Renal Biopsy Collection Instructions

**Purpose**: To ensure proper handling and transport of renal biopsy specimens for Light Microscopy (LM), Immunofluorescence (IF), and Electron Microscopy (EM).

**Principle**: Renal biopsies, also known as kidney biopsies, are performed to aid in the diagnosis of suspected kidney problems, determine the severity of the pathologic process, and to aid in determining the optimal treatment. Renal biopsies are also performed to monitor how well a transplanted kidney is functioning and/or to identify the early signs of rejection. They can be obtained by percutaneous needle biopsy or by ‘open’ wedge biopsy.

--- Safety --- Be sure to follow all universal precautions when handling any kind of fresh tissue.

There are two options when handling renal biopsies. They are listed in order of preference:

**Preferred Method**:

**NOTE: Time of collection to time of receipt in lab should not be greater than 2 hours.**

- Place biopsy on saline moistened telfa (NOT gauze) or on a glass slide, inside a specimen container.
  - Ensure that the container is labeled with two patient identifiers, the location of the biopsy, and the collection time.
- Place the container in a biohazard bag with a cold pack or ice. Place bag inside a larger plastic container or box and send to the Histopathology Laboratory via the quickest transport method.
  - **Note: The transport container should not be a padded envelope.**
- Include a “Fresh Tissue/Electron Microscopy” specimen requisition which can be found on the SLUCare Department of Pathology website.
- See the “Required Information and Shipping/Courier Instructions” on page 3.
**Alternate Method: For TRAINED personnel only**

- A trained person may divide the renal biopsy for LM, IF, and EM.
  - It should be divided as soon as possible to avoid fixation artifacts.

- Place portions of the tissue in the appropriate solutions (see below).
  - Use a razor blade or scalpel (fine tipped forceps are NOT ideal and can cause crush injury to the tissue)
  - Do NOT use fine tipped forceps or serrated forceps.
  - Keep the tissue damp with saline, NOT water.

- Use a hand lens or dissecting microscope to identify glomeruli and divide the tissue as follows:
  1. **Light Microscopy** – Place the sample in 10% neutral buffered formalin. This should be the majority of the sample.
  2. **Immunofluorescence** – Place the sample in Michel’s Fixative (supplied upon request). This is a priority if rapidly progressive glomerulonephritis or other forms of glomerulonephritis are suspected.
  3. **Electron Microscopy** – Place the sample in glutaraldehyde (supplied upon request). This needs to contain at least one glomerulus and ideally will be 2-3 mm in length.
  4. If dividing a limited specimen, please follow the visual below:

    ![One Core Available](image1.png)  ![Two Cores Available](image2.png)

**Special Considerations:**

- Any specimen requiring evaluation by Electron Microscopy should be submitted via the preferred method. Michel’s transport medium *will* cause artifact for Electron Microscopy specimens.
- Michel’s transport medium can preserve tissue for up to 3 days, if refrigerated.
• The Histology Laboratory would prefer to gross the tissue as specimens submitted in Michel’s medium requires extra time/steps.

**Required Information and Shipping/Courier Instructions:**

1. The patient’s first and last name, a second identifier, and the collection time **must** be present on all specimen containers.
   a. The information on the container must match the requisition.
   b. The second identifier may be one of the following: patient medical record number, sample/accession/order number, or the patient’s date of birth.
2. Complete **all** the information on the Saint Louis University requisition.
3. Send a copy of the patient’s medical history and current relevant lab results. ***Be sure to include the name and contact information of the referring nephrologist.***
4. Send specimens with a cold pack or ice. **Do NOT** use dry ice – it will cause artifact. Make sure all containers are tightly sealed and secured in the transport container.
5. Label and transport via courier to the following address:

   **Shipping Address:**
   
   Saint Louis University  
   Histology Lab, 4th Floor  
   Schwitalla Hall, Room 462  
   1402 South Grand Blvd.  
   St. Louis, MO 63104  
   314-977-7874 *

   * It is important to include the Histology Laboratory’s phone number on the label for any questions/issues.

**Laboratory Hours:** The SLUCare Histopathology Laboratory can receive specimens from 5am until 5pm, Monday through Friday. The Laboratory is closed on weekends and SLUCare holidays. Specimens must be processed immediately upon receipt to prevent degradation of the specimen. To ensure the best possible handling of the specimen, the Hospital or referring institution should notify the Histology Laboratory of any scheduled procedures as soon as possible.

**NOTE:** Weekend/after hour specimen receipt and interpretation is available upon request. Contact information for the pathologist on-call for renal biopsies that require processing and interpretation after regular business hours can be obtained from the Histology Laboratory.