

Histology

Autopsy

See the appropriate nursing service policy for complete instructions.

An autopsy will not be performed without a properly signed autopsy permit. It is the responsibility of the attending physician to obtain permission for the autopsy from the next-of-kin. A valid permit must contain the signature of the adult having legal custody of the body of the deceased. The following order of precedence must be used.

- Coroner (if applicable)
- Durable Power of Attorney for health care
- Surviving spouse
- Children (of legal age)
- Parent(s)
- Brother/Sister (Adult)
- Relatives (Adult)
- Anyone having legal custody of the body for burial purposes

The patient's chart and the permit to perform autopsy should be delivered to the laboratory and placed in the morgue. All autopsies will be performed within 24 hours of receiving authorization.

Burial or Disposal of Body Parts

Specimen:	Submit entire body part.
Collection:	Place limb in double plastic bag, label with patient's full name, date and specimen source. Deliver to Histology Laboratory immediately.
Added Information:	Fetal Death Disposition Notification Form, if gestation is less than 20 weeks, must accompany specimen. Be sure appropriate patient information appears on top of form.

Electron Microscopy

Specimen:

Fresh unfixed tissue or tissue fixed in glutaraldehyde. Contact Histology to obtain an Electron Microscopy biopsy kit. For needle biopsies of kidney or liver, the specimen should be minced and placed in 10% Buffered Neutral Formalin. Specimen obtained by surgical excision should be cut into a 3 mm cube and placed in 10% Buffered Neutral Formalin and immediately delivered to the laboratory. Fresh tissue should be submitted on a sterile gauze pad moistened with sterile saline.

Collection:

Added Information:

Electron microscopy results are available within 1-2 weeks. A specimen should also be submitted for routine light microscopic study at the time the specimen is obtained for electron microscopy study. Electron microscopy is not a substitute for routine light microscopy.

Estrogen/Progesterone Receptor Assay (ERA-PRA Assay)

Specimen:

Paraffin embedded tissue block

Collection:

Tissue should be transported from surgery or biopsy site to the Histology Laboratory immediately for fixation and processing.

Added Information:

When submitting paraffin blocks, please send copy of surgical pathology report.

Frozen Section Consultation

Specimen:

Fresh tissue with **NO** added fixative or fluid, submitted in a sterile container.

Collection:

Notify the laboratory that a frozen section is needed and state the Operating Room number and requesting physician. Place fresh tissue on a sterile towel, in a Petri dish, or in a sterile jar. Label the container with the patient's full name, room number, date, operating room, and surgeon requesting the frozen section. Keep tissue moist with saline moistened gauze or equivalent material. Pathologist will collect specimen from OR.

Added Information:

Written and verbal communications between a pathologist and operating surgeon occur at the time of diagnosis. A final report in most cases is issued within the next 24 hours. If unusual or difficult problems are anticipated before the time of surgery, prior verbal communication with a pathologist can be extremely beneficial and is strongly encouraged.

Gross Examination, Surgical Specimens

Specimen:	Specimens which may require gross examination only include: bone fragments from non-pathologic fractures, calculi, cartilage, cataracts, inorganic foreign bodies, discs, meniscus, orthopedic hardware, plaque, stapes, teeth, tonsils (up to age 10), traumatic amputations, varicose veins.
Collection:	Collected per standard protocol by physician.
Added Information:	Please state if physician desires microscopic examination. Cartilage, discs, meniscus, plaque, amputations, and varicose veins may all be submitted for microscopic exam.

Histopathology

Specimen:	Fresh tissue or tissue fixed in 10% buffered formalin.
Collection:	Specimen collected utilizing standard protocol by a physician. Specimens are to be placed immediately in 10% formalin solution, using 10-20 times as much formalin solution as the bulk for the tissue with the following exceptions: <ul style="list-style-type: none">• Frozen section requested• Cultures ordered• Lymph node biopsy
Added Information:	Fresh tissue specimens should be wrapped in a sterile gauze pad moistened with sterile saline. All specimens should be sent to the tissue room in surgery or the Histology laboratory as soon as possible in order to expedite processing. The pathologists, as consultants, will work up cases according to their best medical judgement. This sometimes requires not only special stains or outside consultation but also special biological analysis. Physicians and surgeons are always welcome in the tissue laboratory, and are invited to review gross and/or microscopic specimens on their cases.

Immunofluorescent Studies

Specimen: Biopsy of kidney, skin, muscle and lung are submitted fresh, wrapped in saline moistened gauze as soon as possible following removal, or in special immunofluorescence transfer media.

Collection: A physician collects tissue following standard protocol. Place fresh tissue in a container filled with immunofluorescence transfer media, or place fresh tissue on saline moistened gauze and place gauze in a container suitable for transport. Label the container with the patient's full name, date and time specimen was collected, and patient location. Deliver specimen and completed requisition immediately to the Histology Laboratory

Added Information: Requisition must state diagnosis and specimen source.

Immunoperoxidase Procedures

Specimen: Fresh tissue or paraffin blocks is submitted.

Collection: Tissue collected per standard protocol by a physician. Label the container with patient's full name, date and time specimen collected and patient location. Deliver specimen and completed pathology requisition to the laboratory.

Added Information: This method localizes specific antigens for the diagnosis of poorly differentiated neoplasms. Contact Histology or a pathologist for further information.

Kidney Stone Analysis

Specimen: Kidney stones. Chemical analysis requires 5 mg of stones.

Collection: Specimen should be washed free of tissue and blood and submitted in a clean, dry container. Label the container with patient's full name date and time specimen collected and patient location. Deliver specimen and completed pathology requisition to the laboratory.

Added Information: Do not apply any tape to stones as adhesive interfere with infra-red spectroscopy. Do not place stones in any fixative. 24-hour urine collections for creatinine clearance, magnesium, uric acid, calcium, phosphorus, oxalate, Chem 12, serum sodium, potassium, magnesium citrate, and possibly parahormone levels may be useful investigations.

Lymph Node Biopsy

Specimen:	Fresh lymph node tissue wrapped in saline moistened gauze, in case of suspected diagnosis of Lymphoma or infection (fungus, TB). Otherwise it can be submitted in 10% Buffered Neutral Formalin.
Collection:	Tissue collected per standard protocol by a physician. Place tissue directly into sterile container with saline moistened gauze. Label the container with patient's full name, date and time specimen collected, and patient location. Deliver specimen and completed pathology requisition to the laboratory immediately.
Added Information:	Do Not add any fixative in case of any questions about submitting such specimens. Requests for all examinations including bacteriology and special stains should accompany the specimen to the laboratory.

Muscle Biopsy

Specimen:	Skeletal muscle. 2 x 1 x 0.5 cm desired.
Collection:	A specimen of muscle, 10 x 5 x 5 mm is clamped <i>in situ</i> by the surgeon, using a muscle forceps or sutured to a sterile tongue blade if a clamp is not available. The specimen is then surgically excised and placed in a container on saline-moistened gauze. DO NOT float the muscle tissue in saline. Label the container with patient's full name, date and time specimen collected, and patient location. Place the properly closed container on wet ice and deliver specimen and completed pathology requisition to the laboratory immediately.
Added Information:	For special studies, such as histochemistry, electron microscopy or immunofluorescence, both fresh and fixed tissue are required. Two specimens of muscle must be collected as described above and submitted. Requisition must state operative diagnosis and source of specimen. Serum CK, 24-hour urine creatine and creatinine are commonly completed before a biopsy is performed. Aldolase and CK Isoenzyme may also be useful. Also indicate the referring physician's name.

Myocardial Biopsy

Specimen:	Heart tissue submitted in saline or 10% buffered formalin.
Collection:	Consult a pathologist prior to biopsy procedure for specific instructions. Tissue collected per standard protocol by a physician. Place tissue directly into container of sterile saline or 10% neural buffered formalin. Label the container with patient's full name, date and time specimen was collected, and patient location. Deliver specimen and completed pathology requisition to the laboratory immediately.
Added Information:	Requisition must state operative diagnosis and source of specimen. Refrigerate unfixed specimens if transport to laboratory is delayed.

***Pneumocystis carinii* Preparation**

Specimen:	Fresh lung tissue from biopsy or transthoracic needle aspirate.
Collection:	Tissue collected per standard protocol by a physician. Place tissue directly into container of sterile saline. Biopsy specimens should be submitted fresh. When inoculating needle aspirate on slides, single drops should be applied and allowed to air dry without spreading. Label the container or slides with patient's full name, date and time specimen collected, and patient location. Deliver specimen and completed requisition to the laboratory immediately.
Added Information:	Pneumocystis preparations applied to expectorated sputum have an extremely low yield and will not be done without consultation with a pathologist.

Renal Biopsy

Specimen:	Fresh kidney tissue and fixed tissue.
Collection:	The specimen may be obtained either by open biopsy in the operating room or by needle biopsy in the ultrasound room. Ideally, three pieces of tissue are needed. Two pieces are placed in 10% buffered formalin, one in Michel's fixative.
Added Information:	A pathologist should be consulted before performance of the biopsy to expedite collection and receipt of specimen.

Skin Biopsy, Immunofluorescence

Specimen:

Collection:

3 mm square skin punch biopsy, fresh, no fixative
Take biopsies from the following sites: If pemphigus or bullous pemphigoid is suspected and fresh lesions are present, take a 3 mm biopsy at the edge of the bulla. If only old lesions are available, take biopsy from adjacent area. If dermatitis herpetiformis is suspected or both bullous pemphigoid and dermatitis herpetiformis are suspected, take not only lesion biopsy, but also biopsy of uninvolved area around lesions. If systemic lupus erythematosus (SLE) or discoid lupus erythematosus (DLE) is suspected, take biopsy of sun exposed normal skin, preferably of the wrist, for diagnosis of SLE. Place tissue on saline moistened gauze in a container or place in immunofluorescence transfer media. Label the container with patient's full name, date and time specimen was collected, and patient location. Place the container on wet ice. Deliver specimen and completed pathology requisition to the Histology laboratory. Specimen may not be stored, but rather must be delivered to the Histology laboratory immediately.

Added Information:

Skin Biopsy, Immunoperoxidase

Specimen:

Collection:

Tissue (punch biopsy) fixed in 10% buffered formalin. Tissue collected per standard protocol by a physician. Place skin biopsy immediately in formalin. Label the container with patient's full name, date and time specimen was collected, and patient location. Deliver specimen and completed pathology requisition to the laboratory.

Added Information:

Once placed in formalin, specimen may be maintained at room temperature.