



**Specimen**

The specimen should be representative. We suggest reducing sampling error by obtaining tissue fragments from several sites of the lesion.

1. Always use a sharp razor blade or scalpel to avoid crushing tissue.
2. Cut tissue into tissue blocks 1–2 millimeters in largest dimension.
3. Place the specimen in fixative as soon as it is taken.

**Fixation**

Optimal preservation requires immediate and rapid fixation.

1. Buffered glutaraldehyde (2.5%–3%) or Trump’s fixative (included in Electron Microscopy Kit – T660) is optimal.
2. Formalin-fixed tissue is not recommended.
3. Paraffin-embedded tissue can be run-back to aqueous-phase and processed for Electron Microscopy, but fine structural detail invariably is poor; if this is the only tissue available for study, we prefer that the entire paraffin block be submitted.

**Note:** Paraffin blocks are **not** accepted for ciliary studies.

**Additional Information for Specific Study Requests**

Recommended specimen source per study requested (additional slides/blocks not needed).

| Study                                                                                                    | Source (* in fixative)                                                                                                                                    | Never Accepted          |
|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Ciliary morphology<br>(ciliary dyskinesia, immotile cilia syndrome, Kartagener’s)                        | Brushing (nasal/tracheal)*<br>Biopsies (nasal/tracheal)*                                                                                                  | Paraffin embedded       |
| Neuronal Ceroid Lipofuscinosis (NCL)                                                                     | Skin biopsies*<br>Whole blood – green top (sodium heparin) or yellow top (ACD [solution B]) tube (must be received within 48 hours of draw)<br>Buffycoat* | Whole blood in fixative |
| CADASIL<br>(Cerebral Autosomal Dominant Arteriopathy with Sub-cortical Infarcts and Leukoencephalopathy) | Skin biopsies*<br>Brain tissue*                                                                                                                           | Blood                   |

**Required Information and Shipping**

1. Indicate the patient’s first and last name and include a second unique identifier on the specimen containers.
  - a. The name on the specimen containers must match the paperwork being sent with the specimens.
  - b. Second unique identifiers include: Patient medical record/clinic number, specimen/accession or hospital/order number, and patient’s birth date (mm-dd-yyyy).
  - c. The specimen source and fixative used must be clearly marked on each specimen container.
2. Complete all information on the Electron Microscopy Patient Information. If not ordering electronically, also complete and submit a Pathology Consultation Request (T246).
  - a. A contact physician’s name and telephone number is required for information and verbal report.
  - b. Test PATHC / Pathology Consultation may be added to the request and charged separately by Mayo Clinic Laboratories.
3. When applicable, also include appropriate slides, blocks and a preliminary pathology report.
4. Ship biopsies ambient in appropriate container. **Do not** place on ice, dry ice, or freeze.

Shipping address: Mayo Clinic Laboratories  
3050 Superior Drive NW  
Rochester, MN 55905

5. Place green address label on outside of the transport bag or on the outside of the envelope or package if shipping by overnight carrier.