

Surgical Pathology

I. Hours of Operation

Surgical Pathology: 7:00 AM - 5:00 PM; Monday - Friday

On call availability 24/7 (call resident on call after these hours at 449-4630)

II. Contact Section

Phone: 449-4630

III. Scope of Testing

Gross and histologic examination of tissue, primarily to diagnose malignancy, inflammatory conditions, and to monitor or assess treatment. Tissue samples may also be examined for the presence or absence of various proteins such as immunoglobulins or tumor products. Additional examinations may also include electron microscopy, intraoperative consultation, Immunohistochemistry, molecular genetic testing or referral to other laboratory sections (e.g. microbiology) as needed.

IV. Submission of Tissues

- A. All tissue and materials removed surgically from, or tissue of a foreign body spontaneously passed by any patient of the Medical Center shall be submitted to Pathology for examination and reporting. Clinically normal prepuces from newborn circumcision, placentas from normal vaginal deliveries of healthy newborns, and therapeutic radioactive sources are exempted. The Pathologist shall determine the extent of examination.
- B. All materials submitted shall be accompanied by a Surgical Pathology/Consultation Request with the patient's full name, hospital number, account number, location, age, sex, physician's name, specimen site and a brief clinical history, including preoperative and postoperative diagnoses. Each specimen container must be clearly labeled with the patient's name, hospital number and specimen location.
- C. As soon as possible, specimens should be placed in at least 10 times their volume of buffered 10% formalin in plastic, opaque, tightly-closed specimen containers. In case of whole organs and hollow viscera, a Pathologist should be called to open the specimen, pin it out appropriately, and fix it properly. Furthermore, in cases where additional specialized testing (such as cytogenetics) could be of importance (e.g. soft tissue tumors) pathologist on-call should be contacted before the specimen is put in fixative. Special fixatives may be prescribed in special cases, such as electron microscopy. Surgeons should not cut, dissect, or open tissue(s) that has/have been removed, except in consultation with the Pathologist.

V. Microbiologic Studies on Surgical Specimens

When microbiological studies are needed on surgical specimens, the specimen should not be placed in fixative. It should be placed in a sterile container preferably covered with sterile gauze moistened with sterile saline. A Pathologist should be called (449-4630), who will then divide the specimen appropriately for the microbiologic studies and for histologic examination. Do not place such specimens in any kind of solution (e.g., fixative, saline, etc).

VI. Operating Room Gross Consultation and/or Frozen Section

When a surgeon needs immediate examination of a gross specimen, including cutting it, opening it, etc., a Pathologist shall be called (449-4630). **The surgeon should not cut or otherwise dissect gross specimens in the operating room.** When an immediate intraoperative diagnosis is needed which will impact the immediate care of the patient, a frozen section should be

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ordered. If a frozen section or sections are needed, the pathologist should be called and the fresh tissue taken to the frozen section room near the operating room. The pathologist shall give a verbal report to the surgeon and document the report and time rendered on the surgical pathology requisition. At night or on weekends, as much advance notice as possible should be given so that the pathologist will be present at the required time to examine the gross specimen and/or perform frozen sections.

VII. Electron Microscopy

The Pathologist handling the case shall be responsible for determining whether electron microscopy is diagnostically indicated. If there is a possibility that it will be done, small cubes of tissue (1 mm) should be placed in 3% glutaraldehyde for fixation as soon as possible, and preferably before formalin fixation. Tissue submitted for electron microscopy only must also be accompanied by H & E section(s) or tissue for light microscopy.

VIII. Lymph Node and Other Biopsies for possible lymphoma and/or T and B Cell Marker Analysis

These tissues must not be placed in formalin or other fixatives - call the pathologist (449-4630) for immediate pickup and processing. See Lymphocyte Cell Marker Analysis, T & B Cell for Immune Status, or Lymphoma CellMarker Analysis, Immunoperoxidase (*in the alphabetic list of tests in this Manual*).

IX. Skeletal Muscle and Nerve Biopsies

The usefulness of the muscle biopsy is critically dependent upon the proper handling of the specimen. Muscle, freshly excised for the diagnosis of neuromuscular disease, should **NEVER** be placed in formalin or any other fixative. Muscle biopsies should not be stretched or clamped. They should not undergo surface drying. The following steps should be taken when a muscle biopsy specimen is procured in the Operating Room:

- A. Take the specimen from the surgeon, wrap it in water or saline-soaked gauze. Do not immerse the specimen in either water or saline.
- B. Put the gauze-wrapped specimen into a plastic specimen container and cover the container.
- C. Call the Pathology resident on duty for frozen sections and state that a muscle biopsy is in the Frozen Section room.
- D. Take the specimen to the Frozen Section room.

If the surgeon has placed a biopsy in muscle clamps, wrap the specimen and the clamps in saline-moist gauze, cover, and call the Pathology resident. If the surgeon is unfamiliar with specimen requirements for muscle biopsy at Creighton University Medical Center, state that two pieces of muscle 1.0 cm in length and 0.5 cm in diameter are ideal. One such piece is acceptable - less than that may result in a suboptimally informative biopsy.

If the muscle biopsy is accompanied by a nerve biopsy, handle the nerve specimen in the same way as the muscle. If at any time, questions arise concerning muscle, nerve or neurosurgical specimens, please contact the Neuropathologist.

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X. Kidney Biopsies

Kidney biopsies should be scheduled with the Pathologist, 24-hours in advance, if possible. Call the pathologist (449-4630) at the time of the biopsy. The tissue cores will be examined under the dissection microscope. The pathologist will divide the specimen for light microscopy and immunofluorescence studies, and place portions in 3% glutaraldehyde for electron microscopy. A Surgical Pathology/Consultation Request form must be filled out by the attending physician and given to the pathologist.

XI. Skin Biopsies for Immunofluorescence

Skin biopsies for immunofluorescence should be sent immediately to Pathology in saline soaked gauze, or if necessary, may be placed in Michel's fixative (N-ethyl maleimide), available from the Immunopathology Laboratory. The specimen in gauze should be refrigerated as soon as possible. Tissue sent only for immunofluorescence must be accompanied by an H & E section or tissue for light microscopy.

XII. Orientation of Surgical Specimens

Surgical specimens requiring special orientation, (e.g., proximal, distal, left, right, and/or o'clock), may be marked with India ink or black silk sutures. The location and nature of such marks must be specified on the Surgical Pathology/Consultation Request. Such indicated orientations shall be maintained throughout the tissue examination and the resulting description and diagnosis by Pathology shall take it into account. If there are any questions, please call the pathologist (449-4630) to orient the specimen.

XIII. Required Review of Material from Other Institutions

Pathologic material obtained at other institutions, which is the basis for diagnosis of patients being treated at this institution, shall be requested for review by Pathology at this location. The attending physician should initiate a request using a Surgical Pathology Consultation Request form and signed patient authorization for Pathology to obtain such material. The following information is necessary on the Request form: name of the institution originally obtaining the material, name and hospital number of the patient, type and date of surgery at the other institution, and pathology accession numbers, if known. Pathology shall obtain the necessary slides and referral reports. Such review should occur prior to the treatment, whenever possible. Attending physicians should not directly request pathological material from other institutions.

XIV. Availability of Materials to Other Institutions and for Outside Consultations

Pathologic material from this laboratory may be referred to outside consultants chosen by the Pathology Department. If the attending physician or the patient desires additional opinions, the matter should be discussed with the pathologist handling the case. Material will be made available on request to other institutions treating patients biopsied at this institution.

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XV. Forensic Specimens

Bullets should be given directly to security personnel. The use of metal forceps in the handling of bullets should be avoided, whenever possible. "Chain of Custody" procedures should be observed.

XVI. Delivery of Specimens

Specimens obtained in the operating suite are delivered, with accompanying tissue form, to the frozen section room, written in the log book and placed in the specimen refrigerator. All other specimens are delivered to central deposit in the main laboratory on the ground floor.