

SPECIAL PROCEDURE SPECIMEN COLLECTION

1. CJD / CREUTZFELDT-JAKOB DISEASE

Under no circumstances should tissue from a known or suspected CJD patient be sent to the F. C. Blodi Eye Pathology Laboratory.

FIXATION: Any specimen from a patient with known or suspected prion disease, as well as those at high risk of a prion disease, will be submitted to the Surgical Pathology Lab as fresh (unfixed) tissue with prior notification to the laboratory.

SPECIAL HANDLING FOR CJD SPECIMENS:

The following procedure will contain the suspected tissue in one area of the Hospital until the determination of prions has been received:

- a. The University of Iowa Hospitals and Clinics Policy and Procedure for Infection Prevention and Control (IC-03.002) will be followed in the OR for specimen collection and submitting fresh (unfixed) tissue to the Surgical Pathology Lab.
- b. The Department of Pathology – Surgical Pathology Lab Policy and Procedure for Handling Tissue Suspected of Creutzfeldt-Jakob or Other Prion Diseases (SP-207) will be followed for processing these specimens.
 - i. The surgical area will notify the Surgical Pathology Lab prior to the collection of a suspected CJD specimen.
 - ii. The Surgical Pathology Lab will notify their Neuropathology Faculty that the specimen will be coming.
 - iii. After the case has been accessioned, a 0.5 g piece of tissue will be obtained (as little as 10 mg is sufficient), packaged, labeled and frozen in a -80° C freezer.
 - iv. The remaining tissue will be placed in formalin, packaged, labeled and held in the Surgical Pathology Lab.
 - v. The frozen tissue will be sent to the National Prion Disease Pathology Surveillance Center (NPDPS) for processing. One of the neuropathologists will assist in coordinating the send out of tissue. A report should be received within a week.
 - vi. If the report from the surveillance center states that the tissue is a prion disease, Surgical Pathology will treat the remaining tissue with formic acid and submit to the NPDPS.
 - vii. If the report states the tissue is negative for prions, the formalin fixed tissue will be sent to the F.C. Blodi Eye Pathology Laboratory for routine processing and re-accessioned with an Ophthalmic Pathology number.

2. CORNEAL EPITHELIAL SCRAPING FOR ACANTHAMOEBA

a. **Special instructions:**

- i. For **STAT** results, scrapings should be done between the hours of 7:30 am and 3:00 PM. If they are done before or after these hours technicians may not be available to complete the procedure.
 - a) STAT scrapings need to be delivered to the Eye Pathology Laboratory by Eye Clinic staff.
- ii. **Routine** scrapings will be picked up at the nurses station by lab personnel between 2:30 and 3:00 PM.
- iii. Make sure the following materials are in the room prior to performing the scraping:
 - a) Spatula for scraping the cornea
 - b) Sterile container (centrifuge tube, specimen container)
 - c) Wash bottle containing Saccomanno fixative
 - d) UIHC patient ID label for the specimen container

b. **Procedure**

- i. Have an open labeled sterile container (centrifuge tube, specimen container) available prior to scraping the patient.
- ii. Using a spatula scrape the patient as usual.
- iii. Immediately after scraping the cornea, using wash bottle containing Saccomanno fixative, wash cells and tissue off spatula and into the sterile container.
- iv. Make sure not to use more than 0.5 ml of Saccomanno to wash the cells off the spatula.
- v. Take tip of spatula and swirl in the Saccomanno to assure that all of the cells have been removed from the spatula.
- vi. Place the lid on the container tightly
- v. Place an "Eye Pathology Exam" Epic order and collect the specimen
 - a) The yellow paper consult request form may be used to include any info unable to be entered electronically in the Epic order.
 - b) This paper order should be placed in the outside pouch of the bio-hazard bag along with the CSN or HSC stickers.

c. **Sacomanno Fluid**

- i. Saccomanno fluid will be provided by the Ophthalmic Pathology Lab (5-7609) when:
- ii. The supply in the Cornea Clinic has been depleted.
- iii. The Saccomanno Fluid has expired.
- iv. An updated copy of the Safety Data Sheet (SDS) for Saccomanno fluid will be provided by the Ophthalmic Pathology Lab (5-7609).

d. Lab Instructions

- i. Clinic copies of lab instructions for Corneal Epithelial Scraping will be provided by the Ophthalmic Pathology Lab (5-7609) - [Prot: 1.1.3](#).

3. ELECTRON MICROSCOPY

a. Fixative: Glutaraldehyde

b. Special instructions:

- i. Prior to surgery contact the ophthalmic pathologist to determine if Electron Microscopy is necessary for the patients care or if another test would be more informative.
- ii. If Electron Microscopy is to be performed on the tissue the following materials should be obtained prior to surgery:
 - a) A container of Glutaraldehyde which can be obtained by contacting the Electron Microscopy laboratory at 319-335-8142 or 319-335-8143.
 - i) The lab is located in the lower level of the EMRB building (room 81 EMRB)
 - ii) The bottle of Glutaraldehyde must be labeled with the UIHC patient label sticker and percentage of Glutaraldehyde in the bottle.
 - b) A container of 10% Neutral Buffered Formalin
 - i) The specimen container must be labeled with the UIHC EPIC patient label ID label
 - ii) Place an Epic order +/- yellow form
- iii. After removal of the tissue from the patient place half of the tissue into appropriately labeled containers of Glutaraldehyde and 10% Neutral Buffered Formalin.
- iv. An order must be placed in Epic for an Eye Pathology Exam +/- a yellow Eye Pathology consult request form.
 - a) When filling out the order or form make sure to indicate that one specimen is in 10% neutral buffered formalin and that the other is in Glutaraldehyde: (i.e.: A. corneal biopsy, left eye in 10% neutral buffered formalin, B. corneal biopsy, left eye in Glutaraldehyde, for EM studies).
- v. Send both specimens to the Ophthalmic Pathology Laboratory as the ophthalmic pathologist will have to request the test for Electron Microscopy after the routine slides have been reviewed.
 - a) The Electron Microscopy specimen will be refrigerated by the ophthalmic pathology laboratory until it is sent to the Electron Microscopy facility for study.
NOTE: If the EM specimen is not in the frozen section room by 2:30 PM it will not be picked up by the Ophthalmic Pathology Laboratory that day, and it is the responsibility of the staff physician to assure the specimen is refrigerated until our next specimen pick-up or the laboratory is contacted and special arrangements are made to pick up the specimen.

4. FINE NEEDLE ASPIRATIONS

- a. **Arrangements:** Special arrangements must be made **at least one day prior to this procedure being performed** with the pathologist **to assure that the pathologist and a technician are available** to process the specimen. If this is an **emergency** please try to give the laboratory at least one hours notice prior to the removal of the specimen.
 - i. At this time arrangements should be made with the ophthalmic pathologist.
 - ii. Fine needle aspirations must be performed no later than 2:30 p.m., **Monday-Friday**, for same day diagnosis, **unless** prior special arrangements have been made with the pathologist.
- b. **Fixation:** This specimen requires immediate fixation.
- c. **Special Instructions:** The following materials should be in the surgical suite prior to beginning this procedure.
 - i. An FNA kit from the Eye Clinic nurse's station.
 - ii. Small gauge needle (no smaller than 25 gauge).
 - iii. Syringe
 - iv. The following three steps must be followed exactly as written in order to meet JCAHO, OSHA and CAP regulations.
 - a) The physician will remove the specimen using the small gauge needle and syringe and retain the specimen in the syringe.
 - b) After the removal of the specimen the physician will carefully draw an equal amount of Saccomanno fixative into the syringe.
 - c) The physician will then dispense the fixed specimen into the empty 50 ml cylindrical tube by discharging the fixative through the needle into the tube and then place lid on tube tightly to prevent leakage.
 - d) Gently agitate the specimen with the Saccomanno fluid for complete fixation.
 - e) Place the tube into the BioHazard bag.
 - v. An order for Eye Pathology Exam must be placed in Epic and the specimen must be collected in Epic if done in the clinic area. If an Eye Pathology form is also completed, it should be done so **prior to** the removal of the specimen to decrease the delay in getting the specimen to the laboratory.
 - a) Label the 50 ml cylindrical tube with the UIHC Epic patient ID label with 2 unique patient identifiers (name and MRN or DOB).
 - vi. The specimen will be delivered to the laboratory for immediate processing.
 - vii. Once in the laboratory, the specimen will be accessioned, grossed and processed within 24 working hours.
 - viii. The finished slides will be given to the pathologist for an urgent interpretation.
 - ix. The pathologist will inform the staff physician as soon as a diagnosis has been rendered.

Note: If the Pathologist is unavailable, the slides will be prepared by a technician and read by the pathologist upon her return.

d. FNA Biopsy Kits

- i.** FNA Biopsy Kits are located at the Ophthalmology Nurse's Station.
- ii.** A kit should be obtained prior to the scheduled procedure.
- iii.** Each kit contains:
 - a)** Saccomanno fluid (fixative)
 - b)** 50 ml cylindrical tube (specimen container)
 - c)** BioHazard specimen bag
 - d)** Ophthalmic Pathology Consultation Request Form
 - e)** Clinic copy of instructions for FNA tap procedure (*Prot: 1.1.4*)
- iv.** The FNA biopsy kits in the ophthalmology nurses station are provided by the Ophthalmic Pathology Laboratory (5-7609) when:
 - a)** The supply of kits has run out
 - b)** The Saccomanno fluid has expired
- v.** An updated copy of the **SDS** for the Saccomanno fluid will be provided by the Ophthalmic Pathology Laboratory (5-7609). The SDS is located in the FNA Biopsy Kit container.

5. FROZEN SECTIONS ON OPHTHALMIC TISSUE

- a. Arrangements:** For ALL ophthalmic cases, the ophthalmic pathologist should be paged (2438) directly from the operating room to notify her of the frozen. She will then notify Surgical Pathology of whether or not she will personally be available to interpret the case. If not, Surgical Pathology will contact Dr. Patricia Kirby. If Dr. Kirby is not available, the Surgical Pathologist in the frozen room will provide coverage.
SURGEONS ARE REQUIRED TO MAKE PRIOR ARRANGEMENTS WITH DR. SYED TO MAKE SURE SHE IS AVAILABLE FOR CASES THAT ARE OPHTHALMIC PATHOLOGY SPECIFIC.
- b. Fixation:** Fresh tissue (no fixative) placed on a saline soaked gauze pad and immediately sent to the frozen section room, 5804 JPP, to produce permanently stained and mounted slide/s from the frozen tissue.
- c. Special Instructions:**
 - i.** Place an Epic order for Eye Pathology Exam in Epic OpTime. An Eye Pathology yellow consult form is optional.
 - ii.** After the frozen section consultation is completed, residual tissue is wrapped in lens paper and placed in a cassette.
 - iii.** The F.C. Blodi Eye Pathology laboratory will pick up the residual tissue and/or slides on their routine (3:00 PM) run, as mentioned under the General Information on Collection and Handling of Specimens.
 - iv.** The slides and residual tissue will be accessioned in the F.C. Blodi Eye Pathology Laboratory.
 - a)** Surgical Pathology will use Eye Pathology's accession number.
 - v.** All residual tissue is processed for paraffin section comparison.

6. DIRECT IMMUNOFLUORESCENCE

- a. **Arrangements:** If a physician feels there may be a need for direct immunofluorescence (DIFM) on a case (typically when trying to make a diagnosis of ocular cicatricial pemphigoid), s/he should submit fresh tissue from the case and send it directly to the Immunopathology laboratory. Another portion of the tissue should be fixed in formalin and sent to the Eye Pathology lab.
- b. **Fixation:** Fresh tissue on a saline-moistened gauze should be sent to the Immunopathology laboratory and tissue placed into 10% neutral buffered formalin should be sent routinely to the F.C. Blodi Eye Pathology laboratory for processing.
- c. **Special Instructions:**
 - i. Contact the Immunology laboratory (356-2688) prior to surgery for special instructions on how to handle the fresh tissue specimen properly.
 - ii. If additional tissue is placed into 10% neutral buffered formalin, send it and the Ophthalmic Pathology Consultation form to the Frozen Section room for the routine 2:30 PM pick-up by the laboratory.
 - a) Enter an order for Eye Pathology Exam in Epic. Make sure that the order indicates that tissue has also been sent to the Immunopathology laboratory (only one order is needed for both the fresh and the formalin-fixed tissue).
 - i) A yellow Eye Pathology Consultation is optional.
 - b) The formalin-fixed specimen will be picked up by the F.C. Blodi Eye Pathology laboratory on the usual 2:30-3:00 PM run, unless other arrangements have been made with the Ophthalmic Pathology laboratory.

7. METABOLIC DISEASES (ie: gout, cystinosis, storage disease)

- a. **Arrangements:** If the specimen is being obtained for the diagnosis of a suspected metabolic disease, **contact the laboratory prior to removal of the specimen for special fixation instructions.** Do not excise the specimen until the special instructions have been received or the disease process may not be detectable if the proper fixative was not used.
- b. Each specimen is different and must be handled on a case by case basis. Contact the F.C. Blodi Eye Pathology laboratory for instructions (319) 335-7609.

8. TEMPORAL ARTERY BIOPSIES

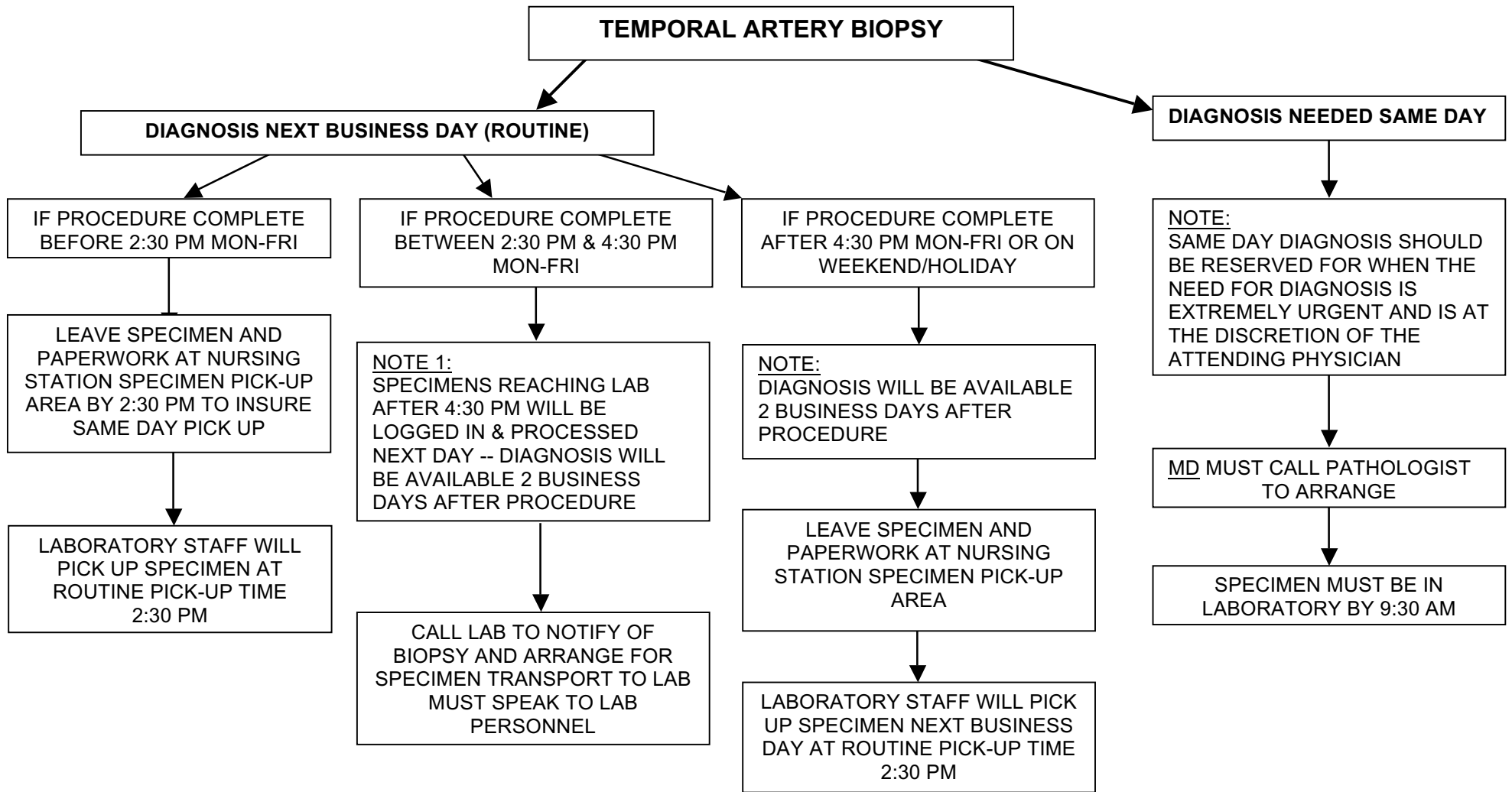
- a. If a physician wants a same day diagnosis, **THEY** must call the lab themselves. Nursing is not responsible for telling the lab that there is a “stat” biopsy. The lab can only provide same day results if the specimen is received in the lab by 9:30 AM. Transportation of the specimen is to be arranged by the MD when the lab is notified.
- c. The lab will continue to pick up specimens on their usual 2:30 PM run unless otherwise directed by Dr. Syed.
 - i. If a TA biopsy is **received after 4:30 PM** it will be processed the following business day (e.g., biopsy arrives in lab Tuesday after 4:30 PM will be given to the ophthalmic pathologist for interpretation by 1:00 PM Thursday).

Note: Be aware that times may vary somewhat depending on the workload, availability of the ophthalmic pathologist, and technician availability.

d. Fixation: 10% Neutral buffered formalin

e. Special Instructions:

- i.** Prior to beginning the surgery for a TA biopsy the following should be in the surgical room:
 - a)** specimen container with the correct amount of 10% neutral buffered formalin
 - b)** a formalin warning sticker on the container
 - c)** UIHC EPIC patient ID label
- ii.** Immediately after the TA biopsy specimen has been removed from the patient, place the tissue in the container of 10% neutral buffered formalin, make sure the tissue is completely covered with formalin.
- iii.** The amount of formalin in the container will vary with the size of the specimen, however the fixative should be a minimum of ten times the volume of the specimen being fixed.
 - a)** The amount for TA biopsies should be at least **25-30 ml** of 10% neutral buffered formalin in the container.
- iv.** Place the lid on the container properly and tightly to avoid a formalin spill.
- v.** Place the container in a Biohazard bag and any labels and/or paperwork in the outer pocket of the bag.
- vi.** Place an order for Eye Pathology Exam in Epic or Epic OpTime. An Eye Pathology yellow consult form is optional.
- vii.** Follow the procedure under General Information on Collection and Handling of Specimens for proper labeling of the specimen.



BLODI EYE PATHOLOGY LABORATORY PHONE NUMBER: 5-7609
LAB CLERK -- PEG HARRIS LAB SUPERVISOR -- CHRISTY BALLARD

PATHOLOGIST PAGERS:
SYED 2438 KIRBY 3414

9. VITREOUS TAP (Intraocular biopsy, fluid and tissue fragments from the posterior segment of the eye)
- a. **Arrangements:** A vitreous tap is a concentrated aspirate of vitreous humor collected to diagnose malignancy or infection.
 - i. The Ophthalmic Pathology Lab should be notified at least one hour before the procedure, preferably the day before.
 - b. **Fixation:** The specimen must be fixed immediately.
 - c. **Vitreous Biopsy Kits**
 - i. Vitreous Biopsy Kits are located in the Ophthalmology Nurse's Station.
 - ii. A kit should be obtained prior to the scheduled procedure.
 - iii. Each kit contains:
 - a) Saccomanno fluid (fixative)
 - b) 50 ml cylindrical tube (specimen container)
 - c) BioHazard specimen bag
 - d) Epic "Eye Pathology Exam" order is mandatory, yellow consult request form is optional
 - e) Clinic copy of instructions for vitreous biopsy procedure ([Prot: 1.1.5](#))
 - iv. The vitreous tap kits in the ophthalmology nurses station are provided by the Ophthalmic Pathology Laboratory (5-7609) when:
 - a) The supply of kits has run out
 - b) The Saccomanno fluid has expired
 - v. An updated copy of the **SDS** for the Saccomanno fluid will be provided by the Ophthalmic Pathology Laboratory (5-7609). The SDS is located in the Vitreous Biopsy tray.
 - d. **Special Instructions:**
 - i. Prior to the beginning of surgery for a vitreous biopsy, the following should be in the surgical room:
 - a) A syringe
 - i) Vitreous fluid is tapped out of the vitrectomy tubing. There is no needle involved.
 - b) A Vitreous Biopsy Kit from the nurse's station
 - ii. Label the 50 ml cylindrical tube with the UIHC patient ID label.
 - iii. Aspirate an equal amount of Saccomanno fixative into the syringe and then dispense into the 50 ml tube.
 - iv. Gently agitate the specimen and the Saccomanno fluid for complete fixation.
 - v. Place an order for Eye Pathology Exam in Epic or Epic OpTime. If desired, an Eye Pathology yellow consult form can also be sent.

vi. For stat processing, immediately deliver the specimen to the Ophthalmic Pathology Lab, room #233 Medical Research Center (in the College of Medicine just behind General Hospital).

(1) Vitreous biopsies must be in the Ophthalmic Pathology Laboratory by 3:00 p.m. for same day results.

vii. For routine processing, the Ophthalmic Pathology Lab will pick up the specimen on the daily run at 2:30 p.m.

NOTE: Vitreous specimens should be kept at room temperature. They should NOT be refrigerated.

******NOTE******

Never refrigerate or place vitrectomy specimens on ice as cells degenerate faster.

viii. VITRECTOMY CASSETTE BAGS:

- a) The vitrectomy cassette bag (dilute aspirate) should be labeled with a UIHC patient ID label and sent immediately to the Eye Pathology. Once received in the laboratory, the specimen will be immediately transferred into fixative to prevent degradation of cells.
- b) Place an order for Eye Pathology Exam in Epic or Epic OpTime. An Eye Pathology yellow consult form is optional.