoplastic blood and bone marrow using traditional chromosome techniques.

Molecular pathology is a specialty within the field of anatomic and clinical pathology that uses DNA/RNA analysis and specialized molecular techniques for the accurate classification and diagnosis of malignancies and infectious disease.

Additional tests are added to the Molecular & Cytogenetics test menu continually. Please contact the respective area for turn around times and available assays.

# **Molecular & Cytogenetic Testing**

## **Preparation, Collection, Fixation and Transportation**

### **Universal Precautions Required**

#### **PATIENT PREPARATION**

Patient preparation for all molecular and cytogenetic specimens is according to the instructions specified by the patient's physician.

#### **REQUISITION REQUIREMENTS**

1. Refer to the requisition requirements for Histopathology requisition.
2. Include both date and time of collection.

#### **SPECIMEN LABELING**

1. Use facilities guidelines for obtaining proper patient identification.
2. Label the blood collection tube with the first and last name and second identifier in pen, or affix a printed label or an addressograph label. Indicate date/time collected on specimen. **SEE SPECIMEN LABELING SECTION.**

#### **COLLECTION, HANDLING, FIXATION AND TRANSPORTATION**

1. Collect specimens according to each of the following sections.
2. Ensure proper mixing of Blood/BM specimens.
3. Label specimen according to labeling instructions, complete requisition according to requirements, place the specimen container in the large section of a biohazard transport bag and the completed requisition in the outer section and submit to the laboratory.
4. Transport to the laboratory at room temperature immediately.

<b>Test Name:</b>	<b>Cytogenetic Analysis – Constitutional Blood Detection of chromosomal gains and/or losses, as well as deletions, inversions, or translocations</b>
<b>Methodology:</b>	Chromosome Analysis
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One green top (sodium heparin) peripheral blood
<b>Specimen Collection:</b>	Venous blood draw
<b>Handling:</b>	Peripheral blood - room temperature. On weekends, refrigeration recommended.
<b>Specimen Requirements:</b>	Preferred: 3-5ml whole blood Minimum: 1ml whole blood
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen:</b>	Frozen; wrong anticoagulant
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

<b>Test Name:</b>	<b>Cytogenetic Analysis – Leukemia/Lymphoma Detection of chromosomal gains and/or losses, as well as deletions, inversions, or translocations specific to hematopoietic disorders and malignancies</b>
<b>Methodology:</b>	Chromosome Analysis
<b>Performed:</b>	Monday- Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One green top (sodium heparin) tube of bone marrow aspirate; one green top (sodium heparin) peripheral blood (blast count should be >5%)
<b>Specimen Collection:</b>	Bone marrow aspirate; venous blood draw
<b>Handling:</b>	Bone marrow aspirate; peripheral blood - room temperature. On weekends, refrigeration recommended.
<b>Specimen Requirements:</b>	Preferred: 3-5ml whole blood/bone marrow aspirate Minimum: 1ml whole blood/bone marrow aspirate
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen:</b>	Frozen; wrong anticoagulant
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

<b>Test Name:</b>	<b>Cytogenetic Analysis – Products of Conception Detection of chromosomal gains and/or losses, as well as deletions, inversions , or translocations</b>
<b>Methodology:</b>	Chromosome Analysis
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Fresh tissue in RPMI
<b>Specimen Collection:</b>	Surgical Specimen placed in RPMI
<b>Handling:</b>	Refrigerate fresh tissue
<b>Specimen Requirements:</b>	Fetal demise
<b>Transport:</b>	Keep ambient, refrigerate for extended storage
<b>Suboptimal Specimen:</b>	Frozen; fixed tissue
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: Currently outsourced in conjunction with chromosomal microarray testing, as indicated.**

<b>Test Name:</b>	<b>Cytogenetic Analysis- Oncology Detection of chromosomal gains and/or losses, as well as deletions, inversions, or translocations specific to hematopoietic disorders and malignancies</b>
<b>Methodology:</b>	Chromosome Analysis
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One green top (sodium heparin) tube of bone marrow aspirate; one green top (sodium heparin) peripheral blood (blast count should be >5%)
<b>Specimen Collection:</b>	Bone marrow aspirate; Venous blood draw
<b>Handling:</b>	Bone marrow aspirate; peripheral blood - room temperature. On weekends, refrigeration recommended.
<b>Specimen Requirements:</b>	Preferred: 3 ml-5 ml whole blood/bone marrow aspirate Minimum: 1 ml whole blood/bone marrow aspirate
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen</b>	Frozen; wrong coagulant
<b>Department:</b>	Molecular Diagnostics & Cytogenetics

<b>Test Name:</b>	<b>Cytogenetic Analysis – Solid Tumor</b> <b>Detection of chromosomal gains and/or losses, as well as deletions, inversions, or translocations specific to malignancies</b>
<b>Methodology:</b>	Chromosome Analysis
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Fresh tissue in RPMI
<b>Specimen Collection:</b>	Surgical Specimen placed in RPMI
<b>Handling:</b>	Refrigerate fresh tissue
<b>Specimen Requirements:</b>	Tumor in tissue
<b>Transport:</b>	Keep ambient, refrigerate for extended storage
<b>Suboptimal Specimen:</b>	No tumor present in tissue; frozen; fixed tissue
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: Currently outsourced.**

<b>Test Name:</b>	<b>FISH – FFPE</b> <b>Fluorophore-labeled probes for DNA specific targeting of aberrant chromosomes in leukemia, lymphoma, myeloma myeloproliferative/myelodysplastic disorders, and solid tumors</b>
<b>Methodology:</b>	Fluorescence In Situ Hybridization
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissue block or minimum of 4 slides
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat
<b>Specimen Requirements:</b>	Minimum 4 slides
<b>Transport:</b>	Ship with ice pack (only in hot weather)
<b>Suboptimal Specimen:</b>	No tumor present in tissue; labeling specifications not followed; incorrect fixative; frozen specimen
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

<b>Test Name:</b>	<b>FISH – Fresh</b> <b>Fluorophore-labeled probes for DNA specific targeting of aberrant chromosomes in leukemia, lymphoma, myeloproliferative/myelodysplastic disorders, and solid tumors</b>
<b>Methodology:</b>	Fluorescence In Situ Hybridization
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One purple EDTA or heparinized tube; touch prep; fresh tissue in RPMI
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Avoid excessive heat; whole blood 2-8 degrees Celsius; refrigerate fresh tissue; bone marrow aspirate 2-8 degrees Celsius
<b>Specimen Requirements:</b>	Preferred specimen: touch preps; 5ml whole blood; 1ml bone marrow Minimum: 0.5ml heparinized or EDTA bone marrow
<b>Transport:</b>	Keep ambient, refrigerate for extended storage
<b>Suboptimal Specimen:</b>	No tissue on slide; labeling specifications not followed; incorrect fixative; frozen specimen
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

- Plasma cell enrichment (CD138+) performed for myeloma cases if adequate specimen available. Specimens frequently shared with conventional cytogenetics.
- CD34+ enrichment performed for myelodysplasia cases if adequate specimen available.

<b>Test Name:</b>	<b>FISH - Lymphoma</b> <b>Fluorophore-labeled probes for DNA specific targeting of aberrant chromosomes in leukemia, lymphoma, myeloproliferative/myelodysplastic disorders, and solid tumors</b>
<b>Methodology:</b>	Fluorescence In Situ Hybridization
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissues or 4 positively charged slides; touch prep; fresh tissue, minimum 0.5 ml heparinized or EDTA bone marrow, 5 ml heparinized or EDTA blood, or fresh tissue in RPMI
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat; whole blood 2-8 degrees; refrigerated fresh tissue
<b>Specimen Requirements:</b>	Tumor in tissue; minimum 4 slides; 5 ml whole blood; 1 ml bone marrow; touch preps
<b>Transport:</b>	Refrigerate fresh tissue and ship within 24 hours with ice pack
<b>Suboptimal Specimen</b>	No tumor present in tissue; tissue has been decalcified; labeling specifications not followed; incorrect fixative; frozen specimen
<b>Department:</b>	Molecular Diagnostics & Cytogenetics

<b>Test Name:</b>	<b>FISH – Urothelial Cell</b> <b>Fluorophore-labeled probes for DNA specific targeting of aberrant chromosomes in Urothelial cell cancers</b>
<b>Methodology:</b>	Fluorescence In Situ Hybridization (UroVysion)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Collect specimen according to the standard operating procedures of the facility
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep specimen cool, avoid excessive heat
<b>Specimen Requirements:</b>	5-20ml of urine; thin prep (prepared by cytology)
<b>Transport:</b>	Refrigerate and ship within 24 hours with ice pack
<b>Suboptimal Specimen:</b>	No cells in specimen/slide; labeling specifications not followed; incorrect fixative; frozen specimen
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

<b>Test Name:</b>	<b>BCR/ABL by PCR</b> <b>Quantitative real-time PCR used for the detection of t(9;22) BCR/ABL1 fusion transcripts that result in CML. Analytical sensitivity is 10<sup>-5</sup> on the International Scale (IS)</b>
<b>Methodology:</b>	Quantitative RT-PCR (Cepheid)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One purple EDTA tube preferred
<b>Specimen Collection:</b>	Bone marrow aspirate; venous blood draw
<b>Handling:</b>	Whole blood - room temperature, on weekend store in refrigerator
<b>Specimen Requirements:</b>	Minimum: 4mL whole blood/bone marrow aspirate
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen:</b>	Frozen. Wrong anticoagulant.
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: This assay does not detect the p190 + (9;22) seen in B-cell ALL. If B-ALL suspected, outsourcing the specimen will be pursued or performed by FISH for diagnosis.**

<b>Test Name:</b>	<b>EGFR Mutational Analysis – Lung Cancer</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissue; 4 positively charged slides; paraffin embedded scrolls
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat
<b>Specimen Requirements:</b>	Tumor in tissue, minimum of 4 slides
<b>Transport:</b>	Keep cool, place inside biohazard bag
<b>Suboptimal Specimen</b>	No tumor present in tissue; tissue has been decalcified; labeling specifications not followed; incorrect fixative; frozen
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels.**

**\*A liquid biopsy (peripheral blood) may be used if tissue is limited and/or insufficient for molecular testing.**

<b>Test Name:</b>	<b>JAK2 V617F</b> <b>JAK2 mutation testing to confirm polycythemia vera or other myeloproliferative neoplasms</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One purple EDTA tube
<b>Specimen Collection:</b>	Bone marrow aspirate; venous blood draw
<b>Handling:</b>	Whole blood - room temperature, on weekend store in refrigerator
<b>Specimen Requirements:</b>	Preferred: 3ml whole blood/bone marrow aspirate Minimum: 1ml whole blood/bone marrow aspirate
<b>Transport:</b>	Room temperature in biohazard bag
<b>Suboptimal Specimen</b>	Frozen; wrong anticoagulant
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels.**

**Exon 12 JAK2 mutations may be pursued if JAK2 V617F mutation is negative.**



<b>Test Name:</b>	<b>KRAS – Colorectal Cancer, Lung Cancer</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissue; 4 positively charged slides; paraffin embedded scrolls
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat
<b>Specimen Requirements:</b>	Tumor in tissue; minimum of 4 slides
<b>Transport:</b>	Keep cool, place inside of biohazard bag
<b>Suboptimal Specimen</b>	No tumor present in tissue; tissue has been decalcified; labeling specifications not followed; incorrect fixative; frozen
<b>Department:</b>	Molecular Diagnostics & Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels. KRAS molecular testing is not indicated as a routine stand-alone assay as a sole determinant of targeted therapy.**

<b>Test Name:</b>	<b>BRAF V600E (cobas) - Melanoma</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR) (companion diagnostic assay for melanoma tissue as an aid for eligibility for vemurafenib)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissue; 4 positively charged slides; paraffin embedded scrolls
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat
<b>Specimen Requirements:</b>	Tumor in tissue; minimum of 4 slides
<b>Transport:</b>	Keep cool, place inside of biohazard bag
<b>Suboptimal Specimen</b>	No tumor present in tissue; tissue has been decalcified; labeling specifications not followed; incorrect fixative; frozen
<b>Department:</b>	Molecular Diagnostics & Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels.**

<b>Test Name:</b>	<b>BRAF Mutation Analysis – Melanoma, Lung , Colon</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissue; 4 positively charged slides; paraffin embedded scrolls
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat
<b>Specimen Requirements:</b>	Tumor in tissue; minimum of 4 slides
<b>Transport:</b>	Keep cool, place inside of biohazard bag
<b>Suboptimal Specimen</b>	No tumor present in tissue; tissue has been decalcified; labeling specifications not followed; incorrect fixative; frozen
<b>Department:</b>	Molecular Diagnostics & Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels.**

<b>Test Name:</b>	<b>Thrombophilia Assay (Hypercoag panel, coag risk panel)</b>
<b>Methodology:</b>	Multiplex PCR (e sensor)/Fluorescence Monitoring
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One purple EDTA tube- includes 4 mutations: Factor V Leiden, Prothrombin, and 2 MTHFR Mutations-may be ordered as single test
<b>Specimen Collection:</b>	Venous blood draw
<b>Handling:</b>	Whole blood - room temperature, on weekend store in refrigerator
<b>Specimen Requirements:</b>	Preferred: 3 ml whole blood Minimum: 1 ml whole blood
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen</b>	Frozen; wrong coagulant
<b>Department:</b>	Molecular Diagnostics & Cytogenetics

<b>Test Name:</b>	<b>B-cell Clonality Assessment – Hematologic Disease</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One purple EDTA peripheral blood; 2-3ml; EDTA bone marrow aspirate; FFPE
<b>Specimen Collection:</b>	Bone marrow aspirate; venous blood draw
<b>Handling:</b>	Whole blood - room temperature, on weekend store in refrigerator
<b>Specimen Requirements:</b>	Preferred: 3ml whole blood/bone marrow aspirate Minimum: 1ml whole blood/bone marrow aspirate
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen</b>	Frozen; wrong anticoagulant
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels.**

<b>Test Name:</b>	<b>T-cell Clonality Assessment – Hematologic Disease</b>
<b>Methodology:</b>	Polymerase Chain Reaction (PCR)
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	One purple EDTA peripheral blood; 2-3ml; EDTA bone marrow aspirate; FFPE
<b>Specimen Collection:</b>	Bone marrow aspirate; venous blood draw
<b>Handling:</b>	Whole blood - room temperature, on weekend store in refrigerator
<b>Specimen Requirements:</b>	Preferred: 3ml whole blood/bone marrow aspirate Minimum: 1ml whole blood/bone marrow aspirate
<b>Transport:</b>	Inside biohazard bag
<b>Suboptimal Specimen</b>	Frozen; wrong anticoagulant
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**Note: Currently outsourced in conjunction with multigene targeted disease panels.**

<b>Test Name:</b>	<b>Next-Generation Sequencing (Various Disease Profiles)</b>
<b>Methodology:</b>	Next-Generation Sequencing
<b>Performed:</b>	Monday-Friday. After hours and weekends: see table of contents for “directory” section
<b>Specimen Collection Supplies:</b>	Paraffin embedded tissue block or minimum of 4 slides; PB; BM
<b>Specimen Collection:</b>	Universal precautions required
<b>Handling:</b>	Keep block cool, avoid excessive heat; whole blood 2-8 degrees Celsius; refrigerate fresh tissue
<b>Specimen Requirements:</b>	Minimum 4 slides Preferred: 3ml whole blood/bone marrow aspirate Minimum: 1ml whole blood/bone marrow aspirate
<b>Transport:</b>	Ship with ice pack (only in hot weather); biohazard bag
<b>Suboptimal Specimen</b>	No tumor present in tissue; labeling specifications not followed; incorrect fixative; frozen
<b>Department:</b>	Molecular Diagnostics and Cytogenetics

**\*Delta Pathology has partnered with nationally recognized testing laboratories to offer a full range of molecular and FISH assay options if not performed at the local level. In lung cancer, multiplexed genetic sequencing panels are preferred over multiple single-gene test to identify other treatment options beyond EGFR, ALK, and ROS1.**

# **Lab to Lab Specialty Testing/ Stains**

- ❖ **Immunohistochemistry**
- ❖ **Special Stains**
- ❖ **Molecular Pathology**
- ❖ **Flow Cytometry**

## IMMUNOHISTOCHEMISTRY STAINS

DAB CHROMAGEN	
AAT-Alpha-antitrypsin	ADH5 (dual stain)
AFP-Alpha Fetaprotein	ALK-Anaplastic Lymphoma Kinase
ARG-1	B72.3 (TAG-72)
BCL-2	BCL-6
Ber-EP4-Anit Human Epithelial Antigen	Beta-Catenin
CA125	CA19.9
Calcitonin	Calponin
Calretinin	CAS
CD1A	CD3
CD4	CD5
CD7	CD8
CD10	CD15
CD20	CD23
CD30	CD31
CD34	CD44
CD45 (LCA)	CD56
CD57	CD68 (KP1)
CD79A	CD99
CD117-C-KIT (GIST)	CD138
CDX2	CEA
Chromogranin A	CK-HMW (34 Beta E12)
CK-HMW-p63	CK-PAN (AG1/AE3)
CK5/6	CK7
CK8-LMW	CK19
CK20	CMV
Cyclin D1	D2-40
Desmin	DOG1
EBV	E-Cadherin
EMA	ER-Estrogen Receptor
Factor 8	Factor 13X
Galectin-3	GATA-3
GCDFP-15	GFAP – Glial Fibrillary Acidic Protein
GLUT1	Glycophorin A
HCG	Hep Par1
Her2Neu by IHC	HMB45
H. Pylori	HSV II
Inhibin	Kappa
Ki67	Lambda
Melan A	Mammaglobin
MLH-1	MOC-31
MSA (HHF35)	MSH-2
MSH-6	MUC-1

<b>DAB CHROMAGEN</b>	
MUC-2	MUC-5AC
MUM-1	Myeloperoxidase
Myosin (5M-H)	Napsin A
Neurofilament	NKx3.1
NSE	OCT3/4
P16	P40
P53	P57
P63	P120 Catenin
P501s	P504s (Ama CR)
Parvalbumin	PAX2
PAX5	PAX8
PD-L1	PHH3
PIN4 Cocktail (dual stain)	PLAP – Placental Alkaline Phosphatase
PMS2	PR – Progesterone Receptor
PSA – Prostate Specific Antigen	PSAP – Prostate Acid Phosphatase
Prostate Triple S	PSMA
RCC	S100
SMA – Smooth Muscle Actin	SOX-10
SOX-11	Synaptophysin
Tdt	Thrombomodulin
Thyroglobulin	Treponema pallidum (spirochete)
TTF-1 Thyroid Transcription	Villin
Vimentin	VZV
WT1 – Wilm's Tumor 1	

<b>RED CHROMAGEN</b>
<b>Factor13</b>
<b>HMB45</b>
<b>HHV-8</b>
<b>Ki67</b>
<b>Melan A</b>
<b>S100</b>
<b>SOX 10</b>
<b>T Palladium</b>

<b>PANELS:</b>
<b>Breast In Situ</b>
<b>ER PR</b>
<b>Breast Invasive</b>
<b>ER, PR, Ki67, HER2 by FISH &amp; IHC</b>
<b>Mismatch Repair</b>
<b>MLH1, MSH2, MSH6, PMS2</b>

<b>SPECIAL STAINS</b>	
AFB	AFB Flo
Alcian Blue	Colloidal Iron
Congo Red	DIF (Direct Immunofluorescence)
Elastic	Fontana Masson
Giemsa	GMS-Pneumocystis
GMS-Fungus	Gram
Gram-yellow	Iron
Mast Cell Stain	Melanin Bleach
Mucicarmine	Oil Red O
PAS-H	PAS-Diastase
Reticulin	Trichrome
Vonkossa	Warthin-Starry

<b>FLOW CYTOMETRY</b>
<b>CD4 Profile</b>
(Includes CD3, CD4 and CD8 per cent and absolute values)
<b>Leukemia/Lymphoma Panel</b>
Blood
Bone Marrow
Body Fluid
Tissue/Lymph Node

<b>MOLECULAR PATHOLOGY</b>
<b>Fluorescent In Situ Hybridization (FISH)</b>
HER2Neu
<b>Nucleic Acid Amplification (NAA) – Thin Prep Only</b>
HPV High Risk
GC/CT