Title: Specimen Submission Guidelines

CAP Checklist: GEN.40050

Document Type: Standard Operating Procedure

COMPLIANCE STATEMENT:

To define how to submit surgical pathology and cytology specimens to the University of Colorado Pathology Department and how to arrange for an autopsy examination. ***The pathology department maintains and reviews electronic copy at least biennially.***

LABORATORY POLICY:

I. EXTENT OF SERVICES

Surgical Pathology is a section of Anatomic Pathology concerned with the study of tissue and organ samples removed from patients to obtain diagnosis of a lesion or disease. The pathologist is therefore able to advise the referring physician as to the nature of the disease, the prognosis, and the need for additional sampling or exploration.

- Surgical Pathology Reports are available through EPIC.
- Turnaround time for biopsies and small specimens is usually 24-48 hours, depending on case complexity and whether special stains or ancillary studies are required.
- Turnaround time for larger resection cases may require more time for processing and may not be finalized until two or more days after receipt in the pathology laboratory.
- If a case is still in progress, you may contact the Surgical Pathology Main Office (720-848-4421) and ask to speak to the attending assigned to the case.

Cytopathology is another section of Anatomic Pathology concerned with the study and evaluation of cells present in smears, fine needle aspirates, and body fluids. Analyses of nuclear and cytoplasmic characteristics permit the diagnosis of various disease processes.

Autopsy/post-mortem examination is a highly specialized surgical procedure that consists of a thorough examination of a deceased patient to determine the cause and manner of death and to evaluate any disease or injury that may be present.

II. HOURS OF OPERATION, LOCATION AND LAB PHONE NUMBERS

Section and Location	Hours	Contact	After Hours Contact
Main Office AIP1 3.003	Monday-Friday 08:00am-05:00pm Excluding holidays	**p.** (720) 848-4421 **fax** (720) 848-4454 **tube** #833	(720) 848-4421 on call resident and attending listed on voicemail message
Frozen Section AIP1 3.128	Monday-Friday 07:30am-06:00pm Excluding holidays	**p.** (720) 848-4653 **fax** (720) 848-0989 **tube** #833	On call resident (amion.com)
Surgical Pathology Gross Room AIP1 3.124	Monday-Friday 07:30am-06:00pm Excluding holidays	**p.** (720) 848-4653 **fax** (720) 848-0989 **tube** #833	On call resident (amion.com)
Histology Subspeciality Laboratory AIP1 3.106	Monday-Friday 08:00am-05:00pm Excluding holidays	**p.** (720) 848-4281 **fax** (720) 848-4454 **tube** #661, #681	Closed
Cytopathology AIP1 3.106	Monday-Friday 08:00am-05:00pm Excluding holidays	**p.** (720) 848-4361 **fax** (720) 848-0924 **tube** #661, #681	Closed
Autopsy	Monday-Friday	Office of Decedent	Office of Decedent

AIP Morgue B2309	08:00am-05:00pm Excluding holidays	Affairs (720) 848-4356 or Autopsy Coordinator (720) 848-4387	Affairs (720) 848-4356 or Autopsy Coordinator (720) 848-4387

III. DEPARTMENT LEADER CONTACT LIST

Chair, Department of Pathology Ann D. Thor, MD	(303) 724-3704
Vice-Chair, Anatomic Pathology Jeffrey Kaplan, MD	(303) 848-4453
Directors, Surgical Pathology Amber Berning, MD Jeff Schowinsky, MD	(720) 848-4423 (720) 848-4411
Supervisor, Surgical Pathology Andrea Hartwick, MHA, MS PA(ASCP)^{cm}	(720) 848-4641
Histology Program Director Jeana Marks, HT(ASCP) Supervisor, Histology Laboratory Phil Faulkner, HTL(ASCP)	(720) 848-4745 (720) 848-4281
Supervisor, Histology Subspecialty Laboratory Phil Faulkner, HTL(ASCP)	(720) 848-4281
Director, Cytopathology Sanjana Mehrotra, MD	(720) 848-5021
Supervisor, Cytopathology Rebecca Waller, MPH, SCT (ASCP)	(720) 848-4697
Director, Autopsy Sarah Mengshol, MD	(720) 848-9105

IV. SURGICAL PATHOLOGY

- Specimens should be sent to the surgical pathology (gross room) laboratory, as quickly as possible, after removal from the patient.
- Specimens should be refrigerated if a time lapse of one (1) hour or more is expected before delivery to the lab.
- Each specimen must be labeled (see Container Labels below) with:
  1. Patient's full name
  2. Medical Record Number (MRN)/ Hospital Number
  3. Anatomic source and site of the specimen (e.g., left dorsal hand). This information must be on a label on the container itself, NOT on the lid of the container.
- Additional specimens must be placed in separate and properly labeled containers.
- **A printed paper copy of the Epic order or a handwritten paper requisition MUST accompany each specimen.**
- All Pathology orders must be placed in Epic and printed out using one of the following lab orders:

LAB3421	Surgical Pathology Request	Biopsy/Tissue Surgical Specimens
171014	Dermatopathology Request	Skin Biopsy and Excisions (often from the Clinic)

- If EPIC orders do not print automatically:
  - Go to Chart Review (Path) and click on the order.
  - Scroll down to the bottom of the order and click on: View Order Information
  - Scroll down to the bottom of the page and click on: Reprint Requisitions
  - Click on the printer icon to print to the selected local printer.
- Paper surgical pathology requisition forms can be obtained from the Surgical Pathology Laboratory, x84653, AIP1 Room 3.124.
- Requisition forms must be legible and filled out thoroughly, to include:
  1. Patient's full name
  2. Medical Record Number (MRN)
  3. Date of birth
  4. Submitting Clinic Location
  5. The referring provider or the name of the responsible physician
  6. Phone or pager number for the physician requesting the lab work.
  7. Date and time the specimen was collected.
  8. Specimen anatomic source/site and laterality (i.e., kidney, right)
  9. **Pertinent clinical history**, including history of malignancy and any radiation or chemotherapy, infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis), and differential diagnosis as appropriate.
  10. Referral Number - if required by patient's insurance
- Hospital transport has scheduled deliveries from various sites throughout the hospital to the surgical pathology laboratory throughout the day.
- Specimens must be packaged per universal precautions:
  - Double- bagged and accompanied by the corresponding order/requisition form.
  - To prevent leakage, all lids must be securely tightened.
  - The specimen bag should be labeled with a surgical pathology sticker or handwritten instructions that the specimen is for the surgical pathology laboratory.
- For fixation of specimens in formalin, specimens must be fully submerged with the optimal formalin to approximate specimen volume of 10:1 or higher, or if not feasible (e.g., large specimens) at least 4:1.
- For specimens clinically suspected or otherwise known to contain malignancy, which are likely to be submitted for ancillary testing, (e.g., breast carcinoma, gastroesophageal carcinoma), it is required to record on the requisition:
  - out of body time (time the tissue is removed from the patient)
  - the time the specimen is placed in fixative.
- Extra-Large specimens**:** (i.e., limb amputations):
  - Double-bagged into two large red biohazard bags.
  - Labeled on the outside with the patient's name, hospital number, and source of specimen as above.
  - The hospital staff should bring the specimen and associated requisition directly to the Surgical Pathology Laboratory (AIP room 3.124)
  - OR if after hours/holiday- bring to specimen storage refrigerator (AIP II room 2.371) near the Operating Rooms and place it in the refrigerator.
  - Record the specimen in the "OR Pathology Logbook" and all specimens will be delivered

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by transport on the first route of the following business day.

a) CONTAINER LABELS

Each specimen container must be labeled with:

- Patient's full name
- Hospital number (medical record number)
- Anatomic source and site of the specimen (i.e., right upper lobe lung nodule)
- This information must be on a label on the container itself, NOT on the lid of the container.
- Place additional specimens in separate and properly labeled containers.

Specimen Fixation:
Exercise universal precautions when handling and transporting all surgical pathology specimens.

Place specimens (see exceptions below) in:

- Appropriately sized, tightly sealed, approved containers.
- With a volume of 10% formalin at least 10 times that of the tissue volume, if possible.
- Label each container with a biohazard/formalin warning label.
- Proper and timely fixation is a critical step in tissue preparation for diagnosis, and **the importance of this step cannot be over emphasized.**
- Formalin is available in the Operating Room and most clinics (see Appendix B for supply vendors).

After placing the specimen inside of the appropriately labeled formalin container:

- Place in a sealable biohazard bag (and secure requisition within the proper compartment).
- Seal the bag prior to delivery to the laboratory.
- **Failure to do this may result in rejection of the specimen and delay in diagnosis.**

b) SPECIMEN DELIVERY METHODS

- Specimens may be delivered in one of the following ways during business hours:
  - Picked up by courier or hospital transport and delivered to pathology.
    - Hospital transport's first pickup run starts at 7:00 am and the last run begins at 4:30 pm.
  - Bring specimens directly to the Surgical Pathology Laboratory (Gross Room), AIP Room 3.124 between the hours of 7:30 am and 6:00 pm.
    - Specimens for intra-operative frozen sections, Stat or Rush cases MUST be hand delivered and given directly to gross room staff with verbal indication that the specimen is Rush, Stat or Frozen. The requisition form MUST be labeled Stat, Rush or Frozen with clinician contact information.
    - **ALL STAT OR RUSH POST-TRANSPLANT BIOPSIES (LIVER, KIDNEY, LUNG, AND HEART) MUST BE HAND DELIVERED TO GROSS ROOM STAFF AND THE REQUISITION FORM MUST BE CLEARLY MARKED.**
  - Biopsies or other small specimens may be delivered to the Surgical Pathology Laboratory by pneumatic tube (station #833).
    - Irretrievable specimens should not be sent through the pneumatic tube and hand delivered instead.
- Biopsies will be processed if received before 5:30pm.
- **PLEASE PUT SPECIMENS IN THE APPROPRIATE DESIGNATED PICKUP SITE AS EARLY AS POSSIBLE TO MAKE CERTAIN SPECIMENS ARE PROCESSED AS QUICKLY AS POSSIBLE.**
- **If cases are held within their respective departments and delivered to Surgical Pathology in batches,**

there is a high likelihood that the specimen will not be processed the same day, and the results will be delayed.

c) SPECIMEN REJECTION POLICY

All specimens received by Surgical Pathology are examined for the following deficiencies:

1. Absence of a Requisition Form
2. Absence of **TWO** patient identifiers on container and requisition form
3. Mislabeling of container or specimen designation that differs from the requisition.
4. Missing specimen container
5. No tissue in the container
6. Requisition missing physician's name.
7. No pertinent clinical history provided.
8. Incomplete requisition (specimen sites not listed)
9. Inadequate amount of fixative
10. Container lid improperly sealed/fluid spill

- To prevent specimens from being lost during the transport process, cases with deficiencies will **not** be returned.
- Instead, those specimens with deficiencies 2 (Absence of TWO patient identifiers on specimen or requisition) or 3 (Mislabeling of container or specimen designation that differs from the requisition) will require a clinical staff member to come to the Surgical Pathology lab (AIP Room 3.124) to correct the discrepancy prior to processing.
- Clinical specimens that are deficient in areas 1, 4, 5, 6, 7, 8 may be handled as follows:
  - The clinic may fax over the Requisition Form with the required information.
  - Surgical pathology may call the submitting department and talk to a member of the clinical team.
  - If the specimen with discrepancies is from an **out of state or out of town clinic**, an attempt to rectify the situation via fax or phone will be made. The specimen may have to be shipped back to the clinic for correction.
- An RL Solutions incident report will be submitted for any discrepancy and filed with Risk Management. A copy of the requisition with the documented error will be kept in Surgical Pathology.

d) DEFINITIONS OF STAT VS RUSH VS ROUTINE SPECIMENS

- **STAT** – Surgical biopsy specimens received in formalin that require same day processing due to an emergent patient care situation and the pathologic diagnosis will immediately impact or alter the plan of treatment. Only small tissues (biopsies) can be processed Stat. Most ancillary special stains and immunostains cannot be performed in a Stat manner. Results are typically reported via phone call within 6 hours of receipt. If results are required in less than 6 hours, a frozen section may be considered but must be performed on FRESH tissue.
- **RUSH** – Surgical biopsy specimens received in formalin that require a 24-hour turnaround time or less due to an urgent patient care situation. If received in the Surgical Pathology lab by late afternoon, these cases are reported out in the morning of the next business day.
- **Routine** – Surgical pathology specimens in which there is no immediate need for patient results.
  - Most routine specimens will have results reported within 2 business days.

e) AFTER HOURS STAT, RUSH, FROZEN SECTION ANALYSIS OR OTHER SPECIAL ANALYSIS OF NON-FIXED TISSUE

- Call the on-call resident (amion.com) at night (7pm-7am) or weekends who will notify the attending pathologist for all after hours STAT, RUSH, specimens requiring an intra-operative frozen section.

  or other special analysis.
  - If reaching the on-call resident is unsuccessful, contact the attending pathologist by cell on amion.com.
- Hand-deliver the specimen to the pathology resident at the gross room (AIP Rm 3.124).
- The requisition form MUST be labeled as STAT, RUSH or Frozen.

f) AFTER HOURS ROUTINE SPECIMENS

- Send specimen (and accompanying requisition) to the holding refrigerator in the main clinical laboratory (2nd floor of the Leprino Building).
- If in Central OR's, specimens for surgical pathology can be put in the refrigerator and logged.
- Transport will deliver the specimen to surgical pathology in the morning of the next working day.

g) FROZEN SECTIONS

The intra-operative frozen section is one of the most important procedures that the pathologist performs, and when effectively utilized can influence the course of an operation. The purposes of a frozen section are:

- to establish the presence and nature of a lesion
- to determine the adequacy of surgical margins
- to establish whether the tissue obtained contains diagnostic material (even if the exact diagnosis cannot be made at the time of frozen section) or whether additional sampling is required.

- The indication and limitations of frozen section diagnosis vary from organ to organ.
- Hand-deliver the specimen to the pathology resident at the gross room (AIP Rm 3.124).
- Requisition must be labeled as Frozen, with contact information to contact clinical team with results.

To request a frozen section or intraoperative consultation:

- **7am-7pm on weekdays (non-holiday):** call 848-4654 (Surgical Pathology Lab).
  Provide the following information:
  - OR room number
  - Requesting surgeon
  - Type of tissue being sent
  - Infectious status (e.g., TB, hepatitis B/C, etc..) and
  - Any other special requests

AFTER HOURS FROZEN SECTIONS AND HOLIDAYS

- **7pm-7am on weekdays and all day on weekends and holidays**.
  - Notify the pathologists in advance (> 30 minutes if possible)
  - Contact the On-Call Surgical Pathology resident who will then notify the Surgical Pathology Attending.
  - If you are unable to contact the On-Call Surgical Pathology resident, contact the Surgical Pathology Attending.
  - Contact numbers of the on-call staff are available through amion.com or are available

as a recorded message at 720-848- 4421.

h) BREAST SPECIMENS

To help achieve rapid triaging and fixation—please do not batch specimens!

Needle core biopsies:

- Write the time the tissue is removed from the body and the time the specimen is placed in formalin on the requisition form.
- Indicate all special instructions (i.e., the tissue in the cassette contains calcifications).

For all resections related to the breast including plastic surgery specimens and specimens removed from patient with known breast cancer (this is without flexibility):

- Rapidly transport all breast specimens to pathology immediately upon removal from the patient to have a <60-minute cold ischemic time which is required for hormone receptor staining.
- Note the out of body time on the requisition.
- To achieve less than an hour of cold ischemic time, pathology triages, and sections the specimens when they arrive and place them in formalin noting the in-formalin time on the requisition for each specimen.
- After hours- place tissue in formalin and document in formalin time on requisition or call the on-call resident for triaging instructions if the specimen has suspected or confirmed malignancy.

i) SPECIMENS REQUIRING SPECIAL HANDLING

Several types of specimens should be submitted to the pathology laboratory **fresh** (without formalin), in a **sterile container,** so that ancillary studies (i.e., lymphoma workup, chromosomal analysis, flow cytometry) may be performed.

Examples include:

- Biopsies and resections/excisions for lymphoma work-up
- Biopsies of tumors with unknown diagnosis (possible sarcoma)
- Any specimen consented for various research protocols (if specified by protocol)
- Any specimen in which ancillary studies are anticipated beforehand.

- If special arrangements are needed, please discuss the case with the attending pathologist.
- Bring these specimens fresh to the surgical pathology laboratory (AIP Rm 3.124) for review.
- If questions arise or arrangements need to be made, call **720-848-4653;** after hours, please contact the surgical pathology resident on-call (available through amion.com).

j) BONE MARROW BIOPSIES AND ASPIRATES

- Bone marrow biopsies (core and clot) and aspirates should be submitted to the Clinical Laboratory on the second floor of the Leprino Building along with appropriate requisition and orders. (**LAB4350 Bone Marrow Morphology Request)**
- Formalin- filled containers for marrow core biopsy and clot specimens may be obtained from the Hematology section of the Clinical Laboratory (86928).

k) PRODUCTS OF CONCEPTION (POCS) AND FETUSES

- Submit in formalin (unless cytogenetics is requested), with proper patient identification on the container, including mother's name and medical record number (MRN).

- A completed Surgical Pathology requisition form must accompany the specimen, which provides gestational age (or clinicians' best estimate).

- All products of conception (POCs) must be accompanied by consent and disposition forms signed by the mother (can be scanned into EPIC).
- All intact fetuses 20 weeks gestational age and greater are sent to pathology morgue (AIP B2309)
- If chromosomal analysis is requested, please call the Colorado Genetics Lab (303-724-5701) for assistance after hours.
- Tissue for cytogenetics can be collected from a **fresh specimen** in the Surgical Pathology Laboratory (AIP Rm 3.124) and sent to the Colorado Genetics Laboratory.
- Contact the Office of Decedent Affairs for specific details regarding disposal and examination of perinatal tissues (303-848-4356).

l) RENAL BIOPSIES

- Biopsies from a transplanted kidney are submitted for light microscopy with other stains and procedures being performed at the discretion of the pathologist and/or clinical service.
- Biopsies from native kidneys are typically submitted for evaluation by light microscopy, immunofluorescence, and electron microscopy.
- Immediately after a biopsy is obtained, it is examined for adequacy using a microscope prior to dividing it for each study.
- Adequacy assistance is available from the Surgical Pathology Laboratory by calling 720-848-4653 ahead of time (please call to schedule 24 hours in advance if possible). Provide the following information when requesting assistance:
    - Patient name and MRN
    - Time and location of biopsy
    - Contact name and phone number.
- Because of the complicated nature of these specimens, the turnaround time is typically between 2 and 7 business days.

m) INFECTIONS SPECIMENS REQUIRING CULTURES FOR MICROBIOLOGY

- These include infectious (Mycobacterium or other microbiologic agents) tissue specimens that may require cultures.
- Microbiology tissue cultures are best collected in the Operating Room and sent directly to the main Clinical Laboratory (Leprino Building) with appropriate Microbiology or Virology Requisition forms.
- The Pathology Laboratory is **NOT** a sterile environment, and specimens may become contaminated if cultures are collected at this location.
- Use universal precautions when handling and transporting of all surgical pathology specimens.
- When infectious specimens require routine surgical pathology evaluation, *clearly indicate the infectious nature and the presumed microorganism on the requisition.*
    - Place the specimen in a formalin container and transport in a sealed biohazard bag.

n) MEDICAL-LEGAL CASES AND HARDWARE

These may include, but are not limited to:

- breast implants
- orthopedic hardware

- bullets
- foreign bodies

- Surgical Pathology requisition pertaining to confirmed or potential medical legal cases should be clearly marked as such and sent to the pathology lab.
- Please hand-deliver the specimen to the surgical pathology lab (AIP Room 3.124), with a chain of custody form and sign it over to the lab or to the safe if after hours.
- Pathology holds all hardware and legal medical specimens for at least six months and can release specimens to a member of the clinical team when the appropriate consent form is completed.

o) MOLECULAR PRIORITY SPECIMENS FOR SURGICAL PATHOLOGY

- Submit the sample to surgical pathology with the following information included in the requisition:
  - **"Molecular Priority, please send attention CMOCO."**
- Utilization of this process requires advance approval of the CMOCO laboratory.
- For questions, please contact the CMOCO laboratory: 303-724-4754 or CMOCO@ucdenver.edu

p) SUBMITTING TISSUE FOR ELECTRON MICROSCOPY

Ultrastructural analysis can be invaluable in the examination of unusual tumors, renal biopsies, ciliary dysmotility syndromes and in specimens suspected of harboring unusual pathogens.

- Place minute fragments (averaging 1 cubic mm or approximately one-half the size of a grain of rice) of fresh tissue in 3% buffered glutaraldehyde, with a tissue volume: fixative volume of approximately 1:30.
- Pre-measured vials of 3% buffered glutaraldehyde are available in the Surgical Pathology Laboratory (AIP Room 3.124).
- Tissue submitted for ultrastructural analysis should be accompanied by a properly completed Surgical Pathology Requisition Form. If additional tissue is submitted for routine light microscopy add as additional specimen on requisition and send both to surgical pathology in one sealed biohazard bag.

q) SUBMITTING PROSTATE MAPPING BIOPSIES

- The Histology Subspecialty Lab must be notified by email or phone at least 24 hours prior to prostate mapping biopsy collection to prepare the collection kit. Contact Phil.Faulkner@cuanschutz.edu at 720-848-4281.
- HSL personnel will supply a collection kit containing 6 racks of 25 vials in tamper resistant bags. Please contact the lab for additional materials.
- Identify each container with a patient label and hand-write where the biopsy was obtained.
- Prostate mapping biopsy specimens must be collected on sterilized blue biopsy sponges and placed face down into screw cap plastic specimen collection containers with a volume capacity of at least 15mL.
- Include a surgical pathology request form when returning the collection kit.
- Return all unused collection materials with the collection kit.
- Contact the lab at 720-848-4281 for pick-up of completed cases. Do not send it through hospital transport.

r) RADIOACTIVE SEED SPECIMENS

- These include some breast, prostate, and associated sentinel lymph node specimens.
- To ensure that amount of residual radiation is minimized before the specimen is processed the specimen:
    - Label the container as radioactive and document a seed is present.
    - Send fresh with accompanying requisition and radioactive seed worksheet.
    - Document the out of body time on requisition.

V. CYTOLOGY

a) STAT, RUSH, AND ROUTINE SPECIMENS

STAT:

- Cytological specimens require immediate processing due to an **emergent** patient care situation and the cytologic diagnosis will immediately affect or alter the plan of treatment.
- Ancillary special stains (most), immunostains, and cell block preparations cannot be performed in a STAT manner.
- Typically, results are delivered within approximately 2 hours of receipt.
- If the specimen type also requires cellblock preparation, a preliminary result will be delivered, and as deemed necessary by the cytopathologist, same day cellblock processing can be requested.
- **STAT specimens must be walked directly to Cytology Lab, AIP (1), 3rd. floor, Room 3.000 and the Cytology Lab must be notified by phone (x 84361) that a STAT specimen is being sent.**
- **All STAT specimens must include the name and phone number of the clinician who will receive the results.**
- **After hours STAT specimens** (outside 8 am -5 pm, and weekends) e.g. BAL specimens which must be urgently evaluated for Pneumocystis jiroveci (carinii) will be processed and read out by the surgical pathologist on-call: https://www.amion.com/Scheduling.shtml

RUSH:

- **RUSH cytology specimens** require expedited processing due to an urgent patient care situation.
- If received in the cytology lab by late afternoon, these cases are reported out in the morning of the next business day.

ROUTINE:

- **Routine cytology specimens** are those in which there is no immediate need for patient results.
- Most routine specimens will have results reported within four business days.
- Routine specimens received after-hours or on weekends should be sent to, and will be stored in the main Clinical Laboratory, second floor, Leprino Building.
    - They will be delivered to Cytology Laboratory on the next business day.

General Considerations for Cytology Specimens

- Specimens should be sent to the cytology laboratory FRESH, as quickly as possible, after removal from the patient.
- Specimens should be refrigerated if a time lapse of one (1) hour or more is expected before delivery to the cytology lab.

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- Each specimen must be labeled with:
    a) Patient's full name
    b) Hospital number (medical record number)
    c) Anatomic source and site of the specimen (i.e., pleural fluid, right.) This information must be on a label on the container itself, NOT on the lid of the container.
- Additional specimens must be placed in separate and properly labeled containers.
    - **A printed paper copy of the Epic order or a handwritten paper requisition must accompany each specimen.**
    - All Pathology orders must be placed in Epic and printed out using one of the following lab orders:

LAB3421	Surgical Pathology Request	Biopsy/Tissue Surgical Specimens
LAB3422	Cervical Vaginal Cytology Request	Pap Test Specimens
LAB3423	Non-Gyn Cytology Request	All Fluids/Washings (CSF, Pleural Fluid, Urine, Etc.)

    - If Epic orders do not print automatically:
        1. Go to Chart Review (Path) and click on the order.
        2. Scroll down to the bottom of the order and click on: View Order Information
        3. Scroll down to the bottom of the page and click on: Reprint Requisitions
        4. Click on the printer icon to print to the selected local printer.
    - Paper Cervical/Vaginal Cytology Requisition and Non-Gynecologic Cytology Requisition forms can be obtained from the Cytology Laboratory, x 84361, AIP (1) Room 3.000.
- Requisition forms must be legible and filled out thoroughly, to include:
    a. Patient's full name
    b. Medical Record Number (MRN)
    c. Date of birth
    d. Submitting Clinic Location
    e. The referring Provider or the name of the responsible physician
    f. Phone number for the physician requesting the lab work.
    g. Date and time the specimen was collected.
    h. Specimen anatomic source/site and laterality (i.e., pleural fluid, right)
    i. Pertinent clinical history, including history of malignancy and any radiation or chemotherapy, infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)
    j. Referral Number - if required by patient's insurance
- Hospital transport delivers specimens from the main Clinical Laboratory to Cytology Laboratory throughout the day, between the hours of 8:00 am and 4:30 p.m.
- Routine specimens can be tubed to Cytology (tube station # 661 or # 681). Specimens must be double-bagged and accompanied by the corresponding order/requisition form. To prevent leakage, all lids must be securely tightened. The specimen bag should be labeled with a Cytology sticker or handwritten instructions that the specimen is for the Cytology Laboratory (not Surgical Pathology).
- Sputa must be submitted in ThinPrep vials for non-gynecologic specimens, containing CytoLyt fixative. Collection containers can be obtained from the Cytology Laboratory, x 84361, AIP (1) Room 3.000.
- If used, fixatives are always added in equal volume to the volume of specimen (i.e., for 5 mL of specimen, add 5 mL of fixative). The requisition MUST be marked to indicate the type of fixative

that was used. If the slide is improperly stained based on incorrect information, it may be rendered unreadable.

- For fixation of specimens in formalin, (FNA specimens for cellblock, cores) specimens must be fully submerged with the optimal formalin to approximate specimen volume of 10:1 or higher, or if not feasible (e.g., large specimens) at least 4:1.
- For specimens clinically suspected or otherwise known to contain malignancy, which are likely to be submitted for ancillary testing, (e.g., breast carcinoma, gastroesophageal carcinoma), it is **required to record on the requisition:**
    - **the cold ischemia time** (time between out of body and placement in fixative)
    - **the time the specimen is placed in fixative.**
- Because of the importance of clinical information in the practice of cytopathology, **pertinent clinical information for these specimens must be available to the laboratory.**
- ALL SPECIMENS MUST BE SUBMITTED IN PROPERLY LABELED, SEALED CONTAINERS, AND PACKAGED PER UNIVERSAL PRECAUTIONS.

CYTOLOGY LABORATORY WILL NOT PROCESS:

- SPECIMENS WITH NEEDLES
- SPUTA RECEIVED WITHOUT FIXATIVE
- SPECIMENS RECEIVED IN GLASS BOTTLES
- SPECIMENS IN PLEUR-EVAC CONTAINERS
- SPECIMENS IN EXCESS OF 500 ML IN VOLUME

b) NON-GYNECOLOGICAL SPECIMENS

Bronchial Washings

Preparation of the patient	N/A
Special timing for collection	N/A
Types of collection container and optimal amount of the specimen	Sterile Specimen Cup, 20 mL of sample
Types and amounts of fixatives	FRESH / UNFIXED
Special handling and transport	Specimens should be sent to the cytology laboratory as quickly as possible, after removal from the patient. Specimens should be refrigerated if a time lapse of one (1) hour or more is expected before delivery to the cytology lab.
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the anatomic source, site, and laterality of the specimen. This information must be on a label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)

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GI or Urinary Tract Brushings

Preparation of the patient	N/A
Special timing for collection	N/A
Types of collection container and optimal amount of the specimen	Submit brush(es) in a sterile container with 20 mL of CytoLyt fixative or normal saline. The brushes should be completely submersed in the fixative, and the brush handles should be cut off a few centimeters above the brush bristles.
Types and amounts of fixatives	CytoLyt or Normal Saline
Special handling and transport	Specimens should be sent to the cytology laboratory as quickly as possible, after removal from the patient. Specimens should be refrigerated if a time lapse of one (1) hour or more is expected before delivery to the cytology lab.
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the anatomic source, site, and laterality of the specimen. This information must be on a label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)

Cerebrospinal Fluid (CSF)

Preparation of the patient	N/A
Special timing for collection	N/A
Types of collection container and optimal amount of the specimen	Preferably specimen volume is three (3) mL of CSF.
Types and amounts of fixatives	FRESH/ UNFIXED
Special handling and transport	Specimen MUST be delivered as quickly as possible to the main Clinical Laboratory, Leprino Building, Room 253. CSF specimens are initially processed by Hematology in the Clinical Laboratory and then sent to Cytology for review. In case of an after-hours STAT CSF, page the on-call pathology resident to notify them of the STAT specimen.
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the source of the specimen. This information must be on a label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)

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Effusions and Body Fluids

Specimen types include: a) Ascites or peritoneal fluid b) Pleural or thoracentesis fluid c) Pericardial fluid d) Synovial fluid e) Cyst fluid f) Pelvic washings	
Preparation of the patient	N/A
Special timing for collection	N/A
Types of collection container and optimal amount of the specimen	Specimens should be sent to cytology fresh, in a plastic 60 mL capped syringe (no needle), 120 mL screw top specimen cup, 80 mL screw top urine cup, or other non-glass container. If the specimen is collected in a larger container, it should be divided, and no more than 500 mL submitted to Cytology. Prior to pouring off a cytology aliquot, the specimen should be gently agitated by inverting the container 5-10 times. Minimum volume of at least 150 mL of specimen is preferable.
Types and amounts of fixatives	FRESH. Do not add anticoagulant or fixative.
Special handling and transport	Deliver to Cytology Laboratory (AIP (1), 3rd Floor, Room 3.000) as soon as possible. Refrigerate if specimen cannot be delivered within one hour. Specimens with needles, in excess of 500 mL, specimens in Pleur-Evac containers, or in glass containers will not be accepted.
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the anatomic source, site, and laterality of the specimen. This information must be on a label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)

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Sputum

Preparation of the patient	N/A
Special timing for collection	An early morning deep cough specimen is to be collected in a container with sputum fixative.
Types of collection container and optimal amount of the specimen	ThinPrep Non-Gyn Test vials for sputa collection / fixation are available in the Cytology Lab, AIP -1, 3rd. Floor, Room 3.000; phone 720-848-4361.
Types and amounts of fixatives	CytoLyt
Special handling and transport	Sputum specimens received without a fixative will be rejected. Deliver the sample to Cytology Laboratory (AIP (1), 3rd Floor, Room 3.000)
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the specimen type. This information must be on a label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)

Urine

Preparation of the patient	Provide patient education on the clean catch technique
Special timing for collection	The second voided specimen in the morning is preferred, after the patient has been up and active. Patients should be encouraged to come to the hospital to provide fresh voided urine specimen for best results.
Types of collection container and optimal amount of the specimen	Urine Collection Cup. For males, a simple voided specimen is satisfactory. For females, a mid-stream clean catch (after cleaning urethra with an alcohol wipe) specimen is preferred. 50-80 mL of urine is considered optimal. To prevent leakage, the lid must be securely tightened.
Types and amounts of fixatives	FRESH/ UNFIXED.
Special handling and transport	Deliver to Cytology Laboratory (AIP (1), 3rd Floor, Room 3.000) as soon as possible. Refrigerate if specimen cannot be delivered within one hour. If the specimen cannot be refrigerated, equal volume of cytology fixative, CytoLyt, may be to the specimen as a last resort. Adding fixative dilutes the specimen and may result in less than satisfactory reading.
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the specimen type on a label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)

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Anal Pap Test

Preparation of the patient	Patients are asked not to douche or have an enema or insert anything into their anus for 24 hours prior to an anal cytology exam. Lubricants should not be used prior to obtaining a cytology sample because the lubricant may interfere with the processing and interpretation of the sample.
Special timing for collection	Sample is obtained with the patient lying on their left side, but other positions are acceptable. The buttocks are retracted to visualize the anal opening and a Dacron or polyester tipped swab moistened in tap water is inserted for approximately 2 to 3 inches into the anus. The swab can be felt to pass through the internal sphincter, so the sample is obtained from the junction of the anus and rectum, which is where most of the HPV- related lesions are believed to originate. The swab is rotated 360 degrees with firm lateral pressure applied to the end of the swab, such that it is bowed slightly and then it is slowly withdrawn over a period of 15 to 30 seconds from the anus, continuing to rotate the swab in a circular fashion. The lateral pressure ensures that the mucosal surface, rather than rectal contents are sampled.
Types of collection container and optimal amount of the specimen	The swab is placed in a ThinPrep Non-Gyn vial and vigorously agitated to disperse the cells for liquid based cytology. The sample must be fixed quickly within 15 seconds to avoid drying artifacts, which occurs easily and makes interpretation difficult.
Types and amounts of fixatives	CytoLyt
Special handling and transport	Deliver to cytology laboratory (AIP (1), 3rd Floor, Room 3.000.
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the anatomic source of the specimen on the label on the container itself, NOT on the lid of the container.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B, or C, tuberculosis).

FINE NEEDLE ASPIRATIONS (FNA) AND CORE BIOPSIES

Preparation of the patient	N/A
Special timing for collection	Notify Cytology at 720-848-1793 of the FNA requiring cytology assistance, within 5 -10 minutes of the patient being placed in the room and prepped/ asleep for the procedure. Provide advance notification via phone or email for urgent/complex cases that will need to be rushed or require special handling.

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Types of collection container and optimal amount of the specimen	A Cytotechnologist will assist with FNA procedure, prepare slides, collect for cellblock, and triage the sample for ancillary testing: Direct Smears or Core Touch Preps – glass slides Needle rinse(s) or cores for Cellblock – Formalin conical tubes. Needle rinse(s) and/or dedicated passes for ancillary tests. • RPMI – Lymphoproliferative disorders • RPMI – Cytogenetics • RPMI – Tissue Banking • Saline – Thyroglobulin Assay • Saline – Parathyroid Hormone • Saline – Calcitonin
Types and amounts of fixatives	95% alcohol to fix slides for Papanicolaou staining. 10% Buffered formalin for cellblock (CB)
Special handling and transport	For fixation of specimens in formalin, specimens must be fully submerged with the optimal formalin to approximate specimen volume of 10:1 or higher, or if not feasible (large specimens) at least 4:1. For specimens clinically suspected or otherwise known to contain malignancy, which are likely to be submitted for ancillary testing, (breast carcinoma, gastroesophageal carcinoma), it is required to record on the requisition: • Time out of body • Time the specimen is placed in formalin. Record pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis), mass location, shape, and size. If known, record information reg. prior procedures and/or specimen testing requested. If applicable, record COMIRB # for research cases A cytologist will bring the entire FNA case back to the Cytology Laboratory and hand it off to the non-gyn bench, including verbal confirmation of any special requests and processing instructions. Refer to the following SOPs in MediaLab Cytology Manual: • Lymphoma Tissue Banking • Pancreatic Cyst SOP • Breast Protocol CB and End-Of-The-Day CB • CMOCO Samples • Choroidal Melanoma Protocol • BTS Protocol for Cytology Laboratory • Ancillary Testing from Cytology Specimens
Proper specimen labeling	Label with a patient sticker or patient's name and date of birth or Medical Record Number (two unique identifiers). Record the anatomic source, site, and laterality for each specimen. This information must be on a label on the container itself, NOT on the lid of the container, and must match the information recorded on the FNA Requisition. Refer to FNA Specimen Procurement, and FNA Error Prevention SOPs, for detailed labeling instructions.

Appropriate clinical data	On the FNA Requisition, provide all available pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis), research participation or special studies.

Fine Needle Aspiration, (FNA)

- For Cytology assistance call **: phone 720-848-1793**
- Cytology Supervisor: phone: 720-848-4697
- A Cytotechnologist will assist with FNA procedure, prepare slides, collect for cellblock and ancillary testing whenever possible.
- Cytology Resident, Fellow, and Cytopathologist on service will becontacted for Rapid On-Site Evaluation (ROSE)
- **AFTER HOURS FNA COLLECTION KIT** is available for FNA procedures done after normal working hours: before 8 am, after 5 p.m. or on weekends.
  - Use **one kit per site** sampled.
  - Place 2-3 FNA passes into the conical vial containing 10% Formalin.
  - Place 2-3 FNA passes into the conical vial containing CytoLyt™ fixative.
  - Label each specimen vial with the patient's sticker and the body site.
  - Fill out the corresponding requisition form. Provide the following information:
    a) Patient's name
    b) Patient's medical record number
    c) Specimen site/s and laterality
    d) Specimen type (brushing, FNA, Core BX)
    e) Date and time the specimen was collected.
    f) Name of the performing physician
    g) Contact information for the ordering physician.
    h) Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease (i.e., HIV, Hepatitis B or C, tuberculosis)
  - Deliver completed kit to the Clinical Laboratory in the Leprino Bldg.
  - **If lymphoproliferative disorder is suspected by the performing clinician, please obtain a tube of RPMI / Flow transport media and a requisition from the Clinical Laboratory at 720-848-4401. Place one or two FNA passes into RPMI, and return it to the Clinical Lab.**
  - **Note: It is OK to rinse the sample out of the FNA needle with minimal amount of sterile saline into formalin, CytoLyt™, or RPMI tubes.*

- **FOR EMERGENT AFTER-HOURS FNA procedures:**
  - **Arrange coverage during business hours by calling Cytopathology Fellow at 720-848-4442, or Cytology Resident at 720-848-0473** to arrange coverage for the procedure.
  - **For weekend after hours coverage not arranged beforehand**
    - **For weekend coverage, please call the scheduled On-Call Surgical pathologist and Resident:** https://www.amion.com/Scheduling.shtml
  - Alternatively, the specimen may be collected in a container with 10% formalin,

    labeled with patient identifiers and specimen source, labeled for Cytology, and sent

to the Clinical Lab with the corresponding Non-Gynecologic Cytology Request.

- For urgent questions or consultations, contact the available cytopathologist, as needed.

c) CYTOLOGY NON-GYN SPECIMEN COLLECTION GUIDELINES

Epic Order: LAB3423

Specimen	Fixative	Quantity	Storage	Deliver To
CSF	None	3-5 mL	Refrigerate	Clinical Laboratory—Attn: Hematology (within 30 min)
Body Fluids: Pleural, Pericardial, Ascitic / Peritoneal Fluid	None	150 mL	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Bronchial, GI or Urinary Tract Brushing	CytoLyt	Brush in 5-10 mL CytoLyt or Saline	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Bronchial Washing	None	20 mL	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Sputum	CytoLyt	5-10 mL in ThinPrep Non-Gyn vial	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Cyst Aspiration	None	< 150 mL	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Urine / Bladder Washings	None	50-80 mL	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Pelvic Washings	None	150 mL	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681
Anal Pap	CytoLyt	Sample in ThinPrep Non-Gyn vial	Refrigerate	Cytology Lab, M-F, 8:00 am – 5 p.m. AIP-1, Room. 3.000 Tube station 661 or 681

d) GYNECOLOGICAL, PAP TEST SPECIMEN COLLECTION

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Pap Test

Preparation of the patient	Advise the patient to avoid intercourse, vaginal creams, suppositories, medicine, and douches two days before the scheduled Pap Test, as these may obscure abnormal cells.
Special timing for collection	The best time to schedule the Pap Test, is two weeks after the first day of the last menstrual period.
Types of collection container and optimal amount of the specimen	ThinPrep Liquid Based Preparation (LBP), collection vial SurePath Liquid Based Preparation (LBP), collection vial Refer to the sections below for each type of LBP.
Types and amounts of fixatives	ThinPrep – Methanol-based LBP, 20 mL vial SurePath – Ethanol-based LBP, 10 mL vial
Special handling and transport	Each Pap Test specimen must be accompanied by a printed out Cervical Vaginal Cytology Request, Epic Order: LAB3422, or a handwritten Cervical/Vaginal Cytology Requisition. Deliver to cytology laboratory (AIP (1), 3rd Floor, Room 3.000, or Clinical Laboratory in the Leprino Building, after hours.
Proper specimen labeling	Record the anatomic source, site, and laterality of the specimen (Cervical/Endocervical or Vaginal; Right / Left Cervix, if applicable). This information must be on a label on the container itself, NOT on the lid of the container and must match the paper copy of the Epic test order. The use of pre-printed patient labels is preferred, if possible. Specimen vial should be labeled in the presence of the patient, at the time of the procedure.
Appropriate clinical data	Provide pertinent clinical history, including history of malignancy, radiation, chemotherapy, or infectious disease. Information required on a Gyn Cytology Requisition: 1. Patient's full name 2. Patient's date of birth 3. Medical Records Number (MRN) 4. Specimen collection date/Encounter date 5. Specimen source (Endocervical/Cervical or Vaginal) 6. Pertinent History (Birth control method, LMP, STD) 7. Previous pap test/biopsy/treatment (Specify date, results) 8. Screening factors (Normal, High Risk) 9. Visit Type (Routine Screening, Diagnostic) 10. Requesting Clinic Location with contact name & pager 11. Requesting Clinician 12. Requested Procedure a. Pap Test only b. Cotest - Pap Test with HPV c. Pap Test with Reflex HPV (if ASCUS) d. Include GC/Chlamydia to Above Request e. HPV Testing Only (No Pap Test) f. GC/Chlamydia Testing Only (No Pap Test) 13. Insurance information 14. Referral Number - if required by insurance

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Conventional Gynecological Smears (rare)

Protocol for Endocervical, Ectocervical, Vaginal and combined Smears

- Each slide must be labeled with the patient's name, smear site, and hospital number.
- Smears must have cells from the squamo-columnar junction to be adequate.
- If a lesion is visible, a slide should be made of this area first.
- Spread cells evenly and quickly over the slide and fix by immersing the slide IMMEDIATELY in 95% ethanol. Cytology spray fixative may be used instead. When spraying, the aerosol can, should be held about twelve (12) inches from the slide to avoid damaging the cells. If a pump spray is used, pump 3-4 times at 6-8 inches.

Protocol for Vulvar, Labial Smears

- A scrape should be made of the specified area, smeared and labeled as above.
- Requisition filled out as indicated above.

Collection of Thin Prep Gynecological Specimens

- Visit https://www.hologic.com/thinprep for detailed information on the collection of the ThinPrep liquid base Gyn specimen, including:
    - ThinPrep Pap Test Collection Video
    - Pap collection Guide Brush/Spatula Broom
    - Pap Collection Guide Rovers Cervex Brush Combi
    - Customer Letter Pap Collection Lubricant
    - Lubricant Compatibility List
    - Lubricant Information Memo
    - Patient Exam Checklist
    - ThinPrep Collection Techniques
- The patient should be tested two weeks after the first day of her last menstrual period, and B when she is menstruating. Excessive amounts of blood may still compromise the test and lead to an unsatisfactory result.
- The patient should not use vaginal medication, vaginal contraceptives, vaginal creams, vaginal jellies, or douches during the 48 hours before the exam.
- The patient should refrain from intercourse 48 hours prior to the exam.
- For patients without physical or physiological need for lubricants, lukewarm water should be used to warm and lubricate the speculum. Water lubrication has the fewest risks to the quality of the Pap sample collected.
- The use of lubricants with the ThinPrep Pap test is not recommended. However, if a lubricant is necessary, a **carbomer-free lubricant** may be used sparingly on the exterior of the speculum. Consult the list of common lubricant brands for compatibility.

Preferred Lubricant	**Manufacturer**
PAP TEST Lubricating Jelly	Aseptic Control Products
Surgilube Surgical Lubricant	HR Pharmaceuticals
Compatible Lubricant	**Manufacturer**
K-Y Jelly (Physician Formula)	Johnson & Johnson
Surgel	Ulmer Pharmacal

- Excess mucus or other discharge if present should be removed before taking the sample. The excess cervical mucus is essentially devoid of cellular material, and when present in the sample vial, may yield a slide unsatisfactory for interpretation.
- Inflammatory exudate from the cervical canal should be removed before taking the sample by placing a dry 2-by-2-inch piece of gauze over the cervix and peeling it away after it absorbs the exudate or by using a dry procto swab or Scopette® swab. The excess inflammatory exudate is essentially devoid of diagnostic cellular material and, when present in the sample vial, may yield a slide with little or no diagnostic material present.
- The cervix should not be cleaned by washing with saline or it may result in an acellular specimen.
- The sample should be obtained before the application of acetic acid.

Endocervical Brush/Spatula Protocol

1. Obtain an adequate sampling from the ectocervix using a plastic spatula.
2. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface.
3. Rinse the spatula as quickly as possible into the PreservCyt® Solution vial by swirling the spatula vigorously in the vial 10 times and pressing the sides of the spatula on the sides of the collection container.
4. Discard the spatula.
5. Obtain an adequate sampling from the endocervix using an endocervical brush device.
6. Insert the brush into the cervix until only the bottom-most fibers are exposed.
7. Slowly rotate 1/4 or 1/2 turn in one direction. DO NOT TWIRL OR OVER-ROTATE.
8. Rinse the brush as quickly as possible in the PreservCyt Solution by rotating the device vigorously in the solution 10 times while pushing against the PreservCyt vial wall (paint the side of the container vial with the brush). Press the brush vigorously to the sides of container to further release material.
9. Discard the brush.
10. Tighten the cap so that the torque line on the cap passes the torque line on the vial.
11. Label the vial with the patient's sticker or record the patient's name and ID number on the vial.
12. Record the patient information and medical history on the cytology requisition form.
13. Place the vial and requisition in a specimen bag for transport to the laboratory.

Broom-Like Device Protocol

1. Obtain an adequate sampling from the cervix using a broom-like device.
2. If desired, use lukewarm water to warm and lubricate the speculum. Water-soluble gel lubricant sparingly applied to the posterior blade of the speculum can be used if necessary.
3. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix.
4. Push gently and rotate the broom in a clockwise direction five times.
5. Rinse the broom as quickly as possible into the PreservCyt® Solution vial by vigorously pushing the broom into the bottom of the vial 10 times, forcing the bristles apart.
6. As a final step, swirl the broom vigorously to further release material.
7. Discard the collection broom.
8. Tighten the cap so that the torque line on the cap passes the torque line on the vial.
9. Label the vial with the patient's sticker or record the patient's name and ID number on the vial.
10. Record the patient information and medical history on the cytology requisition form.
11. Place the vial and requisition in a specimen bag for transport to the laboratory.

Collection of SurePath Gynecological Specimens

- Visit: https://www.bd.com/en-us/offerings/capabilities/cervical-cancer-screening/cervical-sample-collection/surepath-liquid-based-pap-test for detailed information including educational videos:
  - BD SurePath Collection Vial introduction video
  - Rovers Cervex-Brush overview video
  - Rovers Cervex-Brush Combi collection procedure video
- Obtain a sample according to the standard collection procedure provided by the manufacturer of the sampling device(s).
- Using the thumb and forefinger of gloved hand, disconnect the head of the device from the handle and insert the head in the collection vial.
- Discard the handle of the sampling device. Do not touch the head of device.
- Cap the vial tightly.
- Label the specimen vial with the patient's sticker.
- Send the specimen containing the head of the sampling device, with appropriate paperwork, to the cytology laboratory.

e) ANCILLARY TESTING FROM A LIQUID-BASED PAP TEST VIAL:

Human Papilloma Virus (HPV) Testing

Gonococcus/Chlamydia Testing

- Collect a gynecologic sample by one of the methods described above.
- Print out a Cervical Vaginal Cytology Request from **Epic, Order: LAB3422**, or fill out a handwritten Cervical/Vaginal Cytology Requisition.
- Select a testing option:
  - Pap Test only
  - Cotest - Pap Test with HPV
  - Pap Test with Reflex HPV (if ASCUS)
  - Include GC/Chlamydia to Above Request
  - HPV Testing Only (No Pap Test)
  - GC/Chlamydia Testing Only (No Pap Test)

f) LABORATORY SPECIMEN REJECTION CRITERIA

Specimens submitted to cytology laboratories may be rejected for any of the following reasons:

- Specimen was received from an unknown clinic or facility. Only legally authorized physicians and facilities may submit specimens for processing.
- Specimen was received unlabeled, mislabeled (e.g., specimen and request order form have different patient information) or labeled incompletely missing the required patient unique identifiers (patient's name and date of birth or medical record number).
- Specimen was received at the Cytology laboratory empty.
- Specimen was received with an attached needle.
- Specimen was submitted in a glass container.
- Specimen was submitted in greater than 500 mL volume. Due to the limited amount of refrigerated storage space, cytology laboratory will accept up to 500 mL of fluid.

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- Sputum was received unfixed. If a concurrent sputum microbiology culture is required, two (2) separate specimens must be obtained and submitted to the laboratory.
- Specimen from a patient suspected of having Creutzfeldt-Jakob Syndrome (CJD).
- Outside slides submitted for consultation are broken beyond repair.
- Rejected specimens require an incident report to be completed on the UCH patient safety website: RL Solutions. The report must be submitted within 24 hours of discovery of the problem.
- When rejecting an unacceptable specimen, laboratory staff will contact the submitting physician, or designee in the clinic via secure chat/phone/ or email to report the identified problem (e.g., specimen collection, transport issue, labeling) so the specimen can be properly re-submitted or recollected.
- All rejected unacceptable specimens are recorded in the "Rejected Specimens" logbook. A copy of the original request form and specimen rejection form are kept in the logbook, including information for the contacted person, date of the notification, and the disposition of the unacceptable specimen (method of returning the specimen to the provider).
- The general supervisor periodically reviews the "Rejected Specimens" logbook to track any trends in recurring errors and/or submitting clinicians needing additional guidance on specimen submission.

SPECIMEN DEFICIENCIES

- For unclear test orders received (using non-specific terms), cytology staff will try to contact the submitting provider via a secure chat/phone/email to clarify orders.

- The submitting physician or designee must correct the problem for cytology laboratory to accept the specimen for processing.

- Examples of specimen deficiencies include, but are not limited to:
    - Specimen was received without corresponding request order for testing (may be printed from Epic).
    - A request order form was received without the corresponding specimen (a request for the specimen may be placed with Clinical Laboratory for shared samples)
    - Specimen received in unsealed container from which the specimen leaked out.
    - Specimen received without indication of specimen site and laterality with orders indicating different sampling sites. Cytopathology specimens, especially non-gynecologic samples, should be labeled on the specimen container with specimen site, laterality, and date of collection.
    - Specimen container and/or order missing date of collection
- Specimen deficiencies will be reported via RL Solutions UCH patient safety website.

- Due to the fragile nature of fresh cellular material, the cytology laboratory will not attempt to recover for processing fresh specimens that are over 7 days old, or frozen specimens.

- For sub-optimal specimens, exp. specimens received leaking from the primary collection container but sealed in the secondary container (specimen bio-hazard bag), cytology laboratory will try to recover as much of the specimen as possible. Specimen deficiency will be recorded via "Leaked" Retrieval Flag in CoPath LIS.

- Cytology laboratory personnel will consult with the Technical Director, Cytopathologist, or Cytology Supervisor regarding unacceptable or sub-optimal specimens not covered by the above list. An appropriate comment for the specimen processing will be entered into the laboratory LIS at accessioning.

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VI. AUTOPSY SERVICE

a) GENERAL INFORMATION

- Post- mortem examinations are not performed after hours, on weekends or Holidays except in exceptional circumstances.
- With questions regarding autopsy, please call the **Office of Decedent Affairs (720-848-4356)** or the Autopsy Coordinator (720-848-4387).
- The Department of Pathology may decline to perform an autopsy examination or limit the examination based upon the discretion of the attending Pathologist or the Director of Autopsy.

b) REPORTING TO CORONERS' OFFICE

- It is the requirement of the State of Colorado and hospital policy to report all deaths to the **Adams County Coroner's Office (303-659-1027)**, regardless of the circumstances of the death.
- Most cases will be released by the Coroner's Office to the hospital for an autopsy to be performed if consent is obtained.
- Coroners or Medical Examiners from ANY county have the right to remove a body from the University of Colorado Hospital at any time.
- Any unexplained death, or death that results from equipment failure or malfunction must be reported to the **University Hospital Risk Management Office (303-724-7475)** in addition to the Adams County Coroner's Office.

c) REQUESTING AN AUTOPSY

When an adult patient expires in University of Colorado Hospital, a Patient Service Coordinator (PSC) or nurse on that unit should initiate the "Discharge by Death Procedure Packet (Adult)." These packets are available through the UCHealth Print Center Portal for either Youth/Adult or Infant. Autopsy examinations can and should be requested for all eligible deaths. The Decedent Affairs Office (staffed 7 days per week, excluding hospital holidays) are experienced in discussing the autopsy procedure with families and documenting consent from the legal next of kin. If the death occurs outside of office hours, the Office of Decedent Affairs will contact the family on the next business day to confirm autopsy wishes and to assist the family with navigating the next steps required for final disposition.

Who Can Give Consent for Autopsy

When a person dies, his/her body becomes the property of the legal next-of-kin or the person charged with the duty of burial. If an autopsy is performed without the permission of this legal next of kin, all involved parties may be sued for unauthorized assault upon the body. The descending order in determining and verifying the legal next-of-kin is listed below and must be adhered to in **every** case. Note: If someone of equal class objects to an autopsy, the autopsy should not be performed, even if a valid permit exists. If there are any doubts about the validity of an autopsy permit, the UCH Legal Office should be contacted at 720-848-7815.

1. Surviving Spouse/Common Law Spouse (not legally separate or divorced)
2. Adult Children (majority of the surviving adult children)

3. Parents or legal guardians (majority)
4. Adult siblings (majority)
5. Grandparents
6. Uncle or Aunt
7. Other personnel accept legal responsibility for funeral arrangements.

Note: Who can give consent for autopsy from C.R.S.A. 15-19-106 “Right of final disposition,” updated September 7, 2021. Per Colorado Code "153-2-107 Kindred of Half Blood," relatives of the half-blood inherit the same share they would inherit if they were of the whole blood.

d) AUTOPSY ARRANGEMENTS FOR OFF-SITE DEATHS

Who is Eligible for UCH Autopsy
University of Colorado Hospital may provide an autopsy for any deceased patient who has been seen by a physician at the University of Colorado Hospital, Highlands Ranch Hospital, and affiliated clinics in the Denver metro area for a condition related to their death within 5 years of death.

Who is Not Eligible for UCH Autopsy
University of Colorado Hospital will not provide autopsies for non-University patients. Families of non-University patients should seek an autopsy at the hospital where the patient's physician has privileges, or for a private pathologist to perform an autopsy.

Costs
The autopsy examination will be performed at no charge, but the legal next of kin must arrange and pay for the transportation of the body to and from the morgue at University of Colorado Hospital.

Coroner Notification
If the patient's death is reportable to the coroner, you must notify the coroner in the county where the patient died. The call must be documented in the Coroner Notification section of the Disposition Permit.

Obtaining Autopsy Consent
It is preferred that consent for an Autopsy examination be obtained by a member of the Office of Decedent Affairs. The legal next of kin must be identified and listed on the Autopsy Authorization section of the Disposition Permit. Any limitations to the autopsy, such as “no thorax,” “chest and abdomen only,” or “brain only” must be clearly indicated on the autopsy consent. Autopsy permits can be obtained **only** after the patient has died. Pre- authorized permits are not acceptable. If a patient has declared that they wish to undergo an autopsy examination, consent must still be obtained from the legal next-of-kin **after** the patient's death to verify that an autopsy is desired and to confirm limitations.

Phone Consent
Permission by telephone is legal, provided (a) the person giving permission is the proper individual to do so; (b) he/she can be identified and (c) the permit is properly completed. If you are dealing with the family by phone, indicate "Phone Consent" on the signature line of the Autopsy Authorization section of the Disposition Permit, and sign as a witness to the consent.

Mortuary Designation

The Office of Decedent Affairs will request that the legal next of kin decide upon a funeral home. The next-of-kin must fill out and sign the Release of Mortuary section of the Disposition Permit. Phone consent is also acceptable when obtaining mortuary information.

Transportation
Transportation of the body to University of Colorado Hospital for an autopsy must be arranged with a funeral home. If families need assistance in locating transportation, it should be explained that they may use any funeral home of their choice and that all of them may be found in the telephone directory. Note: The legal next-of-kin must arrange and pay for the transportation of the body to and from the morgue at University of Colorado Hospital, except in cases of unusual neurological conditions for which a special fund may be used with Departmental approval.

Who Can Help
The **Office of Decedent Affairs (720-848-4356)** will assist with arranging the autopsy as much as possible. However, many of the details (i.e., arranging transportation to UCH, completing the death certificate, etc..) will be left to the Clinical Physician and the next-of-kin.

e) DIRECTIONS TO THE UNIVERSITY OF COLORADO HOSPITAL MORGUE

Directions to the Morgue (AIP Room B2309): Take I-225 to Colfax, west to Quentin Street, right on Quentin to 17th, right on 17th to the dock area (behind the hospital). The morgue phone number is 720-848-7001 or 720-848-7004.

For **Nighttime and Weekend Drop-offs**, mortuaries should take bodies to the loading dock on the north (back) side of the hospital. Call Hospital Security (720-848-7777) for entry. You will need to fill out a blue card with all pertinent patient information. Security will then escort you to the morgue, compare the blue card info with tags, and assist with getting the body into refrigeration.

IMPORTANT: Mortuaries MUST bring the patient in a body bag!

Mortuaries will be contacted for pickup when the autopsy examination is complete.