Inpatient Dermatology Consultations for Suspected Skin Cancer: A Retrospective Review

Scott M. Whitlock, MD; Arjun Saini, MD; Katie A. O'Connell, MS; Thomas Michael Pender, MD; Abby S. Van Voorhees, MD

PRACTICE **POINTS**

- Dermatologists who perform inpatient consultations should be prepared to be consulted for cutaneous malignancies.
- Relatively large skin tumors may be identified, often incidentally, in the inpatient population.
- Careful consideration should be involved when deciding how to diagnose and manage cutaneous malignancies identified in the inpatient setting, taking the overall medical and social context into account.

To the Editor:

Dermatologists sometimes are consulted in the inpatient setting to rule out possible skin cancer. This scenario provides an opportunity to facilitate the diagnosis and treatment of cutaneous malignancy, often in patients who might not have sought regular outpatient dermatology care. Few studies have described the outcomes of inpatient biopsies to identify skin cancer.[1,2]

Seeking to better understand the nature of these patient encounters, we reviewed all consultations at a medical center for which the referring physician suspected skin cancer rather than only those lesions that were biopsied by the dermatologist. We also collected data about subsequent treatment to better understand the outcomes of these patient encounters.

We conducted a retrospective review of inpatient dermatology referrals at an academic-affiliated tertiary medical center. We identified all patients who were provided with an inpatient dermatology consultation for suspected skin cancer or what was identified as a "skin lesion" between July 1, 2013, and July 1, 2019. We collected information on each patient's sex, age at time of consultation, and race, as well as the specialty of the referring provider, lesion location, maximum diameter of the lesion, whether a biopsy was performed, where the biopsy was performed (inpatient or outpatient setting), clinical diagnosis, histopathologic diagnosis, and subsequent treatment.

The institutional review board at Eastern Virginia Medical School (Norfolk, Virginia) approved this study, and all protocol conformed to the ethical guidelines of the Declaration of Helsinki.

Thirty-eight patients met the inclusion criteria. Their characteristics are listed in the Table. Consultations for possible skin cancer accounted for 4% (38/950) of all inpatient dermatology consultations over the study period. Outcomes of the referrals are shown in the Figure. Consultations were received from 12 different physician specialties.

In the 38 patients, 47 lesions were identified; most (66% [31/47]) were on the head and neck. Twenty of 38 patients were found to have at least 1 biopsy-confirmed cutaneous malignancy (23 total tumors). Of those 23 identified malignancies, 10 were basal cell carcinoma, 11 squamous cell carcinoma, 1 malignant melanoma, and 1 anaplastic T-cell lymphoma. Of note,

From the Eastern Virginia Medical School, Norfolk. Drs. Whitlock, Van Voorhees, and Pender and Ms. O'Connell are from the Department of Dermatology, and Dr. Saini is from the Department of Internal Medicine.

Drs. Whitlock, Saini, and Pender and Ms. O'Connell report no conflict of interest. Dr. Voorhees is on the Board of Directors for the American Academy of Dermatology and is Chair Emeritus for the National Psoriasis Foundation.

Correspondence: Abby S. Van Voorhees, MD, Department of Dermatology, Eastern Virginia Medical School, 721 Fairfax Ave, Ste 200, Norfolk, VA 23507 (VanvooAS@evms.edu).

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17 of 23 (74%) identified cutaneous malignancies were 2.0 cm in diameter at biopsy or larger. Subsequently performed treatments for these patients included wide local excision (n=3), Mohs micrographic surgery (n=5), radiation therapy (n=3), topical fluorouracil (n=1), electrodesiccation and curettage (n=4), and chemotherapy or immunotherapy (n=2). Two patients who were diagnosed with skin cancer died of unrelated causes before treatment was completed.

In 10 of 38 patients, only nonmalignant entities were diagnosed, including seborrheic keratosis (n=6), benign melanocytic nevus (n=1), epidermal inclusion cyst (n=1), actinic keratosis (n=1), and radiation-induced necrosis (n=1). Of the 8 remaining patients, 4 were ultimately lost to follow-up before planned outpatient biopsy could be completed; 1 opted to follow up for biopsy at an unaffiliated outpatient dermatology provider. For 2 patients, the decision was made to forgo biopsy despite clinical suspicion of skin cancer because of overall poor health status, and 1 additional patient died before a planned outpatient biopsy could be performed.

In summary, approximately half of the inpatient dermatology consultations for suspected cutaneous malignancy resulted in a diagnosis of skin cancer. The patients in this population were admitted for a range of diagnoses, most unrelated to their cutaneous malignancy, suggesting that the inpatient setting offers the opportunity for physicians in a variety of specialties to help identify skin cancer that might otherwise be unaddressed and then facilitate management, whether ultimately in an inpatient or outpatient setting.

In many of these cases, it might be most appropriate to arrange subsequent outpatient dermatology follow-up after hospitalization, rather than making an inpatient consultation, as these situations usually are nonurgent and not directly related to hospitalization. However, in cases in which the lesion is directly related to admission, the lesion is advanced, there is concern for metastatic disease, or extenuating circumstances make outpatient follow-up difficult, inpatient dermatology consultation may be reasonable. There sometimes can be compelling reasons to expedite diagnosis and treatment as an inpatient.

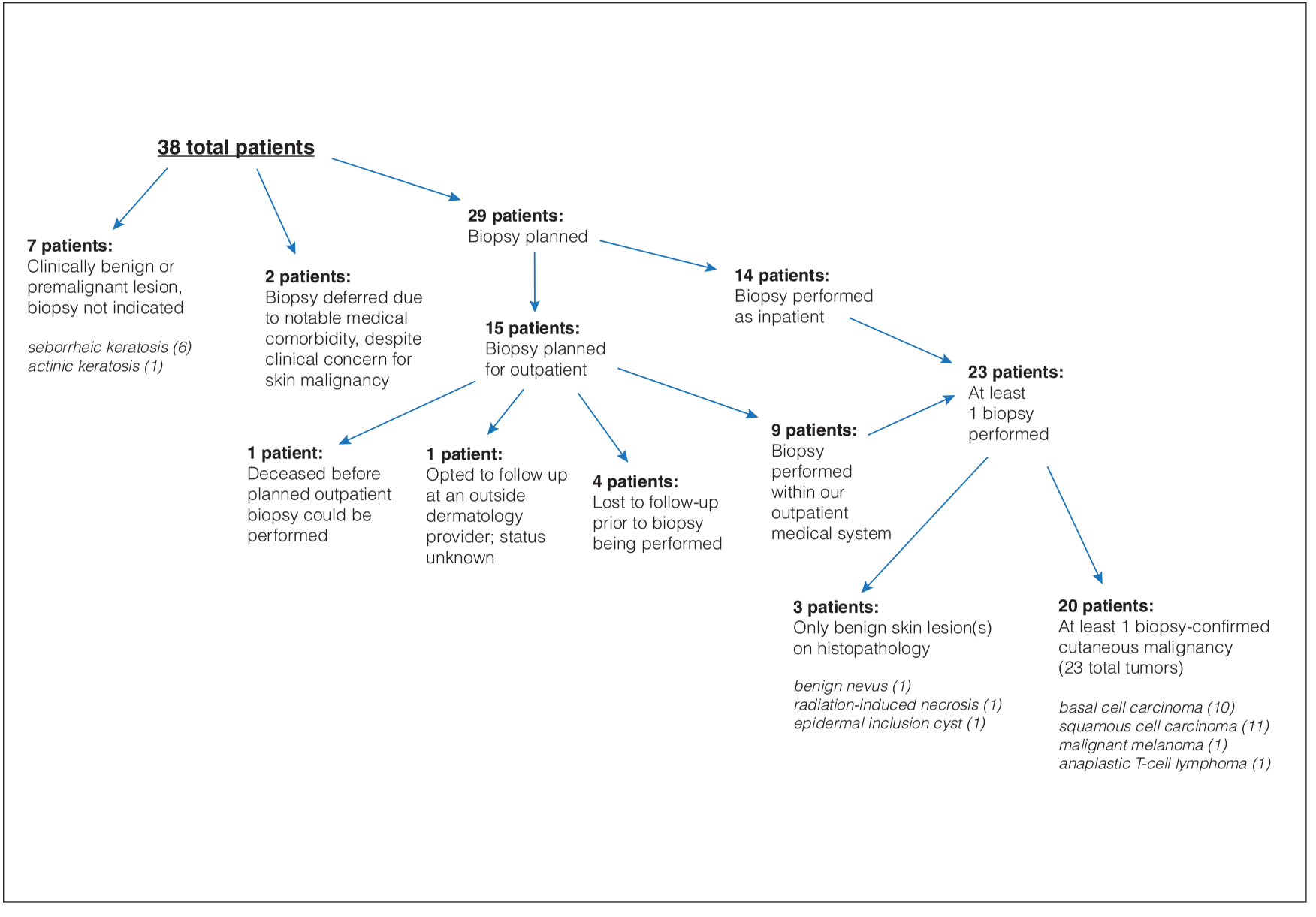
In hospitalized, medically complex patients, in whom a new cutaneous malignancy is identified, dermatologists should discuss the situation thoughtfully with the patient, the patient's family (when appropriate), and other physicians on the treatment team to determine the most appropriate course of action. In some cases, the most appropriate course might be to delay biopsy or treatment until the outpatient setting or to even defer further action completely when the prognosis is very limited. Consulting dermatologists must be mindful of patients' overall medical situation in planning care for a cutaneous malignancy in these inpatient situations.

This study also highlights the surprising number of large-diameter, high-risk tumors identified in these

Patient Characteristics (N=38)

Characteristic	Patients
Mean age (range), y	65.7 (34–84)
Biological sex, n (%)	
Male	31 (81.6)
Female	7 (18.4)
Race, n (%)	
Caucasian/White	32 (84.2)
Black/African American	4 (10.5)
Asian	1 (2.6)
Hispanic/Latino	1 (2.6)
Primary reason for admission, n (%)	
Unrelated to skin lesion	33 (86.8)
	Cardiac (n=9)
	Gastrointestinal (n=3)
	Infectious (n=5)
	Other malignancy (n=4)
	Neurologic (n=3)
	Respiratory (n=4)
	Renal (n=2)
	Obstetric (n=1)
	Elective surgery (n=1)
	Other[a] (n=1)
Skin lesion-related	5 (13.2)
Referring specialty, n	
Internal medicine	17
Family medicine	2
Nephrology	1
Urology	1
ObGyn	1
Neurosurgery	3
Otolaryngology	3
Emergency medicine	2
Cardiology	3
Cardiothoracic surgery	1
Pulmonary or critical care	3
Endocrinology	1

[a]Decubitus ulcer.



Referral and biopsy outcomes for the 38 patients referred for suspected skin cancer or a "skin lesion."

scenarios. Limitations of this study include a relatively small sample size from a single facility that might not be representative of other practice settings and locations. Future multicenter studies could further explore the impact of inpatient dermatologic consultation on the diagnosis and management of skin cancer.

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