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The Effect of Size and Tumor Depth on Histological Clearance Margins of Basal Cell Carcinomas

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Abstract : Aim: Our aim was to determine the effect of size and tumor depth of basal cell carcinomas (BCCs) on surgical margin clearance. Methods: A retrospective study was conducted at the Welsh Centre for Burns and Plastic Surgery (WCBPS), Morriston Hospital between 1 Jan 2016 - 31 July 2016. Only patients with confirmed BCC on histopathological analysis were included. Patient data including anatomical region treated, lesion size, histopathological clearance margins and histological sub-types were recorded. An independent T-test was performed determine statistical significance. Results: A total of 228 BCCs were excised in 160 patients. Eleven lesions (4.8%) were incompletely excised. The nose area had the highest rate of incomplete excision. The mean diameter of incompletely excised lesions was 11.4mm vs 11.5mm in completely excised lesions (p=0.959) and the mean histological depth of incompletely excised lesions was 4.1mm vs. 2.5mm for completely excised BCCs (p < 0.05). Conclusions: BCC tumor depth of > 4.1 mm was associated with high rate of incomplete margin clearance. Hence, in prospective patients, a BCC tumor depth (>4 mm) on tissue biopsy should alert the surgeon of potentially higher risk of incomplete excision of lesion.

Keywords: basal cell carcinoma, excision margins, plastic surgery, treatment

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