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# 1027 – Wire guided localization associated with target axillary dissection after neoadjuvant chemotherapy for breast cancer: real-world data and clinical implications

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**Objective:** To evaluate the accuracy, complications, and clinical implications of wire-guided localization (WGL) of metastatic clipped axillary lymph nodes (CAN) associated with targeted axillary dissection (TAD) after neoadjuvant chemotherapy (NAC) in patients with breast cancer.

**Methods:** A database analysis was performed of 48 node-positive breast cancer patients who underwent NAC followed by WGL-TAD between January 2016 and February 2025. Clinical and tumor characteristics, the WGL procedure, CAN retrieval rate, concordance with double-marking sentinel lymph node biopsy (SNB), pathological response after NAC, and impact on axillary clearance (AC) decision-making were evaluated.

**Results:** The mean age was 42.5 years (range 24–77 years); 31/47 (66%) had stage II disease and 16/47 (34%) stage III; 36/47 (77%) were N1, 10/47 (21%) N2, and 1/47 (2%) N3. Positive nodal status confirmed by fine-needle aspiration was found in 26/47 (55%) and by core-needle biopsy in 21/47 (45%). Invasive ductal carcinoma was identified in 42/48 (87.5%) patients. Immunohistochemistry showed 18/48 (37.5%) triple-negative, 15/48 (31.3%) Luminal B-like, 9/48 (18.8%) Luminal-like/human epidermal growth factor receptor 2-positive (HER2+), 4/48 (8.3%) pure HER2+, and 2/48 (4.1%) Luminal A-like tumors. Ultrasound-guided WGL was used in 42/48 (87.5%) patients and stereotactic-guided in 6/48 (12.5%). No complications (hematomas or pneumothorax) occurred (0/48). Overall, 35/48 (73%) patients underwent SNB+WGL-TAD; 9/48 (19%) underwent SNB+WGL-TAD followed by AC, and 4/48 (8%) had AC. After NAC, 21/48 (43.8%;  $p < 0.001$ ) patients achieved breast pathologic complete response (pCR), and 27/48 (56.2%;  $p = 0.003$ ) achieved axillary pCR. The CAN retrieval rate was 45/48 (93.8%). SNB was concordant with CAN in 39/46 (85%) cases. The SNB+WGL-TAD strategy avoided 12/26 (46%) ACs according to current guidelines when compared with SNB alone in yN0(sn) and supported shared decision-making to decline AC in 11/16 (69%) ypN1(sn).

**Conclusion:** SNB+WGL-TAD after NAC presented high CAN retrieval rate, absence of complications, reduced AC compared with SNB alone in yN0(sn), and played an essential role in shared decision-making to avoid AC in ypN1(sn) cases.

**Ethics:** Research Ethics Committee Approval (CAAE 35494220.9.0000.5109).

**Keywords:** breast cancer; neoadjuvant chemotherapy; sentinel lymph node biopsy; target axillary dissection.