ORIGINAL ARTICLE

Variation among pathologists' treatment suggestions for melanocytic lesions: A survey of pathologists

Kachiu C. Lee, MD,[a] Sue Peacock, MSc,[f] Martin A. Weinstock, MD, PhD,[a,b,c,d] Ge Alice Zhao, MD, PhD,[e,f] Stevan R. Knezevich, MD, PhD,[g] David E. Elder, MB ChB, FRCPA,[h] Raymond L. Barnhill, MD, MSc,[i] Michael W. Piepkorn, MD, PhD,[e,f,j] Lisa M. Reisch, PhD,[f] Patricia A. Carney, PhD,[k] Tracy Onega, PhD,[l] Jason P. Lott, MD, MHS, MSHP,[m] and Joann G. Elmore, MD, MPH[f]

Providence, Rhode Island; Seattle and Bellevue, Washington; Clovis, California; Philadelphia, Pennsylvania; Paris, France; Portland, Oregon; Lebanon, New Hampshire; and New Haven, Connecticut

Background: The extent of variability in treatment suggestions for melanocytic lesions made by pathologists is unknown.

Objective: We investigated how often pathologists rendered suggestions, reasons for providing suggestions, and concordance with national guidelines.

Methods: We conducted a cross-sectional survey of pathologists. Data included physician characteristics, experience, and treatment recommendation practices.

Results: Of 301 pathologists, 207 (69%) from 10 states (California, Connecticut, Hawaii, Iowa, Kentucky, Louisiana, New Jersey, New Mexico, Utah, and Washington) enrolled. In all, 15% and 7% reported never and always including suggestions, respectively. Reasons for offering suggestions included improved care (79%), clarification (68%), and legal liability (39%). Reasons for not offering suggestions included referring physician preference (48%), lack of clinical information (44%), and expertise (29%). Training and caseload were associated with offering suggestions ($P < .05$). Physician suggestions were most consistent for mild/moderate dysplastic nevi and melanoma. For melanoma in situ, 18 (9%) and 32 (15%) pathologists made suggestions that undertreated or overtreated lesions based on National Comprehensive Cancer Network (NCCN) guidelines, respectively. For invasive melanoma, 14 (7%) pathologists made treatment suggestions that undertreated lesions based on NCCN guidelines.

Limitations: Treatment suggestions were self-reported.

Conclusions: Pathologists made recommendations ranging in consistency. These findings may inform efforts to reduce treatment variability and optimize patterns of care delivery for patients. (J Am Acad Dermatol http://dx.doi.org/10.1016/j.jaad.2016.07.029.)

From the Departments of Dermatology[a] and Epidemiology,[b] Brown University, Providence; Dermatoepidemiology Unit, Department of Veterans Affairs Medical Center, Providence[c]; Department of Dermatology, Rhode Island Hospital[d]; Division of Dermatology,[e] Department of Medicine,[f] University of Washington School of Medicine, Seattle; Pathology Associates, Clovis[g]; Department of Pathology and Laboratory Medicine, Hospital of the University of Pennsylvania[h]; Department of Pathology, Institut Curie, and Faculty of Medicine, University of Paris Descartes[i]; Dermatopathology Northwest, Bellevue[j]; Department of Family Medicine, Oregon Health & Science University[k]; Departments of Biomedical Data Science and Epidemiology, Norris Cotton Cancer Center, and Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine at Dartmouth, Lebanon[l]; and Cornell Scott-Hill Health Center, New Haven.[m]

Supported by the National Cancer Institute (R01 CA151306, KO5 CA104699). The content is solely the responsibility of the authors and does not necessarily represent the views of the National Cancer Institute or the National Institutes of Health.

Disclosure: Dr Lott is an employee of Bayer HealthCare Pharmaceuticals, which had no involvement in this research. Drs Lee, Weinstock, Zhao, Knezevich, Elder, Barnhill, Piepkorn, Reisch, Carney, Onega, and Elmore, and Ms Peacock have no conflicts of interest to declare.

Accepted for publication July 12, 2016.

Reprints will not be available from the authors.

Correspondence to: Joann G. Elmore, MD, MPH, Department of Medicine, University of Washington School of Medicine, 325 9th Ave, Box 359780, Seattle, WA 98104. E-mail: jelmore@uw.edu.

Published online September 28, 2016.

0190-9622/$36.00

http://dx.doi.org/10.1016/j.jaad.2016.07.029

Key words: atypical nevi; dermatopathology; dysplastic nevi; melanocytic lesions; melanoma; melanoma in situ; treatment.

CAPSULE SUMMARY

- Pathologists may offer treatment suggestions on reports.
- There is wide variability in suggestions offered for melanocytic lesions, along with the reasons for offering these suggestions.
- The lack of consistency in treatment recommendations leads to the potential for undertreatment or overtreatment of melanocytic lesions.

Understanding why pathologists make treatment suggestions provides insight into patient care practices. Currently, little is known about how often pathologists make suggestions or whether these suggestions are consistent with national guidelines. Given wide variability in surgical and nonsurgical therapies for melanocytic lesions[1-3] and lack of consensus for both diagnosis and treatment of various types of atypical/dysplastic nevi,[3-6] understanding pathologists' suggestions could provide valuable insight. To further complicate matters, terminology for melanocytic lesions lacks standardization and is reflected in poor interobserver reproducibility for borderline tumors with unclear malignant potential.[7-11] Some pathologists have also proposed abandoning the grading system of dysplastic nevi entirely, given the ambiguity of the connotations associated with "mild" or "moderate" dysplastic nevi.[12] Lesions with the same diagnosis, such as Spitz nevi, can vary in pathologic characteristics and pathologists may make recommendations to better guide treatment for these lesions.

Understanding whether such motivations underlie treatment recommendations will help guide the patient's physician in making a decision on the course of treatment. In addition, although the National Comprehensive Cancer Network (NCCN)[13] has established recommendations for the treatment of melanoma in situ and melanoma, it remains unclear whether treatments currently suggested by pathologists are in accordance with these standards.[14-16]

Recognizing variation in diagnostic thresholds, interpretation, and treatment suggestions for the wide spectrum of melanocytic skin lesions, Piepkorn et al[17] proposed the Melanocytic Pathology Assessment Tool and Hierarchy for Diagnosis (MPATH-Dx) classification scheme in 2014 to reduce complexity and improve pathology reporting of these neoplasms. This schema stratifies melanocytic lesions into 5 broad categories based on histologic findings and treatment suggestions. Example diagnoses (and suggested treatments) for the MPATH-Dx categories are as follows: dysplastic nevus with mild cytologic atypia in category 1 (no further treatment); dysplastic nevus with moderate cytologic atypia and conventional Spitz nevus in category 2 (narrow but complete re-excision suggested); dysplastic nevus with severe cytologic atypia, atypical Spitzoid lesion, and melanoma in situ in category 3 repeat (excision with at least 5-mm margins suggested); and invasive melanoma in categories 4 and 5 (wide excision with at least 1-cm margins).[17-20]

There is a knowledge gap in the reasons why and how often pathologists provide treatment suggestions. Understanding these underlying reasons and the consistency or variability in these suggestions can help a physician triage care for pigmented lesions, particularly for lesions without nationally recognized treatment guidelines. Furthermore, data on standard treatment suggestions can serve as a starting point for clinical trials aimed at understanding the appropriate treatment of pigmented lesions. The primary objective of this study is to determine how often and why practicing pathologists render treatment suggestions in their final pathology reports, what suggestions are provided, and how often the suggestions align with NCCN guidelines for melanoma.

METHODS

Data were obtained from responses to a cross-sectional survey of practicing pathologists enrolled in the M-Path study, which was designed to assess the variability in pathology diagnoses. The M-Path study survey recruitment methods were previously described in detail.[21] Briefly, a survey was sent to eligible pathologists practicing in 10 US states (California, Connecticut, Hawaii, Iowa, Kentucky, Louisiana, New Jersey, New Mexico, Utah, and Washington) over a 1-year period (July 2013-August 2014). Inclusion in the study required interpreting melanocytic skin lesions in the past year and plans to continue over the next 2 years. Medical students, residents, and fellows in training were ineligible. This study was approved by the institutional review boards of the University of Washington, Fred Hutchinson Cancer Research Center, Oregon