Guest Editorial

How Can Dermatologists Help Dermatopathologists Work "Smarter" for Them?

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In dermatology and dermatopathology, some histologic diagnoses are incontrovertible and reveal features that are readily diagnostic; however, in many cases clinical correlation is essential, as many diseases have similar histologic reaction patterns and the correct diagnosis is based on additional clinical information. Accuracy of diagnosis has been shown to improve when cases were evaluated at a clinical conference where histology and clinical features were correlated or when digital clinical photographs were evaluated with histologic findings.[1]

Because clinical features usually are not available to the dermatopathologist when evaluating histologic specimens, he/she must rely on the information provided by the referring clinician on the pathology requisition form. It is important for clinicians to include as much information as is reasonably possible on the form in a legible fashion. If the specimen is a pigmented lesion, it should be described by its diameter and any additional information that is available, such as dermoscopic findings. If the process is an eruption, the extent, distribution, color, duration, symptoms, and any other relevant information should be provided.

Clinicians should always avoid "cryptic" allusions. Occasionally, dermatopathologists receive biopsy specimens with no information other than to rule out leukemia cutis. There is obviously more to that story. Do not expect the dermatopathologist to be a mind reader. We appreciate a request when a clinician wants a special stain or a margin rather than assuming we know when those are desired. We also would prefer for margin requests not to be made in an automatic manner when it does not matter whether the process involves the margins, such as in inflammatory conditions.

One should not dilute the value of the clinical impression. For example, do not write "rule out melanoma" for all pigmented lesions or "neoplasm of uncertain behavior" for all cutaneous neoplasms. If there is a prior biopsy, submit the prior number and the diagnosis if possible. Fill out all demographic information (eg, sex, race, age) and other important information such as pregnancy status, medication history, underlying condition, or history of neoplasia, as they all have bearing on the diagnosis.

Inflammatory skin diseases can be challenging to diagnose, as classic examples described in textbooks usually are not sampled. Consider performing more than one biopsy from lesions at different stages of evolution or from different body sites. In difficult cases, bring the patient to a conference, send the patient for consultation, or submit a clinical photograph or digital image. It also may be beneficial to call and discuss the case with the dermatopathologist. If the diagnosis does not make sense, ask for recuts, special stains, or a second expert opinion.

Regarding the biopsy process itself, always harvest a good piece of tissue and place it into the proper medium for the appropriate test. Formalin solution 10% is used for routine specimens, while Michel's transport medium and saline are used for immunofluorescence studies. Make sure the specimen is floating in the liquid, as specimens may adhere to the side of the bottle or the lid. Beware of specimens remaining on a scalpel blade or within the barrel of a punch before inadvertently submitting a bottle containing no material. Also be sure to fill out the information on the bottle label, as the bottle and requisition form may get separated. Do not write on the lid in case it happens to come off.

It also is important not to put more than 1 specimen in the same bottle, especially when dealing with multiple different neoplasms. A possible reasonable exception is multiple skin tags, but note in the chart that you are submitting representative specimens. Beware of throwing away tissue instead of submitting it for biopsy whenever something is removed from the skin.

Keep a biopsy logbook or other records and review all pathology reports systematically. Communicate with the laboratory to check on the status of a biopsy if results are not back as soon as expected to ensure

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that there is not an inadvertent problem. Legal action can result if the patient is not notified in a timely fashion or if treatment is delayed. If the patient does not follow-up in a timely fashion, a certified letter should be sent to the patient.

Extremely small specimens (ie, <1 mm in diameter) or friable specimens may not survive processing. Occasionally, a specimen gets lost, either on the way to the laboratory or otherwise. If there is still a neoplasm at the site or the patient has a widespread process, another biopsy can be performed. My laboratory has a policy of not charging the patient given the circumstances. If nothing is left at the site and it is a neoplasm that could possibly have been malignant, a reasonable approach would be to conservatively re-excise the area and document everything in the medical record.

Regarding biopsy technique, punches of broad neoplasms, especially possible melanoma, may give false-negative results, which includes sampling the darkest area, a practice thought to be more sensitive at detecting malignancy. In actuality, it may be an area of hemorrhage, an associated solar lentigo, or a seborrheic keratosis. Furthermore, this may produce the phenomenon of "biopsy sculpture," turning a large asymmetrical neoplasm into a smaller sample that looks symmetrical and more benign than it actually is. If a punch biopsy is performed, it should be a broad punch (ie, >5 mm in diameter) or the entire lesion should be punched out, which represents an excision. Multiple small punches are not optimal, as a broad specimen that provides a panoramic view of the entire process is preferable. Although incision or excision specimens are excellent, they often are impractical; rather, a broad saucerization biopsy is an excellent method that provides a representative specimen in the majority of cases.

Shave specimens of inflammatory processes do not sample the lower dermis or subcutis and often are inadequate, leading to reports of "tissue insufficient for diagnosis" or "descriptive" rather than specific diagnoses. Inadequate biopsies increase expenses as well as patient inconvenience and anger. In my laboratory, we teach residents to treat the biopsy as a treasure. Some clinicians think that performing a biopsy is analogous to doing a blood test and that any tissue at all will be sufficient for a diagnosis to be rendered; however, small curettings or tiny fragments of tissue often are inadequate and place both the clinician and the pathologist at medicolegal risk.

Clinicians requesting margins on shave biopsies must understand that they are not equivalent to margins reported on elliptical excision specimens or those performed using Mohs micrographic surgery. The pathologist can only report that a neoplasm removed by shave technique "seems to be removed in these sections," as it cannot be determined with certainty that the lesion has been completely removed using this technique.

All biopsies are prone to sampling error. Dermatopathologists often put a note on a report saying that if this specimen represents part of a larger lesion, clinical correlation is recommended to exclude sampling error, which should be known by clinicians. It is extremely risky to ask for margins on a melanoma biopsy, and one should never assume a shave biopsy of a melanoma is adequate treatment.

If a clinician is clinically concerned about a diagnosis, especially melanoma, and the histologic diagnosis is benign, it is recommended that the lesion be excised nonetheless. A final diagnosis depends on a number of clinical, histological, historical, and genetic elements and possibly others. In some cases, the clinical diagnosis is more important than the histologic diagnosis. Clinicians should always feel free to call their dermatopathologist, ask questions, and refute a diagnosis. The dermatopathologist seeks to arrive at the best diagnosis for the patient, not to be "right."

Diagnoses should be simple and differential diagnoses few. The longer the report and the more stains that are performed, generally the less is known about the diagnosis. Diagnoses should be rendered in terms easily understood by clinical dermatologists. Get a consultant dermatopathologist that you know and trust.

REFERENCE

1. Cerroni L, Argenyi Z, Cerio R, et al. Influence of evaluation of clinical pictures on the histopathologic diagnosis of inflammatory skin diseases. *J Am Acad Dermatol*. 2010;63:647-652.

Quick Poll Question

How often do you send photographs to your dermatopathologist so he/she can get a sense of the clinical picture?

a. Always **b.** Never **c.** Sometimes

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