

AB030. Assessing axillary nodal burden using preoperative axillary ultrasound

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Background: Sentinel lymph node biopsy (SLNB) is the gold standard for determining axillary nodal status. There is growing interest in using preoperative axillary ultrasound (AUS) as a non-invasive means of assessing the axilla. However, AUS has limited sensitivity and is subject to operator dependency. This study aimed to quantify axillary nodal burden in false-negative preoperative AUS.

Methods: This retrospective study used an institutional database of all primary invasive breast carcinomas from 2006–2019. Those with pathologically proven axillary metastatic disease who underwent axillary lymph node dissection (ALND) were included. Patients were considered in two groups, low nodal burden/LNB (1–2LN) and high nodal burden/HNB (≥ 3 LN) based on total positive lymph

node count (SLNB + ALND). Preoperative AUS reports were assessed to determine those suspicious for axillary metastasis.

Results: Of the 271 patients (n=273 axillae), 72.16% had LNB and 27.84% had HNB. In patients with LNB, 162 (82.23%) had a normal AUS versus 35 (17.77%) suspicious AUS. In those with HNB 60 (78.95%) had normal AUS findings versus 16 (21.05%) suspicious findings. The sensitivity of AUS for predicting HNB was 21.05%. Nottingham Grade-3 was associated with suspicious AUS findings (P=0.02). However, T-stage, SLN macro-metastasis and extra-nodal extension were not associated with abnormal AUS.

Conclusions: As the surgical approach to the axilla becomes increasingly conservative, detection of axillary involvement by non-invasive means is an area of increasing research. In this cohort, AUS did not reliably identify patients with axillary metastasis. These results highlight the challenges in accurately assessing the axilla using preoperative AUS, which may result in axillary undertreatment if used as an alternative to surgical staging.

Keywords: Breast cancer; diagnosis; lymph node metastasis; ultrasonography

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