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# LETTER TO THE EDITOR

## Research Letter

Dear Editor,

*Concordance between patient-identified concerns and skin cancer diagnosis – an observational cross-sectional study*

A common presentation to the dermatologist is a patient with a self-identified skin lesion that the patient is concerned may be malignant. Often these lesions are benign; however, a complete skin examination may identify skin malignancy in a lesion which had not been concerning with the patient.

We sought to determine the level of agreement between skin lesions that were concerning with the patients and those that concerned their dermatologist.

### METHODS

The study was conducted at a dermatology practice in Queensland.

Data were collected from consecutive patients undergoing skin examination for malignancy.

The site, provisional diagnosis and management for each patient-identified and dermatologist-identified lesion were recorded. Patient-identified lesions are lesions pointed out to the dermatologist by the patient during history taking or examination. The dermatologist recorded lesions considered to be skin cancer, 'suspicious pigmented lesions' or requiring treatment. 'Suspicious pigmented lesions' were defined as pigmented lesions where melanoma was a differential diagnosis. Histological diagnoses were included when obtained.

### RESULTS

301 patients aged 17–92 were included.

Almost all (299, 99.3%) presented for routine examination. Three-quarters (226, 75.1%) had a skin examination within the past year. Most (243, 80.7%) had a history of skin cancer (Table 1).

**Table 1** Demographic and clinical characteristics

| | *N* = 301 |
|---|---|
| Age | |
| <40 years | 19 (6.3%) |
| 40–59 years | 98 (32.6%) |
| 60–79 years | 159 (52.8%) |
| ≥80 years | 25 (8.3%) |
| Gender | |
| Male | 132 (43.9%) |
| Female | 169 (56.1%) |
| Routine skin check | 299 (99.3%) |
| Time since last skin check | |
| 0–6 months | 108 (35.9%) |
| >6 to 12 months | 118 (39.2%) |
| >1 to 2 years | 50 (16.6%) |
| >2 years | 15 (5.0%) |
| Never | 5 (1.7%) |
| Unknown | 5 (1.7%) |
| Previous melanoma | 75 (24.9%) |
| Previous keratinocyte skin cancer | 224 (74.4%) |
| Previous history of melanoma or keratinocyte skin cancer | 243 (80.7%) |

Number (%).

### Data by lesion

376 lesions were recorded in 200 patients:

195 (51.9%) were patient-identified lesions of concern

167 (44.4%) were dermatologist-identified skin cancers or suspicious pigmented lesions

28 (7.5%) were concerning to both the patient and dermatologist (Table 2).

The commonest patient-identified lesions were seborrhoeic keratosis (60, 30.8%) followed by actinic keratosis (49, 25.1%), other benign lesions (including cysts, excoriations; 39, 20.0%), squamous cell carcinomas (SCC) or intra-epidermal carcinomas (IEC) (18, 9.2%) and basal cell carcinomas (BCC) (10, 5.1%) (Table 3).

**Table 2** Cross-tabulation of patient lesion of concern and clinical diagnosis of skin cancer/suspicious pigmented lesion by a dermatologist for 376 lesions in 301 patients who presented to a dermatology clinic for a full skin examination

| Patient lesion of concern | Clinical diagnosis of skin cancer/SPL by a dermatologist | | |
|---|---|---|---|
| | No | Yes | Total |
| No | 41 (10.9%)† | 140 (37.2%) | 181 (48.1%) |
| Yes | 167 (44.4%) | 28 (7.5%) | 195 (51.9%) |
| Total | 208 (55.3%) | 168 (44.7%) | 376 (100%) |

†This is an underestimate since most lesions that were not concerning to either the patient or dermatologist would not have been recorded. The 41 benign lesions recorded by the dermatologists were clinically diagnosed as actinic keratoses and were all treated. SPL, suspicious pigmented lesion. Number (cell %).

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**Table 3** Lesion characteristics for 376 lesions in 301 patients who presented to a dermatology clinic for a full skin examination (200 patients had one or more lesion, 101 patients had zero lesions)

| | Patient lesion of concern ($N$ = 195)[†] | Dermatologist diagnosis of skin cancer or SPL ($N$ = 168)[†] | All lesions $N$ = 376 |
|---|---|---|---|
| Location | | | |
| Head or neck | 103 (52.8%) | 59 (35.1%) | 183 (48.7%) |
| Arms or hands | 30 (15.4%) | 26 (15.5%) | 57 (15.2%) |
| Chest or abdomen | 14 (7.2%) | 16 (9.5%) | 28 (7.4%) |
| Back | 18 (9.2%) | 34 (20.2%) | 49 (13.0%) |
| Legs or feet | 30 (15.4%) | 33 (19.6%) | 59 (15.7%) |
| Clinical diagnosis | | | |
| Skin cancer (all cause) | 28 (14.4%) | 134 (79.7%) | 134 (35.6%) |
| BCC | 10 (5.1%) | 87 (51.8%) | 87 (23.1%) |
| SCC/IEC | 18 (9.2%) | 47 (28.0%) | 47 (12.5%) |
| Melanoma | 0 (0%) | 0 (0%) | 0 (0.0%) |
| SPL | 0 (0%) | 34 (20.2%) | 34 (9.0%) |
| Seborrheic keratoses | 60 (30.8%) | 0 (0%) | 60 (16.0%) |
| Actinic keratoses | 49 (25.1%) | 0 (0%) | 90 (23.9%) |
| Solar lentigo | 6 (3.1%) | 0 (0%) | 6 (1.6%) |
| Benign naevus | 13 (6.7%) | 0 (0%) | 13 (3.5%) |
| Other benign | 39 (20.0%) | 0 (0%) | 39 (10.4%) |
| Histological diagnosis[‡] | | | |
| Not biopsied/ excised | 145 (74.4%) | 9 (5.4%) | 189 (50.2%) |
| Total biopsied/ excised | 50 (25.6%) | 159 (94.6%) | 187 (49.7%) |
| Skin cancer (all cause) | 22 (11.3%) | 106 (63.1%) | 107 (28.5%) |
| BCC | 7 (3.6%) | 69 (41.1%) | 69 (18.4%) |
| SCC/IEC | 15 (7.7%) | 35 (20.8%) | 36 (9.6%) |
| Melanoma | 0 (0%) | 2 (1.2%) | 2 (0.5%) |
| Dysplastic naevus | 0 (0%) | 19 (11.3%) | 19 (5.1%) |
| Benign | | 34 (20.2%) | |
| Solar lentigo | 0 (0%) | 4 (2.4%) | 4 (1.1%) |
| Seborrheic keratoses | 8 (4.1%) | 5 (3.0%) | 13 (3.5%) |
| Actinic keratoses | 6 (3.1%) | 8 (4.8%) | 16 (4.3%) |
| Benign naevus | 3 (1.5%) | 7 (4.2%) | 9 (2.4%) |
| Other benign | 11 (5.6%) | 10 (6.0%) | 19 (5.1%) |
| Management at skin check appointment | | | |
| None | 86 (44.1%) | 0 (0%) | 86 (22.9%) |
| Treatment deferred[§] | 8 (4.1%) | 41 (24.4%) | 43 (11.4%) |
| Curettage and cautery | 9 (4.6%) | 52 (31.0%) | 53 (14.1%) |
| Biopsy | 32 (16.4%) | 64 (38.1%) | 89 (23.7%) |
| Liquid nitrogen | 47 (24.2%) | 3 (1.8%) | 75 (19.9%) |
| 5-FU | 9 (4.6%) | 0 (0%) | 20 (5.3%) |
| Observed | 0 (0%) | 2 (1.2%) | 2 (0.5%) |
| Other | 3 (1.5%) | 1 (0.6%) | 3 (0.8%) |
| PDT | 0 (0%) | 1 (0.6%) | 1 (0.3%) |
| On the day excision | 1 (0.5%) | 4 (2.4%) | 4 (1.1%) |

[†]Lesions that were both patient-identified lesions of concern and dermatologist-diagnosed skin cancer or suspicious pigmented lesion are included in both columns ($n$ = 28).

[‡]Includes any sent for histopathological diagnosis after biopsy, curettage or excision.

[§]Includes referral for excision or curettage and cautery at a later date. Number (%). 5-FU, 5-fluorouracil; BCC, basal cell carcinoma; PDT, photodynamic therapy; SCC, squamous cell carcinoma; SPL, suspicious pigmented lesion – defined as a pigmented lesion where the differential diagnosis includes melanoma.

BCCs were less frequently identified by patients than SCC/IEC (11.5% and 38.3%, respectively, $P < 0.001$), possibly due to the subtle appearance of early BCC. No patient-identified lesions were melanomas.

Back lesions were less frequently identified by patients than lesions in other locations (36.7% and 54.1%, respectively, $P = 0.023$).

Clinical diagnoses for the 168 dermatologist-identified lesions were BCC (87, 51.8%), SCC/IEC (47, 28.0%) and suspicious pigmented lesions (34, 20.2%).

Histopathology was available for 159 (94.6%) of these lesions with 106 (63.1%) keratinocyte cancers, 19 (11.3%) dysplastic naevi, 34 (20.2%) benign lesions and 2 (1.2%) melanomas.

## Data by patient

131 patients (43.5%) had one or more patient-identified lesion of concern. Only 18.3% of these patients (24 of 131) had one or more of their patient-identified lesions clinically diagnosed as skin cancer or suspicious pigmented lesions by a dermatologist. The rest were clinically diagnosed as benign.

Of patients with no patient-identified lesions, 32.9% (56 of 170) had one or more lesion that was clinically diagnosed as skin cancer or suspicious pigmented lesion.

94 patients (31.2%) had at least one lesion that was not concerning to them but was diagnosed as a skin cancer or suspicious pigmented lesion.

Patients with a history of melanoma were more likely to identify a lesion which the dermatologist diagnosed as a skin cancer or suspicious pigmented lesion compared to those with no history of melanoma (32.1% and 14.6%, respectively, $P = 0.033$). This may reflect better education for melanoma patients or an increased vigilance in skin self-examination on their part. Dermatologists may have a lower threshold for diagnosing lesions as suspect in melanoma patients.

Males were more likely than females to identify a lesion of concern that was also considered suspect by their dermatologist (30.2% and 10.3%, respectively, $P = 0.004$). There was no difference by age or history of keratinocyte cancer.

## DISCUSSION

This study confirms that the majority of patient-identified lesions of concern are benign. Furthermore, patients are unaware of most dermatologist-identified skin malignancies and suspect lesions.

This is true even in high-risk patients, such as those in our study, who are often the focus of both public health education and counselling by their clinician on the early signs of skin malignancy.[1,2]

The low rate of patient-identified skin cancers reflects the shortcomings of self-examination. The macroscopic changes in skin malignancy (changes in symmetry, border, colour, size) and the symptoms of itching and bleeding are often found in benign lesions. Furthermore, skin cancers are often asymptomatic, macroscopic changes may be subtle and lesions may be located in inaccessible sites.

Our results suggest that patients should be educated in the features of common benign lesions and malignancy. Skin self-examination is not a substitute for clinician surveillance in high-risk patients.

We recommend complete skin examinations for all patients who present with a lesion of concern.

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## REFERENCES

1. Iannacone MR, Green AC. Towards skin cancer prevention and early detection: evolution of skin cancer awareness campaigns in Australia. *Melanoma Manag.* 2014; **1**: 75–84.
2. Terrill PJ, Fairbanks S, Bailey M. Is there just one lesion? The need for whole body skin examination in patients presenting with non-melanocytic skin cancer. *ANZ J. Surg.* 2009; **79**: 707–12.

## Supporting Information

Additional Supporting Information may be found online in Supporting Information:

**Methods S1.** Supplementary methods