Incidental lesions found in veterans referred to dermatology: The value of a dermatologic examination

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Background: Few studies have evaluated the detection of incidental skin cancers.

Objective: We sought to evaluate the rate of incidental cutaneous malignancies in routine dermatology consults.

Methods: This was a retrospective chart review of all dermatology consults at the Minneapolis Department of Veterans Affairs Medical Center over 8.25 years. Inclusion criteria included an in-person clinic visit within 18 months of the initial consult date. Patients with an in-person skin examination by a dermatologist in the 18 months before consult date were excluded.

Results: Of 28,405 consults sent during the study period, 17,174 met inclusion criteria. In all, 2257 (13.1%) patients had 1 or more biopsied incidental lesions. Half (50.3%; n = 1674) of the 3328 biopsied incidental lesions were malignant, which included 1187 patients. The per-person detection rate for an incidental malignant lesion was 6.9% (1187/17,174). There were 87 incidental melanomas identified in 84 patients. The per-person detection rate for an incidental melanoma was 0.5% (84/17,174). The most frequent anatomical location for biopsied incidental malignancies was the head and neck (53.9%). Incidental melanomas were most frequently located on the back (33.3%).

Limitations: Nondiverse patient population and conservative detection rate estimates are limitations.

Conclusion: An in-person skin examination by a trained dermatologist is important for detection of skin malignancies. This may have implications for teledermatology. (J Am Acad Dermatol 2015;72:651-5.)

Key words: dermatology consults; melanoma; nonmelanoma skin cancer; skin cancer; teledermatology.

Despite rising skin cancer rates, the US Preventative Services Task Force reports insufficient evidence to recommend routine total-body skin examination.[1,2] Although primary care (PC) providers (PCPs) are often delegated as "gatekeepers" to dermatology,[3] few perform total-body skin examinations,[4,5] and diagnostic accuracy is inferior.[3,5] There are few data evaluating malignancies missed by referring providers that are incidentally detected by an in-person dermatologic examination (IPDE).[6,7]

Abbreviations used:

BIL:	biopsied incidental lesion
IPDE:	in-person dermatologic examination
PC:	primary care
PCP:	primary care provider
VA:	Department of Veterans Affairs

METHODS

This retrospective chart review was approved by the Human Studies Subcommittee of the Minneapolis Department of Veterans Affairs (VA)

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Medical Center. Inclusion criteria included: (1) consult from January 1, 2004, through March 31, 2012; and (2) IPDE at the Minneapolis VA within 18 months. Patients with an IPDE (VA or non-VA) in the prior 18 months were excluded.

Data were extracted from consult, notes, and pathology reports and included: consult reason, referral source, demographics, and biopsied incidental lesions (BILs) found on initial IPDE. An incidental lesion was defined as any lesion biopsied during the IPDE not identified in the consult. We were conservative in assigning "incidental" status, deferring to "consult" whenever in doubt.

Six investigators extracted the data from the electronic medical record. The primary investigator trained and cross-checked initial entries of each extractor. All malignant BILs were manually verified.

Individuals with 1 or more BILs were compared with those without BILs. Within the group with BIL(s), those with any malignant BIL(s) were compared with those with only benign BIL(s).

CAPSULE SUMMARY

- There are limited data evaluating incidental skin cancers detected by general dermatologists during initial consultations.
- In this study, 6.9% (1187/17,174) of patients referred by nondermatologists had 1 or more incidental cutaneous malignancies.
- An in-person skin examination by a trained dermatologist is important for the detection of skin cancer.

RESULTS

Of 17,174 consults (28,405 eligible) that met inclusion criteria, 2,257 patients had 3,328 BILs; of these, 1,674 (50.3%) were malignant (Fig 1).

Average age of patients with BILs was significantly older than those without (Table I). Male gender, Caucasian race, skin cancer history, melanoma history, lesion consultation, and PC consultation were also statistically associated (Table I).

Within the group of patients with 1 or more BILs, those with at least 1 malignant BIL were significantly more likely to be older, male, and Caucasian, and to have a history of skin cancer as compared with those with only benign BIL(s) (P values $\leq .0047$) (Table I).

Of the 1,654 benign BILs, the most common diagnoses included nevus (18.1%), benign keratosis (17.5%), dysplastic nevus (14.2%), and actinic keratosis (13%) (Table II; available at http://www.jaad.org). Approximately two-fifths (41.7%) were located on head/neck, followed by trunk (33.9%) and extremities (23.9%) (data not shown).

The most common diagnosis for malignant BILs was basal cell carcinoma (67.5%) followed by squamous cell carcinoma (27.1%); the most frequent anatomical locations were head/neck (53.9%), trunk (24.2%), and extremities (21.9%) (Table III). There were 87 incidental malignant melanomas in 84 patients, most commonly located on back (33.3%), shoulder/upper aspect of arm (14.9%), and face (12.6%).

DISCUSSION

This study has several findings. First, 13.1% of consulted patients had 1 or more BILs. Of 3328 BILs, half (50.3%) were malignant. The per-person detection rate for malignant BIL was 6.9% (1187/17,174). Second, many of the malignant BILs were located on the head/neck (53.9%) or upper extremities (20.2%), areas easily observed in a PC setting. Third, 87 incidental melanomas were identified in 84 patients, a per-person detection rate of 0.5% (84/17,174).

Without an IPDE, a malignancy would have been missed in 6.9% patients. This is lower than the 15.3% rate found by Viola et al[6] in 400 consults, likely as a result of study design; that study focused on consults for suspicious lesions whereas our study included consultation for any condition.

The most common anatomic location among all incidental malignancies was the head/neck (53.9%), an area likely easily observable in a PC encounter. The next most frequent body location was the trunk (24.2%), a region of the body not typically visible unless clothing is removed. Possible explanations include: not performing a skin examination, not removing clothing, or failure to identify lesions of concern. Previous studies have found that less than one third of PCPs perform a total-body skin examination,[3-5] stating lack of time as a major obstacle.[8] An informal survey of PCPs at the Minneapolis VA Medical Center found that less than 5% ask patients to undress. In addition, several studies have demonstrated that PCPs are inferior to dermatologists in diagnostic accuracy[3,9-11] and referrals from PCPs for skin disorders are more common than referrals to other specialists.[12]

For melanomas, the most common location was back (33.3%), consistent with national statistics indicating that this is the most common anatomic location for melanoma among males.[13] Encouraging PCPs to specifically examine the back while performing auscultation could aid in detection of melanoma.