Submission guidelines for Dermatopathology with Microscopic Description

Test/collection code	Test name
8934 (U.S.) DERMBX (Canada)	Dermatopathology with Microscopic Description

The Dermatopathology with Microscopic Description service has been created to help customers provide a more thorough clinical history, automatically assign to the dermatopathology team of pathologists, reduce extended turnaround time due to additional rework, and allow submission of multiple biopsies from the same dermatologic process for a single fee.

The service provides the ability to submit skin specimens that will be assigned to the dermatopathology team of pathologists. Skin specimen types include the following:

- Lesions that are chronic/recurring that fail to respond to therapy
- Clinically unusual lesions
- Acute onset skin conditions that are progressing rapidly
- Clinically severe lesions (e.g., accompanied by systemic signs, sudden hair loss, multifocal nodules)

Note: Specimens that are solitary masses or any other tissues or organs (including liver, pancreas, spleen, bone, etc.) are not covered by the service.

The service will cover the following biopsy work by IDEXX for the approved skin lesions (where applicable):

- Fixation
- Trimming
- Macroscopic (gross) evaluation or dissection of tissue
- 3 levels of deeper recuts
- Special stains (nonimmunohistochemical), if applicable
- Histologic review and reporting of each discrete lesion independently, including a full microscopic description, mitotic index assessment, and/or evaluation of surgical margins
- Internal consultation

The customer turnaround time expectation for Dermatopathology with Microscopic Description is 2–3 days (Monday–Friday).

Dermatopathology submission guidelines

Dermatopathology can be a powerful tool in the diagnosis and management of skin disease. The following includes key points to help you achieve the greatest diagnostic yield from your skin biopsies.

History

A thorough clinical history is critical for accurate histologic interpretation. This includes, at minimum, the following:

- Patient signalment (breed, sex, age)
- Lesion location
- Lesion(s) description
- Duration of signs
- Alopecia (present or absent)
- Pruritus (present or absent)
- Signs of systemic illness (if present)
- Results of previous diagnostics, especially culture or biopsy (and accession numbers if available)
- Previous or current therapeutics, including clinical response or lack thereof
- Clinical differentials
- Submission of clinical photos is strongly encouraged.

Biopsy site selection

- Submission of a minimum of 3–5 specimens is strongly encouraged and will help to maximize the potential of providing a diagnostically valuable interpretation.
- New or fully developed, active lesions are most likely to be diagnostic. Chronic or resolving lesions may be less diagnostic, especially if complicated by secondary infection, self-trauma, or scarring.
- Alopecia: Sample central areas of greatest alopecia, rather than at lesion margins.
- Ulcers: Sample ulcer margins, always including intact epidermis. Do not sample centers of ulcers.
- Vesicles/bullae or pustules: Excision of entire lesion (large punch or wedge biopsy) is preferred.
- Panniculitis/subcutaneous lesions: Wedge biopsy (ideal), or double-punch technique (large superficial punch followed by smaller deep punch).
- Nail/claw biopsies: Sloughed nails are nondiagnostic.

Biopsy site preparation

- Do not scrub or surgically prepare site, even with saline.
- Do not shave. Hair may be carefully trimmed to ¼ to ½ inch if long but with enough left to guide trimming in laboratory. Please refer to second bullet point in the "Biopsy technique" section, below, for additional recommendations in cases of alopecic disease.
- If crusts dislodge during biopsy procedure, always include these in the biopsy container (and note this on requisition).

Biopsy technique

- A local anesthetic may be injected into the subcutaneous tissue, but care should be taken not to inject too superficially, which might disrupt lesions.
- In cases of alopecic disease, a fine or extra fine permanent marker (e.g., a Sharpie* permanent marker) may be used to draw a line in the direction of hair growth, prior to biopsy. This serves as a guideline to allow proper trimming (hair follicle orientation) in the histology laboratory.
- Use 6–8 mm biopsy punches; 4 mm punches may be necessary for difficult areas and/or more painful areas (e.g., footpads, nasal planum, eyelids, or around the eye) or smaller patients. Use new biopsy punches and rely on the cutting action of the tool rather than use of excess force. Center the lesion within the punch biopsy tool; rotate the punch in one direction to minimize shearing forces. Using fine forceps, gently grasp deep subcutaneous tissue and cut below forceps using fine-tissue scissors. Gently blot excess blood from biopsy specimen.
- Place biopsy in an adequate volume of 10% neutral-buffered formalin immediately after collection. Do not submit specimens in saline. Handle specimens gently to avoid crush artifact. Avoid even brief desiccation under bright, hot lights.
- Scalpel wedge or elliptical biopsies are preferred for ulcers and deep lesions, panniculitis, subcutaneous lesions.
- Avoid use of lasers or other cautery devices, which result in heat artifact.

Limitations of histopathology

- Different skin disorders may share the same microscopic changes (such as with some autoimmune subepidermal blistering diseases), so one particular histologic reaction pattern may not be etiologically specific. Please be aware that the value of histopathology is not always in obtaining a definitive diagnosis, and that even the presence of a general reaction pattern can guide further diagnostics.
- Biopsy results should always be used to complement your clinical findings and other laboratory results when formulating a clinical diagnosis.
- Some diseases do not consistently produce histologic lesions at the time of biopsy. For example, amputation of the entire distal phalanx bone with nail allows the highest probability of achieving a histologic diagnosis of suspected lupoid onychodystrophy; however, quite often the lesion is not found histologically, and clinical findings may be relied upon more in such situations.
- Immunohistochemical staining procedures or additional testing (such as submission of fresh tissue for microbiology) may be recommended and will incur an additional cost. Consider obtaining culture specimens at the time of biopsy collection.
- Immunofluorescence for diagnosis of autoimmune skin diseases is no longer recommended due to the high rate of false-negative results and the low specificity.

Drug withdrawal times

- Short-course, low-dose oral steroids: Discontinue for 2 weeks prior to biopsy.
- Long duration, high-dose and long-acting injectable steroids: Discontinue for at least 6 weeks prior to biopsy.
- If lesions are rapidly worsening or patient cannot be kept comfortable without steroids, biopsy may be performed without drug withdrawal (but please include this information on the requisition).
- The effects of other immunomodulatory drugs (e.g., Apoquel*, Cytopoint*) on histopathology is currently unclear. Please include all pertinent therapeutic information in the medical history.