Surgical Pathology

Which pathologist (general call vs. liver) must be called for assessment of donor livers?

The general call pathologist, listed on the call schedule as the "Anatomical Pathologist" not the liver transplant pathologist, must be called for frozen sections looking for fat in donor livers.

How to assess liver biopsies for fat: At low power, estimate the percentage of liver parenchyma involved by macrovesicular steatosis. Do not estimate microvesicular steatosis. Report as follows:

- <30% macrovesicular fat (liver can be used)
- 30-50% macrovesicular fat (liver may be used)
- >50% macrovesicular fat (liver will not be used)

Who do I call about a rapid assessment of a liver biopsy?

This case is for the liver pathologist on call. These biopsies are either from transplanted patients or from patients with severe liver disease. The biopsy is processed as a "rapid" i.e. results will be available approximately 4 hours from the time the technologist receives the tissue. One of the technologists on the rotating call list must also be called.

Who do I call about a rapid assessment of a kidney biopsy?

The resident must stress to the clinician that the tissue will not be processed as a frozen section, but rather as a "rapid" i.e. results will be available out approximately 4 hours from the time the technologist receives the tissue. The resident must then contact the kidney pathologist on call. For core biopsies from living patients, one of the following two technologists (on the rotating call list) must be called: John Livingston or Dave DeVlugt. For wedge biopsies from a donor, any of the technologists on the rotating call list can be called; in this case, the resident should stress to the technologist that if tissue is received fresh, small amounts of the cortex should be submitted for TEM and IMF from the wedge biopsy.

How should biopsies be transported and where should they be sent after hours?

* **Tissue for regular processing:** Tissue should be placed in 10% formalin in a container. This should be placed along with a requisition form in a biohazard bag and sent to Pathology, University Hospital, using the porter system for delivery to the Pathology Specimen Receiving Area (PathSRA) at each campus.

* **Tissue for intraoperative consultation:** Tissue to be kept moist with saline and held pending the
arrival of the resident, pathologist and histotechnologist on call.

*Tissue for rapid processing:* Tissue to be placed in formalin; see above for regular processing.

**What must be done with skin biopsies for immunofluorescence?**

Biopsies should be placed in a container containing Michel’s transport medium, not formalin, then ship to the core laboratory for processing on the next working day.

**How is the lymphoma protocol handled after hours?**

The clinician should be informed that there is always a pathologist and resident available for intraoperative consultations.

If no frozen section is required:

- Between 6pm and 10pm: The resident should call and discuss this with the pathologist on call; in general, the resident can come in without the pathologist to do the preparation, provided that the pathologist is agreeable to this.
- Between 10pm and 7am: The tissue should be placed in formalin.

**What must be done with requests to photograph fresh surgical specimens after hours?**

Pathologists and residents are not available for specimen photography after hours.

**How do I deal with a call from Security to say that a freezer alarm has gone off?**

At the bottom of the Surgical Pathology Citywide On Call Schedule that switchboard has, it says "***Page Pathology Technologist for Mechanical Problems - pager 15719 (eg. Freezer and processor alarms).***"

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**Autopsy Pathology**

**What should nurses/physicians do when a patient dies after hours and has consent for autopsy?**

Call 33371 and leave a message with the relevant details; there is no need to page anyone.

**How do families visit their deceased relatives after hours?**

The family members must go to Security Desk; Security personnel will initiate the process.

**Who gives Security permission to let police into the morgue to ID people?**

The Technical Specialist in the Autopsy Service (Mike Graves or designate) initiates this process.
**What is entailed with donating bodies to UWO?**

After hours, the UWO switchboard should be called (679-2111); they will contact the staff member in the Department of Anatomy and Cell Biology.

**Who should authorize the acceptance of a hospital autopsy from out of town?**

The referring physician must contact the LHSC pathologist on call. The following will be required: completed LHSC Autopsy Authorization (consent), completed Medical Certificate of Death, proper attached ID and a clinical summary. For most cases, a fee will be charged if the deceased has not been a recent patient at LHSC or SJH.

**Who should authorize the acceptance of a coroner's autopsy from out of town?**

The local coroner must contact the Regional Coroner, who will contact the forensic pathologist on call.

**Cytopathology**

**NOTE:** A guide to cytology collection methods is available on the LHSC Intranet (LHSC Intranet - Manuals/Guides - Laboratory Test Information guide - Browse tests by Laboratory - Cytopathology).

**What must be done with pleural or peritoneal fluids collected after hours?**

Place the fluid into a container containing CytoLyt solution or mixed with CytoLyt solution in a container (ratio of fluid:preservative = 2:1) and gently mixed.

The specimen container must be labeled as containing cytology fixative as well as a label with patient identification and specimen type.

A Cytology requisition with appropriate clinical information and specimen type must be completed and sent with the specimen.

Send the specimen in a biohazard bag to Cytopathology Laboratory, LHSC-UC, using the porter system for delivery to the Pathology Specimen Receiving Area (PathSRA) at each campus.

Note: If lymphoma is suspected a portion of the specimen should be sent to flow cytometry in the appropriate fixative (flow cytometry medium)

**How do I respond to the physician who calls at night and requests a cytology smear and rapid assessment for a patient with a neck mass?**

Discuss the issue and suggest, in the first instance, that having it done the following day by an ENT surgeon might be the best solution. If he/she still wishes to perform the aspiration, as soon
as possible, follow the guidelines below.

**How do I respond to the ICU physician who wants help in preparing a cytology smear?**

This is the aspiration technique:

- Inspect lesion location, noting proximity to lung apex, chest wall and/or large blood vessels.
- Place a 23 gauge sterile needle (or 25 gauge or smaller if bloody or thyroid) on to a 10cc plastic syringe.
- Clean skin over lesion with alcohol wipe.
- Stabilize lesion between fingers of your one hand, keeping skin taut.
- Insert needle into lesion, pull plunger of syringe back to get vacuum effect and make excursions back and forth in one plane for about 10 seconds, or until blood is seen at the needle hub.
- Release plunger of syringe, then pull needle out of lesion.
- Apply gauze with pressure at puncture site.
- Prepare aspirate as per below.
- Aspiration may be repeated up to 2 additional times. Any further passes after 3 attempts have low diagnostic yields.

This is the preparation technique:

- Remove needle from syringe and pull air into syringe. Replace needle.
- Place one drop of material in the centre of a slide labeled with pencil (not pen) on the frosted end, close to the frosted end.
- With the long edge of the second slide held at 90 degrees smear material along slide length of the first slide.
- Fix the smeared slides immediately with cytospray held no closer than 6 inches to the slides. If adequate material has been aspirated, you will see white particles on the slide.
- Place the remaining material into the Cytolyt solution by gently pulling a small amount of solution up into the syringe and slowly expelling the sample back into the specimen container. It is important that the majority of the material be fixed in Cytolyt rather than on the smear.
- If the aspirate is bloody or scant, then repeat the procedure.
- Allow the slides to dry completely before placing in a cardboard folder for transport.
• Fill in the requisition with patient identifiers and clinical history.

Note: If there is a clinical suspicion of lymphoma, a portion of the first and second pass should be submitted for flow cytometry in appropriate fixative.

Send the specimen in a biohazard bag to Cytopathology Laboratory, LHSC-University Campus, using the porter system for delivery to the Pathology Specimen Receiving Area (PathSRA) at each campus.

If there is a cytology specimen that needs to be interpreted after hours, what do I do to facilitate this?

Call switchboard to contact a cytotechnologist to determine if they are able to assist. If the pathologist on call is not a member of the “cytology team”, it may be necessary to locate a pathologist from the cytology team to perform the interpretation. These include NC, BG, MGJ, CMM, ET, MMW (other members included: HCE, MSM, KR, ABT but not able to do lung or head/neck samples)

What to do about requests for lymphoma preps on vitreous fluid?

The sample should be sent fresh to the frozen section room in the OR and dealt with by the resident on call. Half of the sample to be placed in a container with Cytolyt fixative (no need to refrigerate), the other half in a container with flow cytometry fixative and placed in the fridge. Both cytology requisitions should be completed and accompany the samples. Send the cytology sample in a biohazard bag to Cytopathology Laboratory, LHSC – University Campus using the porter system for delivery to the Path SRA at each campus. Make arrangements to have flow cytometry specimen sent to VC on the next working day.

Compiled by Dr. D.K. Driman / Jul 06, 2005
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