Accuracy of intraoperative macroscopic diagnosis of sentinel node metastases in breast cancer: is accurate prediction possible?

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ABSTRACT

Background. Accurate intraoperative diagnosis of sentinel lymph node (SLN) metastases enables the selection of patients who require axillary lymph node dissection, thus avoiding an additional operation. In this study we investigated the accuracy of intraoperative macroscopic diagnosis of SLN metastases in patients with breast cancer.

Methods. SLNs from 276 breast cancer patients with clinically negative nodes were analyzed by macroscopic examination. The results of intraoperative macroscopic diagnosis were compared with those of frozen section analysis.

Results. The sensitivity, specificity, overall accuracy, and false negative rate of SLN biopsy in the assessment of node status were 82.1%, 100%, 96.4%, and 17.9%, respectively, for frozen section analysis, and 57.1%, 95.5%, 87.7%, and 42.9%, respectively, for macroscopic evaluation. Even in patients with node metastasis >7 mm, the false negative rate of macroscopic evaluation was 11.1%.

Conclusions. Our results suggest that macroscopic diagnosis is less effective in predicting lymph node status in breast cancer than frozen section analysis. These findings imply that intraoperative macroscopic evaluation of sentinel nodes is never predictive of the final pathology. Free full text available at www.tumorionline.it