



DOI: 10.32768/abc.20231014-5



Complete Removal of Small Foci of Breast Cancer Metastases to the Axillary Lymph Node by Core Needle Biopsy

Günay Rona^{a*}, Meral Arifoğlu^a, Şermin Kökten^b, Ecem Memişoğlu^c

^aDepartment of Radiology, Kartal Doktor Lütfi Kırdar Training and Research Hospital, University of Health Sciences, Istanbul, Turkey

^bDepartment of Pathology, Kartal Doktor Lütfi Kırdar Training and Research Hospital, University of Health Sciences, Istanbul, Turkey

^cDepartment Of General Surgery, Kartal Doktor Lütfi Kırdar Training and Research Hospital, University of Health Sciences, Istanbul, Turkey

Copyright © 2022. This is an open-access article distributed under the terms of the [Creative Commons Attribution-Non-Commercial 4.0](https://creativecommons.org/licenses/by-nc/4.0/) International License, which permits copy and redistribution of the material in any medium or format or adapt, remix, transform, and build upon the material for any purpose, except for commercial purposes.

The clinical or pathological status of the axilla is an essential component for staging in patients with breast cancer. Since lymph node positivity increases the stage of the disease and changes treatment strategies, lymph node (LN) sampling should be done.¹ Pre-operatively, ultrasound (US) or US-guided biopsy should be performed in clinically suspicious lymph nodes to help determine the axillary surgery method.^{2,3,4} In the vast majority of patients, sentinel lymph node dissection (SLND) is the procedure of choice. Axillary Nymph Node Dissection (ALND) may not be indicated if the positive LN number is less than 3 in luminal type breast cancers in this subgroup and if there were more than 3 positive LNs, ALND should be added to the surgery protocol along with radiotherapy (RT) of the lymphatic bed. Having information about the lymph node can also change the plan of surgery in triple-negative and HER2-enriched breast cancers that are a candidate for neoadjuvant chemotherapy. If the LNs are positive and the patient receives neoadjuvant chemotherapy, the lymph nodes are examined intraoperatively. In cases with positive residual LN after NAC, ALND should be applied in addition to radiotherapy.^{1,5,6}

US is the primary modality for the evaluation of axillary LNs in patients with breast cancer.⁷ Diffuse cortical thickening of 3mm or more, focal cortical thickening, rounded hypoechoic LN, and complete or

partial effacement of the hilum are suspicious for lymph node metastasis.^{2,3,4,7} In case of adequate sampling, core needle biopsy (CNB) and fine needle aspiration biopsy (FNAB) have similar high specificity.⁸ FNAB is recommended if there is sufficient radiology and cytology support; otherwise, CNB is recommended.² CNB is more sensitive than FNAB as it takes more adequate tissue samples.⁸ Meanwhile, if the metastatic foci in the lymph node is so small, it can be completely removed by CNB. In this situation, the gold standard of diagnosis of positive lymph and the precise staging of the disease is changed from the information taken from permanent surgical pathology to the CNB of the lymph node.

In this letter, the authors emphasize the importance of the above-mentioned crucial point by presenting a patient that convinced the treatment team to establish the stage of the disease based on the CNB of the axillary lymph nodes. A 20x17mm spiculated contoured mass was detected in the lower inner quadrant of the left breast in an 82-year-old woman. US examination revealed a 22x9mm LN in the left axilla with a focal bulging of 2.6mm in the middle part. Ultrasonography-guided CNB was performed from the suspected LN and the breast mass with a 14 gauge estacorepro 15mm needle (Geotek Medical, Ankara, Turkey). A single sample of 8x0.1x0.1cm tissue was taken from the LN. After CNB, she was diagnosed with non-specific type invasive breast cancer with a 3mm foci of lymph node metastasis. A metallic marker was placed into both biopsied area. At surgical staging of the axilla, the lymph node with

*Address for correspondence:

Günay Rona, MD
Cevizli Neighbourhood, Semsî Denizer Road. E-5
Highway District, 34890 Kartal, Istanbul, Turkey
Tel: +902164583000
Email: gunayrona@gmail.com



the clip was detected in specimen mammography, and the pathologist confirmed the existence of a lymph node with a metallic clip; however, no metastases were observed in this LN in precise sections. In the second examination of the lymph node, a negligible number of atypical cells were detected in a limited area of the LN. The present findings were accepted as macrometastasis, considering the area of metastasis in the core biopsy material.

Although some studies show that CNB could predict the final histological outcome after the operation in some cases with micrometastases, it is preferable to do the primary staging of the axilla by FNAB.^{2,7,8} However, they stated that this is not the main purpose of CNB and that the metastasis size information in the LN obtained by CNB should be correlated with imaging findings.⁹ In our experience, since we obtained the information on axillary lymph nodes by CNB and the metastatic part of the lymph node was totally removed through this procedure, the surgical pathology failed to detect any lymph node involvement and we planned the treatment based on the information received preoperatively from the US-guided CNB.

REFERENCES

1. Gradishar WJ, Moran MS, Abraham J, Aft R, Agnese D, Allison KH, Anderson B et al. Breast Cancer, Version 3.2022, NCCN Clinical Practice Guidelines in Oncology. *J Natl Compr Canc Netw.* 2022 Jun;20(6):691-722. doi: 10.6004/jnccn.2022.0030.
2. Chang JM, Leung JWT, Moy L, Ha SM, Moon WK. Axillary Nodal Evaluation in Breast Cancer: State of the Art. *Radiology.* 2020 Jun;295(3):500-515. doi: 10.1148/radiol.2020192534.
3. Sun SX, Moseley TW, Kuerer HM, Yang WT. Imaging-Based Approach to Axillary Lymph Node Staging and Sentinel Lymph Node Biopsy in Patients With Breast Cancer. *AJR Am J Roentgenol.* 2020 Feb;214(2):249-258. doi: 10.2214/AJR.19.22022.
4. Chang JM, Shin HJ, Choi JS, Shin SU, Choi BH, Kim MJ et al. Imaging Protocol and Criteria for Evaluation of Axillary Lymph Nodes in the NAUTILUS Trial. *J Breast Cancer.* 2021 Dec;24(6):554-560. doi: 10.4048/jbc.2021.24.e47.
5. Offersen BV, Boersma LJ, Kirkove C, Hol S, Aznar MC, Biete Sola A et al. ESTRO consensus guideline on target volume delineation for elective radiation therapy of early stage breast cancer. *Radiother Oncol.* 2015 Jan;114(1):3-10. doi: 10.1016/j.radonc.2014.11.030.
6. Lyons JA, Sherertz T. Postmastectomy radiation therapy. *Curr Oncol Rep.* 2014;16(1):361. doi: 10.1007/s11912-013-0361-1.
7. Chung HL, Le-Petross HT, Leung JWT. Imaging Updates to Breast Cancer Lymph Node Management. *Radiographics.* 2021 Sep-Oct;41(5):1283-1299. doi: 10.1148/rg.2021210053.
8. Balasubramanian I, Fleming CA, Corrigan MA, Redmond HP, Kerin MJ, Lowery AJ. Meta-analysis of the diagnostic accuracy of ultrasound-guided fine-needle aspiration and core needle biopsy in diagnosing axillary lymph node metastasis. *Br J Surg.* 2018 Sep;105(10):1244-1253. doi: 10.1002/bjs.10920.
9. Topps AR, Barr SP, Pikoulas P, Pritchard SA, Maxwell AJ. Pre-operative Axillary Ultrasound-Guided Needle Sampling in Breast Cancer: Comparing the Sensitivity of Fine Needle Aspiration Cytology and Core Needle Biopsy. *Ann Surg Oncol.* 2018 Jan;25(1):148-153. doi: 10.1245/s10434-017-6090-1.

How to Cite This Article

Rona G, Arifoğlu M, Kökten Ş, Memişoğlu E. Complete Removal of Small Foci of Breast Cancer Metastases to the Axillary Lymph Node by Core Needle Biopsy. *Arch Breast Cancer.* 2023; 10(1): 4-5. Available from: <https://www.archbreastcancer.com/index.php/abc/article/view/651>