




Specimen Collection and Handling for Anatomic Pathology

 NMC <small>NORTHWESTERN MEDICAL CENTER</small>	Document Classification	<input type="checkbox"/> Policy <input checked="" type="checkbox"/> Procedure <input type="checkbox"/> Policy and Procedure
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- Purpose:** The purpose of specimen collection and handling is outlined below.
- To ensure that hospital departments and outside sources submitting specimens to the surgical pathology department follow the established methods to guard against clerical and/or processing errors.
 - To ensure that collection, handling and transport of all specimens is consistent in maintaining tissue integrity and proper patient identification
 - To provide the pathologist and pathologist’s assistant with pertinent clinical and historical information to aide in the dissection and pathologic diagnosis.

- Policy Statement:** The following procedure will be utilized by:
- All hospital department staff submitting specimens to pathology
 - All outside sources submitting specimens to Pathology
 - All Pathology personnel

Background: N/A

Definitions: N/A

Procedure:

SPECIMEN CONTAINER LABELING AND REQUISITONS:

Specimen container labeling:

Specimen containers, including multi-specimens (i.e., Multiple colon bx), **MUST** contain the following information:

- Patient’s full first and last names (no nicknames).
- Patient’s medical record and hospital number
- Patient’s date of birth
- Physician’s name and/or location
- Specimen source
- Date collected

Place label on container (*never on the cover or lid*)



Requisitions:

All specimens submitted to surgical pathology **MUST** have a completed, accurate and legible requisition accompany the tissue sample. The requisition **MUST** contain the following information:

- Patient's full first and last names (no nicknames).
- Patient's medical record and hospital number
- Patient's date of birth
- Date specimen collected
- Physician's name
- Additional physician names to receive copies of pathology report
- Clinical information, including ICD-10 diagnosis code if sent from outside source

All specimens (both Surgical Pathology and Cytopathology) must be accompanied by a patient History and Physical (H&P) and/or Endoscopy report as means of providing adequate and timely clinical history essential to rendering a proper and adequate diagnosis.

NOTE: The Surgical Pathology and Cytopathology reports are medical consultations. The type and amount of clinical data provided may significantly affect the accuracy and relevance of the pathologic diagnosis in addition to such issues as the time and extent of initial tissue processing by the Pathologist.

SPECIMEN PICK-UP and RECEIPT

1. Pick-up of specimen will be done by the pathology staff at routine intervals throughout the day and a final pick-up by the end of the shift at 2:00PM.
2. Any specimen collected after the last pick-up time:
 - a. OR – leave specimen and requisition in transfer refrigerator for AM pick-up.
 - b. Outpatient - leave specimen and requisition on collection tray for AM pick-up.
 - c. Referrals - place specimen and requisition in the specimen holding bin in laboratory office refrigerator for AM pick-up.
3. All Specimens **MUST** have an accompanying requisition that is complete, accurate, and legible.
4. OR Surgery - requisitions and specimen labels are verified by the pathology technicians at time of pick-up.
5. Referrals - requisition and specimen labels are verified by the pathology technicians after the specimen is received.
6. Surgical pathology specimens are irretrievable therefore all attempts from any incomplete requisitions, mislabeled specimens, or other discrepant



conditions, will be handled as unacceptable until discrepancies are corrected. Specimen will NOT be destroyed. The proper collecting unit and/or originating facility will be notified of discrepancy and an incident form and accountability form submitted. (see Unacceptable specimens) (See Specimen Identification Policy).

ROUTINE SPECIMENS:

Fixative - 10% Neutral Buffered Formalin (NBF)

1. Specimens requiring routine processing submitted to surgical pathology for examination will be submitted:
 - a. In 10% NBF.
 - b. In an appropriately sized container.
 - c. In a sufficient quantity of formalin to achieve a 10:1 ratio of formalin to specimen.
2. All specimens must be submitted with completed, accurate and legible requisition. (Specimen labeling and requisition).
3. All specimen containers must be properly labeled (Specimen labeling and requisition).
4. History and Physical (H&P) must be submitted with specimen.

GASTROINTESTINAL BIOPSIES: These biopsies are obtained in Outpatient Surgical Services Department in the Endoscopic Examination Rooms.

Fixative – 10% Neutral Buffered Formalin (NBF)

1. Gastrointestinal biopsies are submitted in Hollande's fixative or 10% Zinc Formalin (see above)
2. Submit a completed, accurate and legible requisition. (Specimen labeling and requisition).
3. Specimen containers must be properly labeled (Specimen labeling and requisition).
4. Endoscopic report must be submitted in all specimens.

LYMPH NODES: Please contact Pathology in advance to optimize specimen handling.

Fixative- Submit Fresh

1. Submit ALL lymph nodes in the fresh state for intra-operative consultation.
2. Submit a completed, accurate and legible requisition, include OR room phone extension (Specimen labeling and requisition).
3. Specimen containers must be properly labeled (Specimen labeling and



requisition).

SENTINEL LYMPH NODES:

Fixative - Submit 10% Neutral Buffered Formalin (NBF) unless frozen consultation is requested by surgeon

1. Submit sentinel lymph nodes in 10% NBF
2. Submit a completed, accurate and legible surgical pathology requisition.
3. Specimen containers must be properly labeled (Specimen labeling and requisition).

NOTE: Due to negligible radiation in the sentinel lymph nodes no special handling is required.

URATE CRYSTALS (gout):

Fixative-100% Ethyl Alcohol

1. Submit specimen for uric acid crystals in 100% Ethyl alcohol.
2. Submit a completed, accurate and legible requisition. (Specimen labeling and requisition)
3. Specimen containers must be properly labeled. (Specimen labeling and requisition)
4. History and Physical (H&P) must be submitted with specimen.

PLACENTAL / FETAL DEMISE (UNDER 20 WEEKS):

Fixative - **NONE** (Submit Fresh)

1. Placental specimens and Fetal demise under 20 weeks are submitted **Fresh**, no fixative.
2. Specimens must be refrigerated until gross inspection.
3. Submit a completed, accurate and legible requisition. *Include gestation date and pertinent clinical information.* (See Specimen labeling and requisition)
4. Specimen containers must be properly labeled. (See Specimen labeling and requisition)
5. History and Physical (H&P) must be submitted with specimen.
6. If Cytogenetics is requested, please contact Histology for the proper specimen transport vial.

NOTE: For Fetal Demise **over** 20 weeks, please see Autopsy Protocol.



AMPUTATED LIMBS:

Fixative – NONE (Submit Fresh)

1. Wrap in an under pad and place in labeled bio hazard bag.
2. Submit a completed, accurate and legible requisition.
3. Specimen bio hazard bag must be properly labeled.
4. History and Physical (H&P) must be submitted with specimen.
5. Place in OR transfer refrigerator

SPECIAL TISSUE HANDLING:

1. Conditions under which special handling is required:
 - frozen section diagnosis
 - necessity for touch preps
 - estrogen-progesterone receptor assays
 - immunohistochemistry
 - electron microscopy
2. Tissue must be submitted rapidly to anatomic pathology. The specimen must be submitted fresh and transported in an appropriately sized container containing normal saline or wrapped in gauze soaked with normal saline.
3. The pathologist must be notified in advance of specimen acquisition so that rapid tissue processing can be performed and tissue autolysis minimized.

FROZEN SECTION

- Frozen sections require advance notice and must be closely coordinated with Pathology

TISSUE FOR CYTOGENETICS:

Fixative – Submit Fresh, Saline, or Hanks Solution

- Fresh specimens must be refrigerated.
- Submit a completed, accurate and legible requisition. *For placental / fetal tissue - Include gestation date and pertinent clinical information.* (Specimen labeling and requisition)
- Specimen containers must be properly labeled. (Specimen labeling and requisition)



- History and Physical (H&P) must be submitted with specimen.

TISSUE FOR FLOW CYTOMETRY:

Fixative – Submit Fresh, Saline, or RPMI solution

- Fresh specimens must be refrigerated.
- Submit a completed, accurate and legible requisition. *For placental / fetal tissue - Include gestation date and pertinent clinical information.* (Specimen labeling and requisition)
- Specimen containers must be properly labeled. (Specimen labeling and requisition)
- History and Physical (H&P) must be submitted with specimen.

CYTOLOGY:

- **Method A: Preferred method**
 1. Express the aspirated material into a tube of CytoLyt cytology fixative supplied by the Histology/Pathology department or into a container of 50% ethanol.
 2. Aspirate a small amount of fixative into the barrel of the syringe and rinse the needle into the fixative.
- **Method B:**
 1. Submit fresh unfixed aspirated fluid in the syringe immediately to the laboratory.
- **Method C:**
 1. Fine needle aspiration cytology of tumors is rapidly evolving as an inexpensive, highly accurate and reproducible diagnostic methodology.
 2. Biopsies are best performed using a 22 gauge or narrower needle attached to a 20 cc syringe (used to provide vacuum).
 3. Biopsies should be confined to the lumen of the needle and care should be taken to avoid aspirating tissue into the syringe.
 4. The vacuum is then slowly released. The needle is disconnected from the syringe and air is aspirated into the syringe. The needle is then reattached to the syringe and a drop of tissue is then forced out into a clean glass slide. Using a second slide smears are made in a manner identical to that of a peripheral blood smear.
 5. Two slides are immediately placed into 95% ethanol and two slides are allowed to air dry.
 6. After the slide preparations are completed, 95% ethanol (1-2 cc) is then



aspirated into the syringe, to rinse the lumen, and then expressed into a specimen container containing 50% ethanol and submitted for cell block analysis.

Note Well: N/A

Monitoring Plan: Improperly submitted specimens will be evaluated by the Laboratory for viability and will be documented via the organization's incident reporting system.

Related Policies:

Microbiology Specimen Requirements
Tissue Gross and Exemption List
Specimen Collection, Body Fluids

References:

Theory and Practice of Histotechnology; 2nd edition
Sheehan, Hrapchak, (1980) Theory and Practice of Histotechnology; 2nd
UVMC Department of Pathology and Laboratory Medicine