

# An audit of general practice excisions

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## ABSTRACT

### Objective

To audit a series of general practice excisions and to compare the melanoma versus benign pigmented lesion figures with those available from Australian primary care.

### Method

All the excisions performed in a single semi-rural general practice over a three-year period by three GPs were included and analysed.

### Results

Two hundred and forty-one excisions were performed. Very close to 50% (120/241) of the excisions performed removed a malignancy or a lesion clinically indistinguishable from a malignancy. The overall ratio of benign pigmented lesions to melanomas was 2.5:1. This compares with Australian figures which can go as high as 28:1.

### Conclusions

Australian primary care data does not appear to be generalisable to New Zealand.

### Keywords

Melanoma, excisions, primary care

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### Introduction

Australian primary care excision data has shown that general practitioners in Australia excise large numbers of benign pigmented lesions for each

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melanoma excised, with quoted ratios ranging up to 28:1.<sup>1</sup> While the seriousness of a missed or delayed melanoma diagnosis causes understandable anxiety on the part of patients and primary care providers, such high rates of unnecessary excisions incur substantial cost and morbidity in terms of discomfort, potential wound complications and scarring. Efforts intended to modify provider behaviour in the direction of fewer excisions have been of uncertain benefit.<sup>1,2,3</sup> In the absence of comparable published data from New Zealand, the Australian figures have been recently quoted by representatives of private photographic skin screening services, as part of the justification for the service and as an encouragement to primary care providers in NZ to refer patients to the service.<sup>4</sup> Due to the receipt of the histology of only a portion of the lesions for which the dermoscopy service dermatologists have recommended excision, there is uncertainty about overall figures, but a ratio of 6.3:1 (benign pigmented mole:

melanoma) is reported for a sample of excisions.<sup>5</sup> While no one is currently prepared to state what ratio is desirable, this is a much lower rate of unnecessary excision than those from Australian primary care.

It was our impression that the figures from our practice would be very different from the Australian figures and that Australian figures might therefore not be generalisable to primary care in New Zealand.

### Method

The Avon Medical Centre is a rural practice in Taranaki. During the three years from 1 September 2000 to the 31 August 2003, the period retrospectively reviewed, three general practitioners provided care for approximately 4200 patients. All three performed excisions on the registered patients of the practice. None of the GPs accepted referrals from outside the practice and none had a particular interest in skin lesions, or special training in the recognition or management of skin malignancies. All histology was reported by one labo-

ratory, Taranaki Medlab. The laboratory was able to provide the names of all patients who had histology specimens submitted from the practice in the study time period. Non-cutaneous specimens like vasectomy samples and sebaceous cysts were excluded from the study, but lesions which were not thought to be malignancies but were biopsied for diagnostic purposes, were included.

## Results

Two hundred and forty-one excisions were performed: 21 were melanomas, 62 basal cell carcinomas, and 21 squamous cell carcinomas. One other cutaneous malignancy was excised – a cutaneous malignant fibrous histiocytoma. In addition, 12 keratoacanthomas and three dysplastic naevi were excised. Thus very close to 50% (120/241) of all excisions were performed for lesions which proved to be malignant or clinically difficult to distinguish from malignancies. Fifty-three lesions were reported to be benign pigmented naevi and 31 as seborrhoeic keratoses. Thus the overall ratio for the practice was 2.5 benign pigmented naevi per melanoma, or 3.8:1 if seborrhoeic keratoses are included. The figures for each of the three GPs are shown in Table 1 and the benign pigmented naevi vs melanoma figures for each GP are shown in Table 2.

As will be noted, there are differences between the GPs in our practice, with one GP having excised half of the melanomas and only 20% of the benign pigmented naevi. However, overall, the similarities between the figures for the three GPs are striking in comparison with one of the published Australian figures included in the table.

### Melanoma specific results

The male to female ratio was 15:6. The average Breslow thickness was 1.1mm of those not in-situ (nine were in-situ). 15/21 melanomas were thinner than 0.85mm, which implies a prognosis of 95.7% 10 year survival rate.<sup>6</sup>

Table 1. Breakdown according to lesions and GP

	GP A	GP B	GP C	Totals
Melanomas	11	6	4	21
Dysplastic naevi	2		1	3
BCCs	19	14	29	62
SCCs	12	2	7	21
Keratoacanthomas	4	5	3	12
Seborrhoeic keratoses	14	14	2	30
Benign pigmented naevi	10	29	13	52
Other cutaneous malignancies			1	1
Other lesions	12	18	5	35

Nine patients presented concerned about their lesions (43%). Seven were noted by the GP during the course of an examination (33%). The remainder were noted by relatives, friends, and in one case, a hospital nurse during admission for another problem. Re-excision was performed in 17/21 (80%), mostly in private practice by a general surgeon (12/17). The remaining five were re-excised in the public sector.

One of the hard questions to address in the area of melanoma diagnosis is the rate of missed melanomas. The figures quoted above give some idea of the false positive rate, but little of the false negative rate. While it is likely to be an under-estimate of the rate of missed melanomas, it is known that one melanoma was initially diagnosed as a seborrhoeic keratosis, for which excision was not advised. Six months later it was reviewed at the patient's request and the, by then obvious, melanoma was removed. Possibly unsurprisingly, the GP with the lowest rate of benign lesion excision was the one who missed the diagnosis. The patient concerned was a 63-year-old female. Her melanoma was relatively thick at 1.5mm (Breslow's thickness), but three years later, has given her no further problem, although she has had breast cancer and three recurrences of endometrial carcinoma and is now in a palliative care phase for this disease. Three melanomas were observed for

Table 2. Benign pigmented naevi vs melanoma

GP A	11/10	0.91:1
GP B	6/29	4.8:1
GP C	4/13	3.25:1
Practice overall	21/53	2.5:1
Australian figures	61/1345 <sup>1</sup>	22:1

a period of up to one year, before it was decided that they should be removed. No negative outcomes were noted as a consequence of this policy.

## Discussion

Our figures are strikingly different from published Australian figures.<sup>1</sup> They are also better than two published series involving dermatologists.<sup>5,6</sup> We excised more melanomas than would be anticipated by national figures for melanoma incidence.<sup>7</sup> Decision-making in our practice regarding the suspiciousness of the lesions being seen was based on the ABCD principles which have recognised limitations, particularly in the diagnosis of nodular melanoma.<sup>8</sup> No camera or stored digital image was used for comparison, but we do commonly measure and record a description of lesions causing concern. It is not clear why our figures are so different from those in Australian primary care. It seems unlikely that all three of us are substantially more competent in this regard than our Australian colleagues (hard though it is to admit it). It is our suspicion that incentive issues are

important drivers of excision behaviour. Our patients are charged directly for the cost of an excision. Few have medical insurance, and we are unable to collect any additional subsidy from the State for excisions. We believe that this makes us cautious to recommend excision, unless we have a strong suspicion that the lesion is of concern.

We believe that the clinicopathological correlation achieved by obtaining prompt feedback from the laboratory after excising a suspicious lesion has been helpful in improving our diagnostic acumen. If this is correct, then we would expect GPs

who do not undertake skin excisions to be less accurate in the diagnosis and therefore to refer more patients with benign lesions to secondary care based excision services. On the basis of this reasoning, supported by the diagnostic accuracy we have been able to demonstrate and the rapidity with which excisions can be arranged in primary care, we encourage all GPs to be involved in minor surgery of the skin.

As we reviewed our own figures, we concluded that at least one of us is too conservative regarding recommending pigmented lesion excision

and it is our impression that we are now excising more lesions which are not malignant. We are not aware of any further melanomas having been missed, but it is of course still possible that this has occurred again.

### Acknowledgements

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### Competing interests

None declared.

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