



Perineural invasion present exclusively in central tissue blocks of Mohs surgical excisions of basal cell carcinoma

Perineural invasion (PNI) may be present in basal cell carcinomas (BCC) treated with Mohs Micrographic Surgery (MMS), and may be identified on biopsy prior to surgery, or visualised histologically on Mohs frozen sections. The high cure rate of MMS derives from the technique's comprehensive analysis of the deep and peripheral margins, using horizontal rather than vertical tissue sections. MMS represents an effective treatment option for BCCs with known PNI; moreover, its sensitivity in detecting and diagnosing PNI has also been well documented. Given that MMS assesses marginal rather than central tissue, PNI that exists within a tumour only more centrally to that which is processed for the MMS slides may, theoretically, go undetected. The potential for the central tissue of MMS specimens to be the sole area of PNI-positivity has not been previously prospectively investigated.

A prospective series was collected, comprising thirty patients undergoing MMS for BCCs. On completion of the routine MMS procedure, the central tissue blocks were sent for paraffin fixation, and vertical sectioning. These sections were reviewed, along with the corresponding MMS slides, by a single dermatopathologist.

Seven of thirty cases were positive for PNI on central tissue. Two patients had multifocal involvement, and one patient had extra-tumoural PNI.

This study highlights the potential for PNI to be present exclusively in the central tissue of MMS specimens, when PNI is otherwise not clinically or histologically manifest. The incidence at which this may occur cannot be extrapolated from this small series; larger scale, cross-sectional studies are required.

