

Axillary Node Biopsy

Clinical Situation

The patient was a 44 year old female with a family history of breast cancer. The patient received regular screening every two years which revealed fibrocystic changes.

Findings

Mammography: No evidence of breast abnormality. Possible asymmetric density on the internal part of the breast was noted in the CC view. Microcalcifications were also evident.

Breast tomosynthesis (figure 1): Architectural distortion in the sub-areolar region.

Ultrasound: In the upper and internal region of the right breast, confirmation of the hypoechoic zone $\leq 1\text{cm}$ between two cysts which suggests inflammation correlated with the tomosynthesis findings.

Examination of the axilla in the sentinel node area initially showed a normal lymph node. But, a slight increasing of the thickness of the cortex could be defined (figure 2 / 3x3mm).

Procedure

Initially, a 14g spring-loaded core needle was used to biopsy the breast under U/S guidance. For the lymph node biopsy, a 14g spring-loaded core needle was deemed inappropriate due to the small size of the cortex (3x3) which could lead to some underestimation. Therefore, the Mammotome® elite™ biopsy system was used. Under U/S guidance, the sampling aperture was placed in the cortex of the node and four samples were retrieved.

Pathology

The breast pathology results revealed invasive ductal carcinoma, Grade II.

The axillary node pathology results revealed metastasis into the axilla in the small part of the cortex of the node.

Discussion

For years we have performed spring-loaded core biopsy of the axillary lymph nodes when the lymph nodes show evidence of malignant modifications. In general, we have seen good correlation and have recommended lymph node dissection of the axilla.

However, for cases where there is less evidence of malignancy in the lymph nodes, spring-loaded core biopsy can be less accurate – leading to a risk of underestimation. These inaccuracies are more pronounced when attempting to position the tip of the needle into a small axillary area of 3mm or 4mm before firing the needle.

We have used Mammotome® elite™ for three cases to sample the cortex of a subnormal lymph node in the sentinel node area.

In these cases, the length of the Mammotome® elite™ probe and the bladed insertion tip allowed control of the needle position and the TruVac™ vacuum system enabled easy acquisition of tissue samples with one insertion. Additionally, there has been almost no bleeding after the procedure, and no evidence of bleeding upon five-day follow-up.

Courtesy

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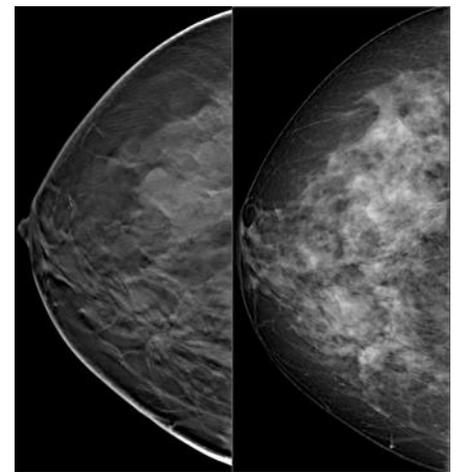


Figure 1 – Tomosynthesis located an architectural distortion in the same area which suggests invasive carcinoma.

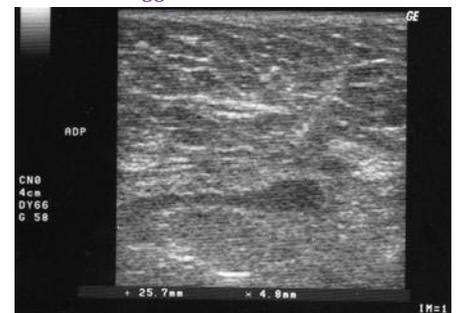


Figure 2 – Long axis view of lymph node that allows observation of the “much localized” thickening of the cortex in which the biopsy should be performed.

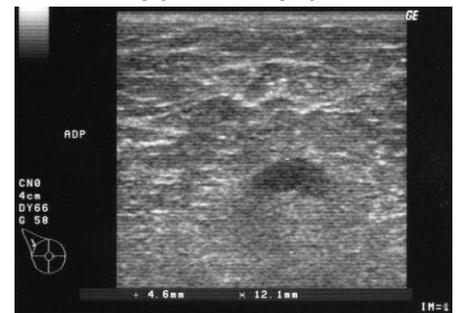


Figure 3 – Sagittal view of the lymph node: Note the localized thickening of the node capsule.



Figure 4 Post-biopsy view