Melanoma depth in patients with an established dermatologist

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Background: The impact of having an established dermatologist on melanoma depth at diagnosis is incompletely understood.

Objective: We sought to determine whether having had a previous dermatologic examination (an established dermatologist), the recency of the last examination, and the wait time for the dermatology appointment are associated with melanoma invasiveness and depth.

Methods: This was a retrospective cross-sectional study of 388 patients with primary melanoma at an academic dermatology department.

Results: Patients with an established dermatologist were more likely than patients without an established dermatologist to be given a diagnosis of melanoma in situ (103/162 [63.6%] vs 69/155 [44.5%], $P = .001$) and to have thinner invasive melanoma (0.48 [0.30-0.71] mm vs 0.61 [0.40-1.10] mm, respectively, $P = .003$). These trends were observed for patients with self-detected, but not dermatologist-detected, melanoma. Patient-detected melanomas made up 184/361 (51.0%) of all melanomas, 83/199 (41.7%) of in situ melanomas, and 101/162 (62.4%) invasive melanomas. Self-detected melanomas were in situ in 36 of 61 (59.0%) patients with an established dermatologist versus 40 of 108 (37.0%) patients without an established dermatologist, $P = .006$. Neither time from last dermatologic examination nor wait time for an appointment was associated with melanoma invasiveness or depth.

Limitations: Data are retrospective and from 1 large academic health care system.

Conclusion: Education obtained at the dermatology appointment may improve early self-detection of melanoma, and having an established dermatologist may facilitate earlier evaluation of concerning lesions. (J Am Acad Dermatol 2014;70:841-6.)

Key words: dermatology; education; melanoma; prevention; public health; skin cancer.

Unlike other malignancies such as breast and colon cancer, melanoma has the potential to be detected in the earliest stages by a noninvasive physical examination, and early melanoma can be either patient or physician detected. Although skin cancer screenings are routinely performed in dermatologists' offices, formal screening guidelines akin to those for breast, cervical, and colon cancer are not as well established for melanoma in the United States. The US Preventive Services Task Force states that the evidence is insufficient to recommend screening by primary care physicians or self-examination by patients and does not comment on examination by a dermatologist.[1] One large nonrandomized study strongly suggests that a large-scale screening program has

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the potential to reduce melanoma mortality.[2] In addition, several studies have shown that physician-detected melanomas are thinner, on average, than patient-detected melanomas,[3-5] and that having had a recent skin examination is associated with thinner melanomas at diagnosis.[6,7]

Dermatologists play an important role in early detection of melanoma. Having an established dermatologist is associated with a lower risk of being given a diagnosis of a presumptive melanoma at a free skin cancer screening.[8] Furthermore, residing in a county with a low density of dermatologists relative to the general population and having a melanoma diagnosed by a nondermatologist[9,10] are both associated with increased melanoma mortality. Patients who have seen a dermatologist are also more likely to perform skin self-examination (SSE).[11] These findings highlight the value of the dermatologist-patient relationship in improving melanoma detection and outcomes. However, the impact of the dermatologist-patient relationship on melanoma depth has not been quantified.

CAPSULE SUMMARY

- Dermatologist-detected melanomas are generally thinner than patient-detected melanomas.
- Patients with an established dermatologist presented with significantly thinner self-detected primary melanomas than did patients without an established dermatologist.
- Knowledge gained at dermatology visits may facilitate early self-detection of melanoma, and/or having an established dermatologist may streamline detection of suspicious lesions.

The primary objective of our study was to determine whether having an established dermatologist is associated with thinner melanoma at diagnosis. We investigated this by determining whether having an established dermatologist was associated with decreased depths of self-detected, dermatologist-detected, or all melanomas. In addition, we assessed whether there is a benefit to more frequent examinations by a dermatologist. Finally, given the variable rate of melanoma vertical growth, we examined the relationship between wait time for the dermatology appointment that resulted in the diagnosis of melanoma and depth at diagnosis.

METHODS

Study subjects

This study was exempt from full board review by the University of Pittsburgh Institutional Review Board. We performed a retrospective cross-sectional analysis of biopsy-confirmed melanomas diagnosed at the University of Pittsburgh Medical Center (UPMC) between February 1, 2003, and December 31, 2010. Inclusion criteria included age 18 years or older and diagnosis of a primary cutaneous melanoma at any of the 4 dermatology clinics at our institution. If a patient had more than 1 primary melanoma diagnosed at our institution during the study period, we only included the first melanoma diagnosed. We excluded cases in which a skin biopsy specimen showed metastatic melanoma or the primary melanoma was diagnosed outside of our institution but the patient was referred to us for treatment from analysis. Data collected included patient demographics; personal history of melanoma (patient-reported if not previously given a diagnosis at our institution); melanoma depth and subtype; method of melanoma detection (dermatologist vs patient); days between last dermatologic examination and melanoma diagnosis; and appointment wait time (days from the time when the patient called to schedule the appointment to when the patient was seen by a dermatologist and a melanoma was biopsied). Personal history of melanoma before being seen in our institution and appointment wait time were obtained from review of medical record documentation. Melanoma depth and subtype were obtained from pathology reports. A melanoma was considered patient detected if the lesion was listed as the reason for the visit in the scheduling system or if it was mentioned in the chief symptom or history of present illness sections of the medical record. A melanoma exclusively discussed in the physical examination portion of the medical record was considered a dermatologist-detected melanoma. Last dermatologic examination was defined as the patient's most recent dermatology visit in our department that included a history and physical examination before having their melanoma biopsied. Appointments that solely involved procedures, such as a surgery without examination or a suture removal, were not considered prior dermatologic examinations. We considered patients who had a dermatology visit that included a physical examination at our institution before the visit at which their melanoma was diagnosed to have had an established dermatologist.

Statistical analysis

We performed χ^2 tests to assess the impact of the following factors on diagnosis of in situ versus