



Submission of Samples for Histopathology: General Guidelines

- Please make sure that all requested information is included on the submission form, including signalment, clinician's contact information, and clinical history. A good clinical history should include lesion appearance and distribution, duration and progression, medication history and results of other diagnostic tests (when applicable), and clinical differential diagnosis.

- Proper tissue handling during and following biopsy collection is essential to avoid artifact, which can significantly impede interpretation. This is particularly important with small specimens. Rupture of cells and associated tissue distortion can be induced by forceps or digital compression (crush artifact). Very small specimens, such as needle and endoscopic biopsies and small skin punch biopsies, will desiccate if not placed promptly in fixative. Cautery causes coagulation necrosis and should not be used for collection of small biopsies. Freeze artifact can also be a problem during the winter in some regions, and care should be taken not to leave tissue out in freezing temperatures.

- Adequate fixation is also important for preservation of cellular and nuclear detail. With few exceptions, the fixative of choice for histopathologic examination is 10% neutral buffered formalin. Specimens should be entirely covered in formalin with a ratio of 1:10 (specimen to formalin).

- Label containers clearly with patient name and tissue identity. Multiple skin punch biopsies representing a multicentric or generalized process can be placed in the same container. However, if multiple cutaneous masses are removed from different sites, these should be placed in separate containers. Likewise, multiple intestinal biopsies from the same region can be submitted together, but biopsies from different regions should be placed in separate containers or cassettes.

If you do not have small containers, small biopsies from different sites can be placed in individually labeled cassettes in a larger container of formalin. Note: use pencil for labeling cassettes.

- Specimens should be 1 cm in at least one dimension for appropriate fixation. Larger specimens can be partially transected to allow better penetration of fixative. Avoid sectioning along the surgical margin, as tissue distortion during fixation will result in loss of orientation and/or separation of tissue planes, thereby precluding confident margin evaluation.

- For evaluation of large specimens (masses greater than 8 cm diameter, limb amputations, entire organs) please contact Dr. Ward at 206-245-8426 for specific submission instructions.