

Diagnosis and management of melanoma in a rural general practice

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ABSTRACT

A review covering 5 years of melanoma detection and management in a small rural New Zealand practice is presented. The incidence of both *in situ* and invasive melanoma was approximately four-fold the national figures, which are among the highest in the world. Most melanomas can be managed in primary care but cost remains an issue.

Introduction

Cutaneous melanoma accounts for 5% of all skin cancers but ~75% of all skin cancer deaths.¹ More than 300 New Zealanders die from melanoma each year.² Although there is uncertainty about the rate of progression of radial phase (*in situ*) melanoma to vertical phase (invasive³), excision of thin melanoma (*in situ* and <1 mm thick) is associated with a very good (98%) 5-year survival rate.⁴

Whangamata Medical Centre is the sole provider of comprehensive general practice care for the community of Whangamata. We have an enrolled population of ~4300 patients. It has become apparent over the last few years that we see more patients with melanoma than expected from the national incidence figures. To confirm this, we reviewed the last 5 years (2013–17) of melanoma diagnoses for this practice.

Method

The database for all patients enrolled at Whangamata Medical Centre was searched for patients coded with melanoma or melanoma *in situ* recorded during the calendar years 2013 to 2017. The histology and care management of each patient was reviewed.

Results

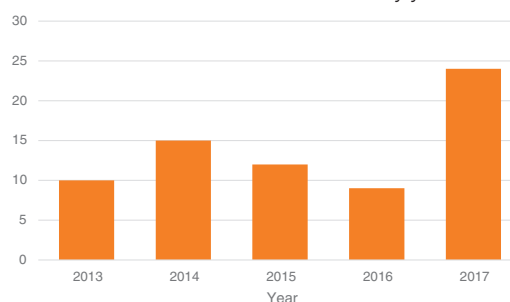
During the 5 years, we coded 30 patients with a new diagnosis of melanoma *in situ* and 40 patients with a new diagnosis of invasive

melanoma (Figure 1). The youngest patient was aged 22 years (*in situ*) and the oldest 93 years (*in situ*). Most patients (83%: 58/70) were aged ≥61 years at the time of diagnosis (Figure 2).

Fifty-three (76%) patients were diagnosed with *in situ* or early (Stage 1: confined to sub-mucosa) invasive disease. Fifteen had invasive melanoma and two had metastatic disease at presentation.

Of the 70 patients, 51 (73%) had their initial biopsy performed at Whangamata Medical Centre and 32 (46%) were totally managed at the medical centre. Most referrals were made for patients requiring wider excision and skin grafting with or without sentinel node biopsy. Some referrals were made for cost reasons and some due to the site being difficult for the referring general practitioner (GP) to manage in primary care. Nine patients were diagnosed elsewhere because they were being followed for skin cancers by either a dermatologist or plastic surgeon.

Figure 1. All patients with a new diagnosis of melanoma *in situ* or invasive melanoma by year



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National guidelines for melanoma management⁵ (biopsy followed by appropriate re-excision and sentinel node biopsy) were followed for all patients apart from two who died from another disease before re-excision was performed.

Eight of the 70 (11%) patients were diagnosed at an annual free skin check held each year at Whangamata Medical Centre. These patients all had early disease (*in situ* or Stage 1).

Five patients presented with amelanotic melanomas and one had an ulcerated acral lentiginous melanoma. All these patients had more advanced disease: two had Stage T2a melanoma (1.01–2.0 mm without ulceration), two had Stage T3a (2.01–4.0 mm without ulceration) and two had Stage T4b (tumour invaded adjacent structures).

Of all 65 re-excisions, only one patient had residual *in situ* disease (previous T3a amelanotic melanoma), one had residual melanoma (previous acral lentiginous diagnosed on punch biopsy) and one had positive sentinel nodes (T4b scalp).

Discussion

New Zealand has the highest incidence (50/100,000) of invasive melanoma in the world,⁶ and the incidence of all melanoma is reported to be ~4000 diagnoses per year² or ~85/100,000. Extrapolating these figures to the Whangamata population gives an expected incidence for all melanoma of fewer than five patients a year and invasive melanoma of approximately three a year. The actual figures are three- to four-fold that for all melanoma and four-fold higher for invasive melanoma. Part of this higher incidence is likely

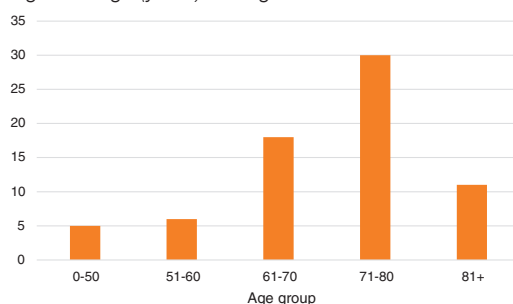
to be due to an older, sun-loving, beach-dwelling population and some might be due to better detection. We presented some earlier figures to the Medical Centre staff in early 2017 and this may have contributed to the increased detection of melanoma in 2017.

Although most patients with *in situ* or Stage 1 disease (75% of our patients) could be completely managed in primary care, cost does remain an issue, resulting in several initial hospital referrals. Whangamata Medical Centre currently charges \$155 for a primary excision (including follow up and suture removal) and half this cost for a re-excision. This barely covers the cost of the procedure but does facilitate early diagnosis and early re-excision. The saving to the District Health Board in both time and expense is likely to be considerable and could be increased with improved reallocation of funds from secondary to primary care.

Current guidelines advise re-excision for all patients with melanoma including *in situ* and T1 tumours. The evidence for re-excision margins for *in situ* and melanomas <1 mm thick is controversial as there have been no randomised controlled trials for these early stages of melanoma. The recommendations are based on the probability of complete excision of all melanoma tissue. As none of the patients in this audit had residual melanoma on re-excision, future research with larger groups of individuals may result in revision to the current guidelines, potentially saving many patients the anxiety, cost and trauma of repeated invasive surgery.

Every year, Whangamata Medical Centre runs a free skin clinic for 4–5 weeks on Mondays through November, held after regular booked appointments. These are attended by ~120–150 patients each year and all patients are examined by a GP using dermatoscopy. Nearly 12% of melanomas were discovered at these clinics and all at an early stage. Numerous other skin cancers (Basal and Squamous Cell (BCC and SCC)) are also diagnosed at these clinics. The discovery of early melanoma at these clinics and the heightened awareness of skin cancer engendered by advertising and running these clinics appears to justify their continuation.

Figure 2. Age (years) at diagnosis of melanoma



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COMPETING INTERESTS

None.