

Abstract

Surgical Excision Margins in Primary Care and Plastic Surgery for Keratinocytic Cancers Diagnosed via Teledermatology: Retrospective Observational Cross-Sectional Study

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Abstract

Background: The incidence of keratinocytic cancers is increasing. In New Zealand, surgical treatment of skin cancers is often undertaken in primary care. In the Waikato district, general practitioners (GPs) are encouraged to confirm diagnoses via teledermatology. Histological examination should confirm clear surgical margins to reduce tumor recurrence. International guidelines recommend a lateral margin of ≥ 3 mm for basal cell carcinomas (BCCs) and ≥ 4 mm for squamous cell carcinomas (SCCs).

Objective: This study aimed to determine lateral and deep margins in keratinocytic cancer excisions performed by GPs (in a private setting) and plastic surgeons (in a private or public setting) after a teledermatologist had confirmed that excision was necessary. Demographic, clinical, and histological features were recorded.

Methods: A retrospective observational cross-sectional study was conducted. The sample in the electronic dermatology referral database included keratinocyte cancers recommended for excision from March to May 2022.

Results: Histological reports revealed that excision was complete in 186 of 201 confirmed cases of keratinocyte cancer. The lateral margins of resection were considered in 10 tumors and deep margins in 8 tumors. All incomplete excisions were carried out by GPs, 11 of which were on the head and neck. There were 133 BCCs, 100 of which were excised by a GP, 3 by a private plastic surgeon, and 30 by a public hospital surgeon. In total, 52 BCCs were present on the head and neck (25 excised by GPs, 25 by hospital plastic surgeons, and 2 by private plastic surgeons) and 81 were present on other sites (75 excised by GPs, 5 by hospital plastic surgeons, and 1 by a private plastic surgeon). Lateral margins were considered in 9 cases (of which 5 cases involved head and neck tumors). The minimum distance from the tumor to the lateral margin was < 3 mm in 80 tumors: 64 were excised by a GP, 2 by private plastic surgeons, and 14 by hospital plastic surgeons. This distance was ≥ 3 mm in 44 tumors (27 excised by GPs, 1 by a private plastic surgeon, and 16 by hospital plastic surgeons). These data show significant adherence to surgical margin recommendations among plastic surgeons compared to that among GPs (odds ratio 2.873, CI 1.274-6.477; $P = .009$). There were 68 SCCs: 57 were excised by a GP, 2 by a private plastic surgeon, and 9 by a public hospital surgeon. In total, 21 SCCs were on the head and neck (14 excised by GPs, 6 by hospital plastic surgeons, and 1 by a private plastic surgeon) and 47 were on other sites (43 excised by GPs, 3 by hospital plastic surgeons, and 1 by a private plastic surgeon). Lateral margins were considered in 1 head and neck SCC case and were not reported in others. The minimum distance from the tumor to the lateral margin was < 4 mm in 35 cases: 31 were excised by a GP, 1 by a private plastic surgeon, and 3 by a hospital plastic surgeon. This distance was ≥ 4 mm in 31 cases (24 excised by GPs, 1 by a private plastic surgeon, and 6 by hospital plastic surgeons). These data do not show significant difference in adherence to surgical margin recommendations between GPs and plastic surgeons ($P > .05$).

Conclusions: Complete resection reduces the risk of recurrence of keratinocytic tumors. GPs in our study were less likely than specialist surgeons to respect surgical margin recommendations established in international guidelines for managing keratinocytic cancer.

Conflicts of Interest: None declared.

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KEYWORDS

skin cancer; tumour recurrence; tumor; basal cell carcinoma; squamous cell carcinoma

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