**Department of Pathology- Histology**

Anatomic Pathology Guidelines

Highlands Ranch Hospital Histology

**Purpose**

The following guidelines delineate how specimens are received. Specific processing requirements for histological processing and examination at UC Health Highlands Ranch Hospital Histology Laboratory are described.

All tissue, appliances, or foreign bodies removed from a patient are sent to Pathology for examination with exceptions as noted in Tables 1&2 in the resource below. Medico-legal foreign body: bullets, etc., removed intraoperatively should follow surgery protocol for chain of custody.

**Policy**

1. Routine Surgical Specimens
   1. Specimens are brought to Histology or the Frozen Section Lab as needed Monday-Friday from 0600-1830
      1. After hours, all specimens are brought directly to the specimen processing window.
      2. Specimen processing staff will distribute specimens to the appropriate location.
      3. It is important that fresh specimens are delivered as soon as possible.
      4. Formalin fixed tissue should be brought to the lab in a timely manner to facilitate processing.
   2. Specimens are received fresh, or in the appropriate fixative with the patient's name, MRI, date of birth and specimen site labeled on the side of the container.
      1. When possible there should be a 20:1 formalin to tissue ratio.
      2. If specimen floats place paper towel soaked in formalin on top of the specimen.
   3. The specimen must be accompanied by a surgical pathology requisition, which includes patient name, medical record number, age, surgeon, specimen site, date, time, pre-op diagnosis and any relevant history.
   4. Specimens should be transported in a manner that prevents exposure of health care personnel to chemicals, blood, body fluids, or other infectious materials and ensures confidentiality of personal health information.
   5. If there is a question about whether a specimen should be placed on formalin, the pathologist should be consulted.
   6. All requisitions must include the collection time and date.
   7. A patient label with the same demographics as the specimen and requisition will be placed in the Pathology Receipt of Specimens Log and initialed by the staff delivering and receiving the specimen.
      1. After hours the storage location of the specimen will be documented in the Pathology Receipt of Specimens Log by the lab staff.
   8. The specimen is accessioned by the Histology lab staff following the Accessioning Procedure.
   9. Frozen Section specimens are delivered to the Frozen Section Lab located in the OR. OR staff notifies Frozen Section Lab by phone/vocera as the specimen leaves the OR to be delivered to the Frozen Section Lab.
2. Intra-Operative and Frozen Section Diagnosis
   1. Specimens for Intra-operative/ frozen sections are delivered to the Frozen Section Lab fresh and labeled with the patient name and specimen source.
      1. Specimens must be accompanied by a surgical pathology requisition, which includes patient name, medical record number, age, surgeon, pre-op diagnosis, specimen source, OR room number, and frozen section protocol must be indicated on each specimen requiring frozen section.
      2. A patient label with the same demographics as the specimen and requisition will be placed in the Pathology Receipt of Specimens Log and initialed by the staff delivering and receiving the specimen.
      3. Once the frozen section report is complete the specimen(s) will be processed as a routine specimen.
      4. Blocks in cryostat are accompanied by the corresponding cassette in effort to prevent mislabels.
   2. A verbal diagnosis is given by phone directly to the surgeon by the pathologist, after verifying patient identification.
   3. There is a 20-minute turnaround time from receiving the specimen to the phoned diagnosis for each block. (This includes a fifteen-minute turnaround time for producing a slide from the tissue.)
   4. Frozen tissue is not to be stored in the cryostat overnight, as the cryostat defrosts every night.
3. Specimens Needing Special Handling. Review individual procedures.
   1. FNA Request
      1. Call histology to notify FNA is required
   2. Lymphoma studies.
      1. Tissue must be fresh.
      2. Requisition must state required test.
      3. Specimen must be labeled appropriately.
   3. Tissues requiring cultures.
      1. Tissue must be fresh.
      2. Requisition must state required test.
      3. Specimen must be labeled appropriately.
      4. Specimen must be delivered to the lab within 60 minutes of collection.
   4. Kidney biopsy.
      1. Requisition must state required tests.
      2. If EM studies are required, submit one core in glutaraldehyde.
      3. If Direct Immunofluorescence is required, submit one core in Michele’s Medium (Zeus).
   5. Stone analysis.
      1. Requisition must state required tests.
      2. Stones must be fresh.
      3. Stones must be drained of any liquid prior to sending out.
   6. EM studies.
      1. Requisition must state required tests.
      2. Specimen must be submitted in glutaraldehyde.
   7. Cell Markers.
      1. Requisition must state required tests.
      2. Collection time and cold ischemic time must be documented on the requisition.
         1. For pathology purposes, the cold ischemic time is the time between collection and when the specimen is placed on fixative.
   8. Chromosomes.
      1. Requisition must state required tests.
      2. Specimen must be received fresh in a sterile container.
   9. Specimens with history of breast cancer.
      1. Collection time and cold ischemic time must be documented on the requisition.
         1. For pathology purposes, the cold ischemic time is the time between collection and when the specimen is placed on formalin.
      2. Specimens must be delivered to pathology/placed on formalin within 60 minutes of removal from body.
   10. Products of Conception.
       1. Any specimen containing fetal tissue must be accompanied by a patient signed “tissue disposition consent” form along with the pathology requisition form.
       2. Do not place formalin on specimen awaiting genetic testing.
          1. Follow guidelines above for chromosomal studies.
          2. When possible submit sections of interest (placenta or chorionic villi) in a sterile container separate from the remainder of the specimen.
   11. Amputated limbs.
       1. If specimen should be sealed in a biohazard plastic bag if too large for specimen container.
       2. The biohazard bag should be labeled with a patient label and sent to pathology with a requisition.
          1. This applies to both surgically and traumatically removed limbs.
       3. Patient should sign an Extremity Disposal Permit, if possible.
       4. In the absence of pathology staff, the limb should be placed in the pathology refrigerator.
          1. If the limb is too large, it must be refrigerated in the morgue.
          2. Storage location must be documented on the Specimen Receipt Log.
   12. Specimens from patients with communicable diseases.
       1. Pathology staff must be notified and the pathology requisition form should document when specimens are taken from a patient with a communicable disease.
          1. Including but not limited to: TB, HIV or Hepatitis.
          2. Not doing so can be detrimental to the pathology staff.
   13. Foreign bodies.
       1. Specimens are sent to pathology at the surgeon’s request.

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| **TABLE 1 – TISSUE REQUIRING LIMITED PATHOLOGIC EXAMINATION** | |
| The following surgically removed specimens require only a gross examination. A microscopic examination may be performed upon request by the surgeon and/or the pathologist’s discretion, as clinically indicated. | |
| General Surgery | Foreign body, i.e., IUD, wood, glass, tubes, non-urological stents, etc. |
| Supernumerary digits |
| Traumatic amputation |
| Carotid endarterectomy |
| Aortic aneurysms |
| Umbilical hernia unless history of malignancy in the same anatomic area |
| Prosthetic valves unless porcine valve |
| Urology | Foreskins (age > 18 years old |
| Orthopedic | Foreign body |
| Acromion/distal clavicle |
| Disc |
| Plastic Surgery | Foreign body |
| ENT | Auditory ossicles |
| Tonsils and adenoids (age <10 years) |
| Uvula |
| OB/GYN | Elective abortion products when fetal parts identified |

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| **TABLE 2 – TISSUE EXCLUDED FROM ROUTINE SUBMISSION FOR PATHOLOGY** | |
| The following surgically removed specimens do not require any pathology examination. A gross and/or microscopic examination may be performed upon request by the surgeon and/or the pathologist’s discretion, as clinically indicated. | |
| **The laboratory requests that the surgeon document, in the medical record, his/her decision to submit, or not submit, any of the following specimens for pathologic examination.** | |
| General Surgery | Redundant skin and subcutaneous tissue, except from breast of female or unless patient has a history of malignancy in the same anatomical area. |
| Toenails |
| Foreign bodies removed from aero digestive tract |
| Portion of rib removed for operative exposure |
| Vein graft |
| Dialysis graft |
| Varicose veins |
| Pacemakers |
| Batteries |
| Urology | Penile foreskins (age <18 years old) |
| Ureteral stents |
| Penile prosthetic devices |
| Stones (kidney, bladder, ECT., stone for analysis are ordered and sent to the clinical lab) |
| Orthopedic | Appliances and hardware |
| Bunions |
| Ligamentum flavum |
| Meniscus |
| Bone specimen removal due to osteoarthritis |
| Plastic Surgery | Skin scars – unless patient has a history of malignancy in same anatomic area |
| Redundant skin and subcutaneous tissue, except from female breast area |
| Toenails |
| ENT | Bone and cartilage from nasal reconstruction (septoplasty) |
| OPHTH | Crystalline lens (cataracts) |
| Eyelid skin from blepharoplasty |
| Muscle from strabismus |
| OB/GYN | Placentas from normal deliveries |
| Placentas from repeat C-section |
| Placentas from C-sections for cephalopelvic disproportion |
| Post C-section scar |
| Vaginal mucosa from strictly structural repair |
| Dental | Teeth – unless associated with adherent soft tissue, cyst or tumor development |
| Hard and soft tissue removed at time of reconstructive or orthognatic procedures |
| Hardware |
| Medico-Legal Foreign Body | Bullets, etc., removed intraoperatively should follow surgery protocol for chain of custody |

**Notes**

1. The pathology department requests that the surgeon documents, in the medical record, their decision to submit or not submit any specimen on this list for microscopic evaluation

**References**

1. CAP Anatomic Pathology Checklist ANP 10032
2. CAP Anatomic Pathology Checklist ANP 10016
3. CAP Anatomic Pathology Checklist ANP.11716