

Axillary Staging in Breast Cancer: A Systematic Review

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Abstract

Introduction: Invasive breast cancer is the most prevalent malignancy in women. The most common site of metastasis is axillary lymph nodes. The aim of our study was to investigate studies related to axillary staging in Iran.

Materials and Methods: A systematic review of the medical literature from 2006 to 2016 was conducted, with 13 abstracts identified and evaluated. These studies included a total of 2220 patients.

Results: Three studies showed that tumor size was a significant predictor of axillary nodal status. One study about the number of axillary lymph nodes needed for staging, identified the accuracy of five node sampling as an alternative and compared to classic axillary dissection in operable breast cancer (Sensitivity: 86%, Specificity: 100%, Accuracy: 92%, PPV: 100%, NPV: 86%). One study showed that neither the primary tumor characteristics nor the size of metastasis in the sentinel lymph nodes can predict the status of non-sentinel nodes and complete axillary node dissection should remain the most appropriate management for patients with positive sentinel lymph nodes. Predicting factors of non SLN metastases were age, LVI, ECI, primary tumor size, and PSLNs/TSLNs ratio. The sensitivity and specificity of evaluation of SLN with frozen section was high (95.5% & 100% respectively). The ^{99m}Tc-MIBI was suitable radiotracer for SLN detection. The results of other studies showed that success rate of SLN finding was high (96%). One study evaluated the magnitude of the absorbed doses of radiation to the hands of operating surgeons and showed that the surgeon performing the sentinel node biopsy procedure was only exposed to a minimal radiation risk.

Conclusions: SLNB, as one of the most important developments in breast cancer surgery, could be expanded even in areas without sophisticated facilities.