

Signs of a Good Dermatohistopathology Report

Nicole A Heinrich DVM DACVD

McKeever Dermatology Clinics

952-946-0035

www.mckeevvetderm.com

Part of training during a dermatology residency is learning how to read skin biopsies and how to write dermatohistopathology reports.

Tips for obtaining a diagnostic skin biopsy:

- Check a surface cytology to identify if a secondary pyoderma or yeast dermatitis is present. If appropriate for the patient, treat all skin infections prior to performing a biopsy. The inflammation from infection can mask the inflammatory pattern of the underlying disease – making diagnosis more difficult.
- Do not shave or clean the lesion prior to the biopsy. The skin can be cleaned with chlorhexidine after the biopsy has been obtained.
- Do not biopsy normal skin. The pathologist already knows what normal skin looks like, and the variation among individuals is often insignificant. More importantly, if a biopsy is half normal skin and half lesional skin, it is possible that only normal skin will get on the slide during processing. It can be difficult for the laboratory technician to know exactly how to orient the tissue sample during initial processing. See the picture below:



- *This picture shows how the tissue sample is embedded in a paraffin wax block before a slice is transferred to a slide for the pathologist to review.*
- Use at least a 4mm punch biopsy tool. A 6mm punch biopsy tool is even better. It can be impossible to identify a diagnostic inflammatory pattern on a sample that is smaller than 4mm in diameter.
- Sample lesions that are in various stages of chronicity.
- Include the epidermis, dermis and subcutis in the biopsy. A common mistake is to biopsy an ugly looking lesion that is devoid of epidermis (erosion or ulcer). The reason that this is a mistake is that the diagnostic inflammatory pattern is often found in the epidermis.

- Write a good history for the pathologist. The following details should be included: is pruritus present? How long have the lesions been present? What is the lesion distribution? Describe response to treatment. Many skin diseases have similar patterns of inflammation. The pathologist needs to know what is being observed clinically to best interpret the inflammatory pattern.

What to look for in a good dermatohistopathology report:

- All layers of the skin should be commented on, including: epidermis, dermis and subcutis.
- Adnexae should be commented on. Are hair follicles present? What stages of the hair cycle are present? Are there abnormalities in the hair follicles? Are sebaceous glands present?
- When inflammation is present, the cells that are involved should be specifically described. The pattern of inflammation should also be specifically stated (i.e. diffuse, lichenoid, perivascular, periadnexal, nodular, interstitial, etc)
- The presence or absence of infectious organisms should be stated.
- The components of crusts or pustules should be stated (i.e. serocellular fluid, cocci, acanthocytes, neutrophils, etc).

Additional descriptive details are needed depending on the pathology, but the above points represent the minimum detail that every dermatohistopathology report should include. The quality of the description is an indication of the quality of the report.