

RESEARCH LETTERS

The Utility of Clinical Photographs in Dermatopathologic Diagnosis: A Survey Study

Dermatopathologists receive skin biopsy specimens accompanied by requisition slips that help direct their diagnoses. Owing to busy clinician's time constraints and the increasing frequency with which the paperwork is completed by physician extenders rather than physicians, the requisition slips often do not contain adequate information. In some cases, this makes diagnosis more challenging.

Prior reports have emphasized the importance of clinicopathologic correlation and the usefulness of clinical photography as an aid in diagnosis.^{1,2} The present study examines (1) how often photographs are currently being used as an aid in dermatopathologic diagnosis, (2) in which situations they are most likely to be helpful, and (3) whether dermatopathologists want to receive photographs more frequently.

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Methods. After approval from the institutional review board at Eastern Virginia Medical School, Norfolk, and the American Society of Dermatopathology (ASDP) board of directors, an anonymous, voluntary, Web-based survey was e-mailed to all board-certified dermatopathologist members of the ASDP. In November 2009, the e-mail invitation was sent to all 816 members who provided their e-mail addresses to the ASDP; 34 of the e-mail addresses were considered invalid because an error message was received in response. The survey remained available for responses for 30 days, and a reminder was sent during the final week. In addition to multiple choice answers, respondents were given the opportunity to write additional comments and feedback on the topic. Statistical analysis was performed using SAS computer software, version 9.2 (SAS Institute Inc, Cary, NC).

Results. There were 135 complete responses and 13 partial responses from all regions of the United States from both dermatology- and pathology-trained individuals. At least 2 respondents had completed both dermatology and pathology residencies. There were 4 international responses. Current frequency of photography usage is summarized in the **Table**. Analysis with the Cochran-Mantel-Haenszel statistic revealed no significant difference in frequency of use among geographic regions. Ninety-

Table. Frequency of Receiving Clinical Photographs

Frequency, Times/y, No.	Dermatopathologists, No. (%) (n=135)
0	18 (13)
1-5	42 (31)
6-12	26 (19)
>12	49 (36)

four percent of dermatopathologists stated that they would like to receive photographs more frequently.

More respondents stated that clinical photography is beneficial in the evaluation of inflammatory skin diseases (92%) than in pigmented lesions (73%) or nonmelanocytic tumors and growths (56%). By Fisher exact test, we found no significant difference between pathology- and dermatology-trained dermatopathologists with regards to finding clinical photography useful in any category. Ninety-one percent of respondents stated that they were able to provide a more specific diagnosis with the aid of clinical photographs. For pigmented lesions, respondents stated that photography and history with measurements were helpful when only a portion of the lesion was biopsied. Otherwise, sampling error might lead to a misdiagnosis of melanoma. One respondent found photographs useful in reporting margins in complex surgical cases.

The most preferred methods of photograph delivery included printed-out photographs (54%) and encrypted e-mail (50%) followed by posting on a secure Web site (21%) and images on compact disc (10%). In addition, several respondents suggested integration into electronic medical records when available.

Respondents were also given the opportunity to write open-ended comments. Several dermatopathologists stated that clinical photographs are particularly useful when the specimen is submitted by a nondermatologist who provides a limited history and differential diagnosis. A potential drawback to photography mentioned is the time and cost that it takes for clinicians to take the photograph and send it to the dermatopathologist. In addition, photographs provided in a cumbersome format (compact disk or flash drive) may slow down sign-out for the dermatopathologist; a printed-out photograph attached to the requisition slip was the most preferred method of delivery for this reason. Furthermore, several people emphasized that clinical photographs should not replace a good history.

Comment. Limitations of this study include an inability for respondents to state that they were trained in both pathology and dermatology residencies prior to obtaining a dermatopathology fellowship. Two respondents included this information in the comment section. In addition, physicians who felt strongly about the beneficial use of clinical photography might have been more likely

to respond to the survey, thus creating response bias and overestimating the beneficial effect of photography.

Overall, this survey study revealed that dermatopathologists find clinical photography most beneficial in the diagnosis of inflammatory skin diseases, and they would like to receive photographs more frequently. They prefer a convenient method of delivery, most commonly a printed-out photograph attached to the requisition slip.

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1. Fogelberg A, Ioffreda M, Helm KF. The utility of digital clinical photographs in dermatopathology. *J Cutan Med Surg.* 2004;8(2):116-121.
2. Kutzner H, Kempf W, Schärer L, Requena L. Optimizing dermatopathologic diagnosis with digital photography and internet: the significance of clinicopathologic correlation [in German]. *Hautarzt.* 2007;58(9):760-768.

PRACTICE GAPS

Submitting Clinical Photographs to Dermatopathologists to Facilitate Interpretations

Advances in immunohistochemical stains, molecular analysis, and laboratory technology have facilitated dermatopathologic diagnostic accuracy. Nevertheless, patients and clinicians are often frustrated when dermatopathologists render nonspecific diagnoses, which may lead to diagnostic and/or therapeutic uncertainty. Given the importance of clinicopathologic correlation (CPC), a practice gap exists between what dermatopathologists desire and what the clinicians provide.^{1,2}

Mohr et al point out that one of the most important tools used to assist accurate dermatopathologic diagnosis is the information supplied on the dermatopathology form accompanying tissue specimens. They also report

that dermatopathologists find the addition of a clinical photograph useful in rendering a microscopic diagnosis, especially when dealing with inflammatory skin diseases. The use of clinical photographs may be particularly helpful when dermatopathologists receive specimens with an inadequate clinical description on the dermatopathology form, which may be more of a concern with specimens submitted by nondermatologists who have less CPC experience.

Although clinical photographs are desired, it is extremely infrequent for a dermatopathologist to be provided with one. Barriers to sending clinical photographs with biopsy specimens include the time it takes to create and implement standard operating procedures (SOP), which include identifying the body region to be photographed, obtaining consent from the patient, taking the digital photograph, downloading the photographic file, labeling the photograph, and either printing or electronically sending the picture to the pathologist. Other barriers are limited computer file storage space; costs of obtaining 1 or more digital cameras for the physician office; and compliance with the secure data transfer standards of the Health Insurance Portability and Accountability Act and Health Information Technology for Economic and Clinical Health. It is also possible that some patients may object to photography, particularly of specific body parts.

This gap between what dermatopathologists desire and what the clinicians provide can be narrowed by improving the quality of information supplied by the clinician to the dermatopathologist. Education directed at office efficiency should include instruction on efficient processes to incorporate patient photography. Mohr et al underscore that patient care will benefit when clinicians improve the quality and quantity of the information provided, and they encourage incorporation of photography as part of routine biopsy procedures. Development of a more comprehensive way of communicating information to dermatopathologists is needed. Clinician-friendly pathology forms and reminder systems to include clinical photographs may help.

Considering patient volume and increasing time limitations of office visits, it would be optimal for clinicians to train an assistant to take and process the photographs for relevant patients. The SOP should be defined for this process to assist personnel in implementation without loss of efficiency. Creating an SOP for a proper and complete provision of information including completion of requisition forms and taking clinical photographs will help establish uniformity of photographic information to the dermatopathologist.

Hard copies of photographs are not always necessary. Digital technology provides a variety of media to safely transmit images, including secure Internet connections and storage on compact discs and flash drives, to protect the confidentiality of patient photographic information, usually considered personal health information. Data transfer between dermatologists and dermatopathologists can be optimized to maximize the quality of dermatopathology diagnosis.

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