Histology/Surgical Pathology

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Specimens submitted for pathologic evaluation of gross and microscopic examinations should be placed in 10% neutral buffered formalin containers supplied by Allina Health Laboratory.

Each specimen must be accompanied by an Excellian order, or a properly completed manual request form. Gross and microscopic testing will always be performed on appropriate specimens for all samples submitted with this requisition unless otherwise stated. An example of this form is included in the Forms section of this directory for reference when filling out patient and specimen information.

The Allina Health Laboratory Histopathology Department uses the most current year CPT coding to classify tissues for reporting and billing purposes.

The unit of service for CPT 88300 through 88309 is the specimen. A specimen is defined as tissue(s) that are submitted for individual and separate attention, requiring individual examination and pathologic diagnosis. Two or more such specimens from the same patient (e.g., separately identified endoscopic biopsies, skin lesions, etc.) are each appropriately assigned an individual code reflective of its proper level of service. For the final pathology coding, please refer to your clinic or patient bill.

For pathology reports, please call Allina Health Laboratory Client Services at (612) 863-4678.
Specimen Acceptability Criteria for all Histology Specimens

Each specimen must be accompanied by a matching requisition or, when appropriate, Excellian Supplemental Form (Breast, FNA and pathologist consult).

- The name, second unique patient identifier, and the specimen source/site, including left vs. right designation when applicable, on the specimen container must EXACTLY match the information on the accompanying requisition/form.
- The specimen source/site is always required on the requisition/form, but is only required on the specimen container when multiple containers are received on the same patient.
- Patient’s with more than one specimen need only one form. Label each specimen as A, B, C, etc., and indicate source of each on the form; i.e. A) Mole, left shoulder B) Mole, right forearm C) Mole, Right Lower Back

The specimen container must contain 2 unique patient identifiers:

- Patient name and Allina Health EPIC number are strongly preferred when possible.
- Patient name and Date of Birth or Social Security Number is an acceptable alternative when the above is not possible.
- All histology specimens must have labels attached to the primary container. Labeling of the container lid is not acceptable.

Outreach Histology Specimen Labeling Issue Resolution

Any specimen not conforming to the criteria listed above, and/or in the instance of tissue not being submitted in the specimen container, will result in the initiation of an Unlabeled/Mislabeled form.

For minor labeling issues, the submitting client will be contacted to notify them of the labeling discrepancy. The Unlabeled/Mislabeled form will be faxed to the client for completion and return.

Minor Labeling Issues are:

- Name spelling discrepancies on requisition/form and/or specimen container
- Transposed numbers or small inaccuracies in 2nd identifiers (Epic number, DOB or SSN) on requisition/form and/or specimen container.
- Minor mismatch in description of specimen source/site. For example, forearm mole vs. arm mole.
- Mismatch of Left vs. Right designation on requisition/form vs. specimen container.
- No second identifier.
- Specimen site/source not indicated.
- Specimen container labeled with patient information and/or site/source on lid.
Specimens with **major labeling issues** will be referred to a Hospital Pathology Associates pathologist for review. The pathologist will contact the submitting provider and will determine if the specimen will be rejected or accepted at that time.

If the specimen is accepted by the pathologist, the submitting client will be contacted to notify them of the need to complete and return an Unlabeled/Mislabeled Form which will be initiated at Allina Health Laboratory and sent to them via fax.

**Major Labeling Issues** are:

- The specimen container is unlabeled
- The patient name on the container does not match the name on the requisition/form
- A significant mismatch between the source/site indicated on the container and the source/site indicated on the requisition/form
- There is no identifiable tissue in the specimen container

Please note that any specimen submission error, minor or major, will delay sample processing and reporting of results. Please make sure that all staff submitting specimens for histology examination are aware of the labeling requirements.
Pathologic Evaluation of Breast Core Biopsies

All breast core biopsies will be evaluated independently by two board certified pathologists, and one of these pathologists will be a member of the Breast Pathology Team at Hospital Pathology Associates (HPA)/ Allina Health Laboratory. Our breast pathology services follow guidelines of the College of American Pathologists (CAP) and American Society of Clinical Oncology (ASCO).

Radiographic information will be utilized to arrive at the correct pathologic diagnosis. This correlation is crucial in providing the precise pathologic interpretation.

In order to assure the most precise pathologic interpretation of radiologically-obtained breast biopsies, we request that complete information be submitted for all ultrasound, stereotactic, or MRI assisted techniques. This information will be incorporated into the pathologic report (clinical information). This data will not only assist us in our interpretation of your biopsies, it will also become extremely useful in the pathologic assessment of the subsequent lumpectomies and mastectomies from these patients.

We also request that a specimen mammogram accompany all breast cores performed for calcifications. Please place the cores containing the calcifications in a cassette (we can provide these for you). Place this cassette into a labeled formalin container; the remaining cores can be floated separately in this container.

Finally, we must have your facility record the time the tissue was removed from the patient and placed into formalin. According to ASCO and CAP guidelines, this information must be recorded on all pathology reports, due to standardized procedures for hormone receptor and HER2 evaluation.

Diagnoses will be issued by the end of the next working day (the day following when the biopsy was obtained). All cases submitted on a Friday will be reported on the following Monday. In the rare event that additional studies are needed resulting in greater than 24 hours turn-around time, one of our breast pathologists will call and inform your radiologists of the preliminary diagnosis and the reason for delay.

Ancillary studies (such as hormone receptor studies and HER2 analysis) will be performed on all breast cancers.

The vast majority of breast reports will utilize templated formats, with recommendations for excision when indicated (such as for intraductal papillomas, radial scars, fibroepithelial lesions (which include possible phyllodes tumors), mucocele-like lesions, flat epithelial atypia (FEA), atypical ductal hyperplasia (ADH), and lobular neoplasia (including ALH and LCIS).
Handling of Breast Specimens

The College of American Pathologists (CAP) and the American Society of Clinical Oncology (ASCO) issued a joint guideline in 2010 aimed at improving the accuracy of immunohistochemistry (IHC) testing for the expression status of hormone receptors (estrogen (ER) and progesterone receptors (PR) in breast cancer.* This is result of previous studies which demonstrated inaccurate hormone receptor analysis and HER2 evaluation due to variances in handling of breast tissue. Based on these guidelines, breast tissue must be sectioned and placed into 10% neutral buffered formalin (NBF) within 1 hour of removal from patient. Also, the tissue must be fixed in formalin for a minimum of 6 hours, not to exceed 72 hours.

To ensure proper handling of breast tissue:
- Surgeon is responsible for recording time on accession slip when specimen removed from patient.
- Designate margins via inks (inking scheme is below) or via sutures (inking is the preferred method of margin evaluation due to more accurate designation as to area of particular margin).
- If a pathologist is not immediately available to handle specimen, bisect sample through the tumor before placing specimen into NBF.
- Place specimen into NBF & record time specimen placed into formalin on requisition.
  - Formalin must be 10 fold greater amount than the volume of specimen.

Inking schemes: Lumpectomy Specimens
1. Dry specimen with gauze
2. Apply inks as follows:
   - Anterior – Orange
   - Posterior – Black
   - Medial – Green
   - Lateral – Yellow
   - Superior – Blue
   - Inferior – Red
3. Seal ink with white vinegar (apply with squirt bottle to all surfaces) and blot dry.
   Make certain ink is completely dry before sectioning.
4. Section through tumor and place in adequate formalin to fix specimen.

Inking Schemes: Mastectomy Specimens
1. Dry specimen with gauze
2. Apply inks as follows:
   - Deep - black
   - Anterior superior - blue
   - Anterior inferior - red
3. Seal ink with white vinegar (apply with squirt bottle to all surfaces) and blot dry.
   Make certain ink is completely dry before sectioning.
4. Section through tumor (from posterior aspect), and place in adequate formalin to fix specimen (recommend placing gauze between sections of breast mastectomy specimens).

**Surgical Specimens Gross Only List**

This list represents surgical specimens that may be for “gross examination only”, as annually directed by the Allina Health Hospitals’ Surgery Departments.

All surgical specimens that are for “gross examination only” are examined by a pathologist and that examination is documented in the report. Representative sections may be submitted at the discretion of the reviewing pathologist. A “gross examination only” shall suffice for the following specimens:

1. Atherosclerotic plaques (carotid, femoral, coronary)
2. Abdominal aortic aneurysm
3. Adenoids < 16 years old
4. Amputations, traumatic
5. Bone, non-diagnostic (i.e. loose body, bunions)
6. Bone, non-tumor, (degenerative joint disease, fracture or acromion)
7. Breast implants/prosthesis or tissue expanders
8. Cardiac valves (aortic or mitral) for stenosis
9. Fat, liposuction
10. Fetus < 20 weeks gestation (unless accompanied by signed autopsy permit)
11. Foreign bodies
12. Foreskin < 16 years old
13. Hammertoes
14. Hernia Sac, patient < 40 years of age
15. Knee cartilage, meniscus
16. Mastopexy specimens
17. Middle ear ossicles
18. Nasal septum, non-inflammatory diagnoses
19. Panniculus, abdominoplasty tissue
20. Prosthetics/medical implants
21. Teeth
22. Urinary calculi (all renal and ureteral calculi are sent directly for chemical analysis)
23. Varicose veins
24. Muscle biopsy – send out to Hennepin County Medical Center
25. Nerve biopsy – send out to Hennepin County Medical Center
26. Kidney biopsy – send out to Hennepin County Medical Center
27. Eye (enucleation) – send out to University of Minnesota, Minneapolis, MN, Dr. Doug Cameron
Surgical Specimens Exempt from Pathology Examination at Surgeon’s Discretion

Following is a list of the types of surgical specimens that are exempt from pathology examination, as annually directed by Allina Health Hospitals’ Surgery Departments. Items listed assume uncomplicated case without extenuating factors.

All tissues or appliances removed at the time of surgery should be documented in the operating room (OR) record as to its deposition; Pathology, Discarded or Returned to Patient

The following items in uncomplicated setting are exempt from Pathology Evaluation. They can be sent for pathologic evaluation at the discretion of the operating surgeon, with specific clinical concern or indication listed on request.

1. Abdominal aortic aneurysm
2. Abdominoplasty tissue, panniculus, fat liposuction
3. Adenoids for patients <16 years
4. Amputations, traumatic
5. Arthroscopy, arthrotomy, meniscectomy tissue
6. Atherosclerotic plaques (carotid, femoral, coronary)
7. Blepharoplasty skin (excess skin, orbital fat)
8. Body cavity fluids (pleural and ascites)
9. Bone fragments (small – e.g. bunions and deviated septum)
10. Breast cyst fluid
11. Breast implants
12. Calculi - Note: All kidney and ureteral calculi submitted to the lab will be sent directly for chemical analysis
13. Cataracts
14. Cerumen
15. Face-lift tissue
16. Femoral heads and bone from total knees for osteoarthritis
17. Fetus < 20 weeks gestation without surgical requisition form or autopsy permit
18. Foreign material/medical hardware (e.g. catheters, stents, pacemakers, tympanostomy tubes), unless there are possible medicolegal implications or infection is a consideration and culturing is desired
19. Hammertoes
20. Heel spurs
21. Hematoma/blood clot
22. Hernia sacs
23. Hydrocele sac
24. Hymenectomy tissue
25. Intervertebral disc
26. Intrauterine device
27. Loose body
28. Mucus
29. Newborn foreskins
30. Orthopedic hardware
31. Placenta, unless abnormal
32. Scars (including C-section scars), unless grossly abnormal or site of previous malignancy
33. Skin and soft tissue removed during surgical approach
34. Stapes, incus and malleus
35. Teeth
36. Toenails
37. Vaginal mucosa
38. Varicose veins
Frozen Section/Fresh tissue examination

Fresh frozen examination is used to microscopically evaluate fresh tissue biopsy fragments or entire organs on an immediate basis. This procedure provides instructions for off site outreach clients to submit fresh tissue specimens for fresh frozen examination.

Test Frequency:

- Monday - Friday, between the hours of 8am and 5pm

Specimen Requirements:

1. Excise the specimen.
2. Place the fresh specimen into a clean, dry container; Do NOT place in formalin.
   a. For small specimens, wrap the tissue in saline soaked gauze to prevent drying of the tissue.
3. Properly label the specimen container (not the lid) with the first and last name of the patient, patient date of birth, site of specimen, and the date and time of specimen collection.
4. Fill out a Histopathology test request form in it’s entirety, being sure to include a phone number to which results should be called.
5. Call the Allina Health histology department prior to specimen transport at (612) 863-4676 to notify them of the impending arrival.

Specimen Transport/Delivery:

Deliver the specimen and completed request form to the Histology laboratory located on the lower level of Abbott Northwestern Hospital within 15 – 20 minute of excise. Fresh specimens that are not delivered promptly to the lab will compromise patient results due to to tissue autolysis. Allina Health Laboratory RUSH courier services will not meet this time requirement; the submitting site is responsible for arranging specimen transport.

Turn-around-time:

Results should be available within 20 minutes after receipt of the tissue within the hospital pathology laboratory.
**Tissue, Gross Only Examination**

Evaluates tissue fragments or whole organs grossly

**Test Frequency:**

- Monday – Friday

**Turn-around-Time:**

- Turn-around-time should generally occur within one business day following the receipt of the tissue at the Allina Health Laboratory prior to 4:30 pm, excluding weekends and holidays.
- Specimens received after 4:30 pm will be turned around within 48 hours, excluding weekends and holidays.

**Specimen Requirements:**

- Excise the specimen.
- Place specimen into a container containing 10% neutral buffered formalin **NOTE:** the specimen should be placed immediately in 10% neutral buffered formalin unless a frozen specimen is needed
- Properly label specimen container (not the lid) with the first and last name of the patient, patient date of birth, site of specimen, and the correct date of specimen collection.
- Place an Excellian order, or fill out a manual Histopathology test request form. For further form information, see the *Forms* section of the directory.

**Comments:**

- For most samples, 20 mL of 10% neutral buffered formalin is sufficient. A ratio of 20 parts of 10% neutral buffered formalin to 1 part of tissue is recommended.
- For larger samples, ensure that the specimen is completely covered with 10% neutral buffered formalin.
**Tissue, Gross & Microscopic Examination:**

Evaluates tissue biopsy fragments or whole organs, both grossly and microscopically.

**Test Frequency:**

- Monday – Friday

**Turn-around-Time:**

- Turn-around-time should generally occur within one business day following the receipt of the tissue at the Allina Health Laboratory prior to 4:30 pm, excluding weekends and holidays.
- Specimens received after 4:30 pm, and in some cases larger specimens received before 4:30 pm, will be turned around within 48 hours, excluding weekends and holidays.

**Specimen Requirements:**

- Excise the specimen
- Place specimen into a container containing 10% neutral buffered formalin
  - Note: the specimen should be placed immediately in 10% neutral buffered formalin unless a frozen specimen is needed
- Properly label specimen container (not the lid) with the first and last name of the patient, patient date of birth, site of specimen, and the correct date of specimen collection.
- Place an Excellian order, or fill out a manual Histopathology test request form. For further form information, see the *Forms* section of the directory.

**Other Comments:**

- For most samples, 20mL of 10% neutral buffered formalin is sufficient. A ratio of 20 parts of 10% neutral buffered formalin to 1 part of tissue is recommended.
- For larger samples, ensure that the specimen is completely covered with 10% neutral buffered formalin.