

Submitting specimens for surgical pathology & related testing procedures

- Histology Department Phone Number: 775-3139
- Department Hours: Monday – Friday 0530 to 1700
- After hours specimen handling questions (evenings, nights, weekends and holidays): page on-call Histologist #0072 (primary), #0790 (back-up)
- **Frozen Sections-** Monday-Friday 530 to 1700 call Histology 775-3139. Pathologist is available in house 730-1630.
- **Frozen Sections-** After 1700, evenings, nights, weekends, and holidays: Contact the page operator who will page the Pathologist on-call. The Pathologist determines if (and will contact) the Histologist on-call if needed. Please plan accordingly as it could take up to one hour for the staff to be onsite.

Principle: Histologic examination of tissues is used to provide diagnostic information that is important for the timely diagnosis of patient's disease process and management of patient. It is important to correctly handle the tissue so that histology can be performed as well as additional related testing that requires fresh unfixed tissue.

The following provides guidelines for the submission of surgical specimens for histologic examination and for related testing procedures. The most important point in handling the tissue is whether to send the tissue in formalin or fresh if additional specialized testing is needed.

ALL ROUTINE AND SPECIAL FIXATIVES MAY BE OBTAINED FROM THE HISTOLOGY DEPARTMENT:

- Formalin, 10 ml and 60 ml jars
- Zeus
- Glutaraldehyde (Trump's)
- Flow Cytometry Media

See Lab-5586 Submission Requirements of Anatomic Pathology Specimens for the full version of Specimen Submission Requirement for Histology Specimens.

Routine Surgical Pathology specimens:

1. Surgical specimens should be submitted in 10% buffered formalin PROMPTLY to insure proper fixation and to keep the cold ischemia time to less than 1 hour. Lumpectomy specimens need to be sent to Histology within 30 minutes. NO other fixative is used for very large resection specimens such as limbs, mastectomies, colons, etc. and specimens requiring special studies (see below). These specimens need to be sent to the Histology Laboratory as quickly as possible to aid appropriate cellular preservation. Optimal specimen handling

provides well preserved cellular detail at the molecular level. This process DOES NOT include cytology specimens (pap smears, fine needle aspirates, or fluids).

2. Very large resection specimens should be left FRESH with no fixative and placed in the walk-in cooler after normal Histology hours.
3. All other Surgical Pathology specimens should be in a container that can be sealed and will not leak.
4. The container should be large enough to accommodate the specimen and filled with enough formalin to completely cover the specimen. The specimen should be able to float freely in the container for adequate fixation.
5. The container should be labeled with 2 identifiers such as the patient's name, MRN, or birthdate; and the specimen source/site. A biohazard sticker or formalin biohazard label should be on the outside of the container.
6. The container should be couriered or brought to the laboratory in a biohazard bag with a completed requisition that includes the name of the submitting physician(s). The requisition should be placed in the sleeve on the outside of the biohazard bag.
7. "FRESH" and "FROZEN SECTION" labels are available and should be used by Operating Room staff for fresh specimens and specimens requiring a frozen section. Operating Room Personnel are asked to affix the orange "FRESH" label to the lid of all fresh specimens (excluding frozen sections, see below) indicating on the label whether the tissue is submitted for: HISTO, MICRO, FLOW.

Tissue for frozen section must always be submitted fresh! Operating Room Personnel are asked to affix the green "FROZEN SECTION" label to the lid of the container. The "FRESH" label is not needed.

Surgical Pathology Specimens Requiring Special Studies:

CHROMOSOME STUDIES: Tissue that requires chromosome studies should be received fresh, NOT IN FORMALIN. This includes Products of Conception, fetal tissue or placental tissue.

CRYSTAL IDENTIFICATION, TISSUE FOR: Submit fresh with no fixative.

CULTURES: Any tissue requiring cultures should be sent fresh and NOT IN FORMALIN. It is best if cultures are needed that a separate sample or culture is sent to Microbiology. If both microbiology and histology needs to be performed on a single specimen, a piece should be removed in a sterile manner (in Histology or Microbiology) then the remainder of the tissue processed in Histology. Make sure it is indicated on the requisition that both histology and microbiology are to be performed on the one piece of tissue. Refer to Lab-5449.

FLOW CYTOMETRY: Any tissue that may need flow cytometry in the work up of the disease process should be received fresh or in Flow Cytometry Media (RPMI) and NOT IN FORMALIN. This includes any tissue where there is a suspicion of lymphoma/leukemia such as lymph nodes, soft tissue or spleens. It is important to

submit spleens fresh if there is any concern for lymphoma/leukemia. Refer to Lab-5472 Flow Cytometry, Preparing Specimens for

FROZEN SECTION: Surgical pathology specimens that need frozen section must be fresh, and NOT IN FORMALIN. Place the tissue in a sterile container and immediately deliver to histology and hand off to histology staff for frozen section. *Please notify Histology department personnel (ext. 53157 or 53139) when planning to submit tissue for Frozen Section.

NASAL BRUSHING/BIOPSY FOR IMMOTILE CILIA SYNDROME: Tissue or brushings collected for immotile cilia must be immediately placed in Glutaraldehyde fixative (Trump's) and then refrigerated. Notify the Histology department (ext. 53157 or 53139) as far in advance as possible when scheduling the procedure and make arrangements to obtain the vial of Glutaraldehyde fixative.

MUSCLE/NERVE BIOPSIES: The Pathology Office (ext. 52262) must be notified as far in advance as possible when scheduling a muscle or nerve biopsy in order to facilitate proper collection and handling and courier arrangements to UW Madison Labs within standard business hours. Muscle biopsies are received fresh. A piece of gauze with a few drops of saline on the gauze can be added if the tissue is at risk to dry out. DO NOT ADD FORMALIN. Nerve biopsies for biochemical studies should also be sent fresh to Histology. Refer to policy Lab-5545 Muscle Biopsy or Lab-5546 Nerve biopsy.

ORGAN PROCUREMENT DONOR TISSUE FOR FROZEN SECTION: Occasionally, the UW Organ Procurement Team will require a pathologist to evaluate liver biopsy tissue from a potential organ donor here at Gundersen Health System. The biopsy is performed to determine suitability of the donor organ and evaluate for pre-existing disease. Biopsy tissue can be obtained in the CCU by an interventional radiologist, surgeon, and/or by the transplant surgery Organ Procurement Team in the main OR. A frozen section is required to evaluate the tissue in rapid fashion. Therefore, the tissue biopsy is submitted to the laboratory fresh, and rapid transport with appropriate communication is an absolute requirement to prevent tissue degradation.

In order to facilitate COMMUNICATION and ensure appropriate SPECIMEN TRANSPORT the CCU nursing staff caring for the donor patient shall communicate with the pathologist-on-call. **Please follow specific guidelines listed in policy Lab-5478**

PRODUCTS OF CONCEPTION (POC): refer to policy Lab-5760 – "Products of Conception and Hospital Burial"

RENAL BIOPSIES, SPECIMEN DELIVERED TO SURGICAL PATHOLOGY STAFF:

3-5 fresh needle core biopsies which yield a minimum of 10 glomeruli are required. Fresh needle core biopsies of kidney tissue are obtained in Interventional Radiology (IR). IR will place tissue into appropriate fixative solutions (3 separate vials), label vials, complete pathology paper requisition and send to the Department of Pathology.

The 3 vials are found in the Mayo specimen collection kit to include: Zeus Fixative for Transporting Immunofluorescence Biopsy Specimens, Trump's Fixative (4% formaldehyde/1% glutaraldehyde) for Electron Microscopy, 10% Neutral Buffered Formalin (NBF) for H & E and Special Stains. Note: the kits are ordered by the Pathology secretaries for the IR department. See Lab-5526 Renal Biopsy Collection and Reporting

Refer to policy Lab-5526 Renal Biopsy Collection.

SKIN/ORAL BIOPSIES FOR IMMUNOFLUORESCENCE: Notify the Histology department (ext. 53157 or 53139) that Direct Immunofluorescence (DIF) is requested. Special skin biopsies that require immunofluorescence studies should have one piece submitted fresh (perilesional), NO FORMALIN. A separate piece (lesional) is needed for histology and is fixed in formalin.

If able to deliver to laboratory immediately, send (DIF) specimen fresh or on saline-moistened gauze. If unable to deliver immediately to the lab, place the specimen in Zeus Tissue Fixative. Label properly and send to the laboratory (along with the formalin fixed sample). Tissue can stay in Zeus Fixative for a maximum of 5 days before testing begins.