

## ULTRASOUND-GUIDED FINE NEEDLE ASPIRATION OF AXILLARY LYMPH NODES IN BREAST CANCER PATIENTS: A TERTIARY CENTRE EXPERIENCE

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**Introduction and aim of the study:** Ultrasound guided FNA is currently used for preoperative assessment of axillary lymph node status of breast cancer patients. While it is known that sentinel node biopsy (SNB) is more sensitive than FNA, there is still controversy regarding sensitivities of CNB and FNA, most studies finding them comparable.

**Aim of this study is to present the results of US-guided FNA compared to postoperative histopathology of lymph nodes in breast cancer patients during the last three-year period in a tertiary breast care centre.**



Figure 1. Small breast cancer (0,7 cm). Patient had a positive axillary node regardless

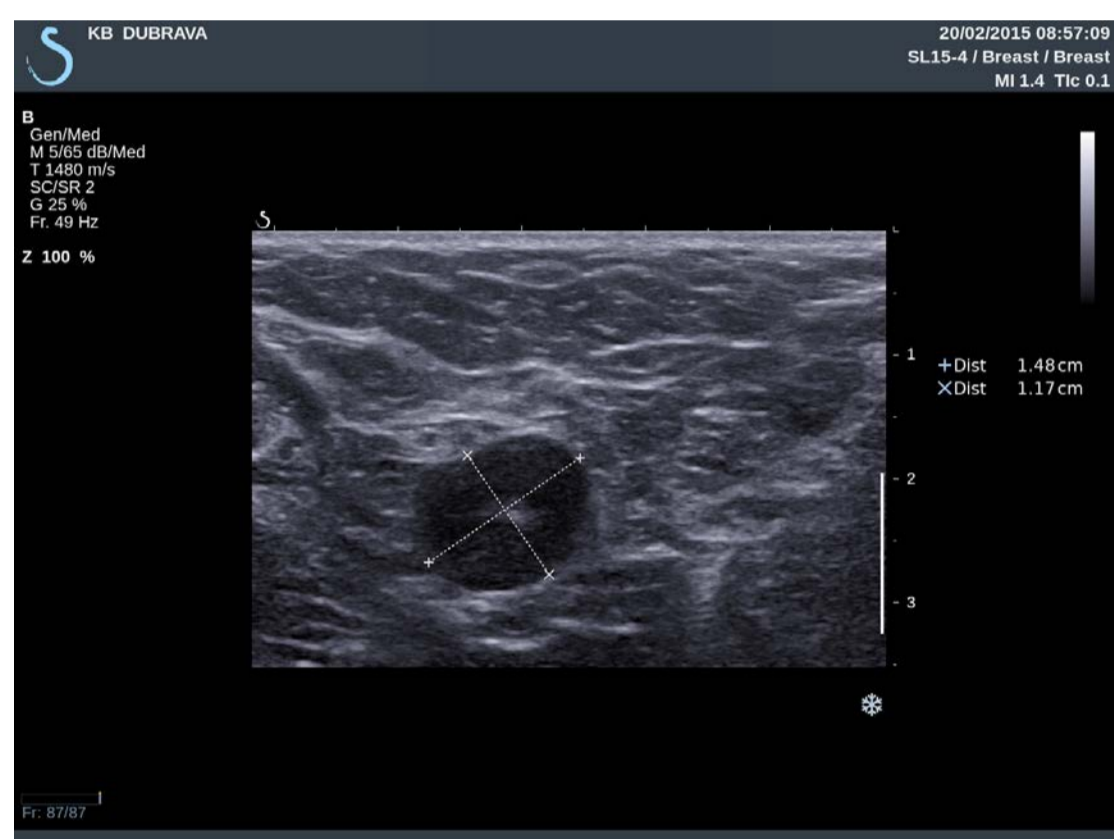


Figure 2. Suspicious lymph node on US examination

**Methods:** Browsing the database of Pathology and Cytology Department in University Hospital Dubrava from January 2015 - December 2017, we found 96 patients with breast cancer that have both preoperative FNA and postoperative histology results available. The preoperative FNAC were compared with postoperative histology results. Sensitivity, specificity, PPV and NPV were calculated.

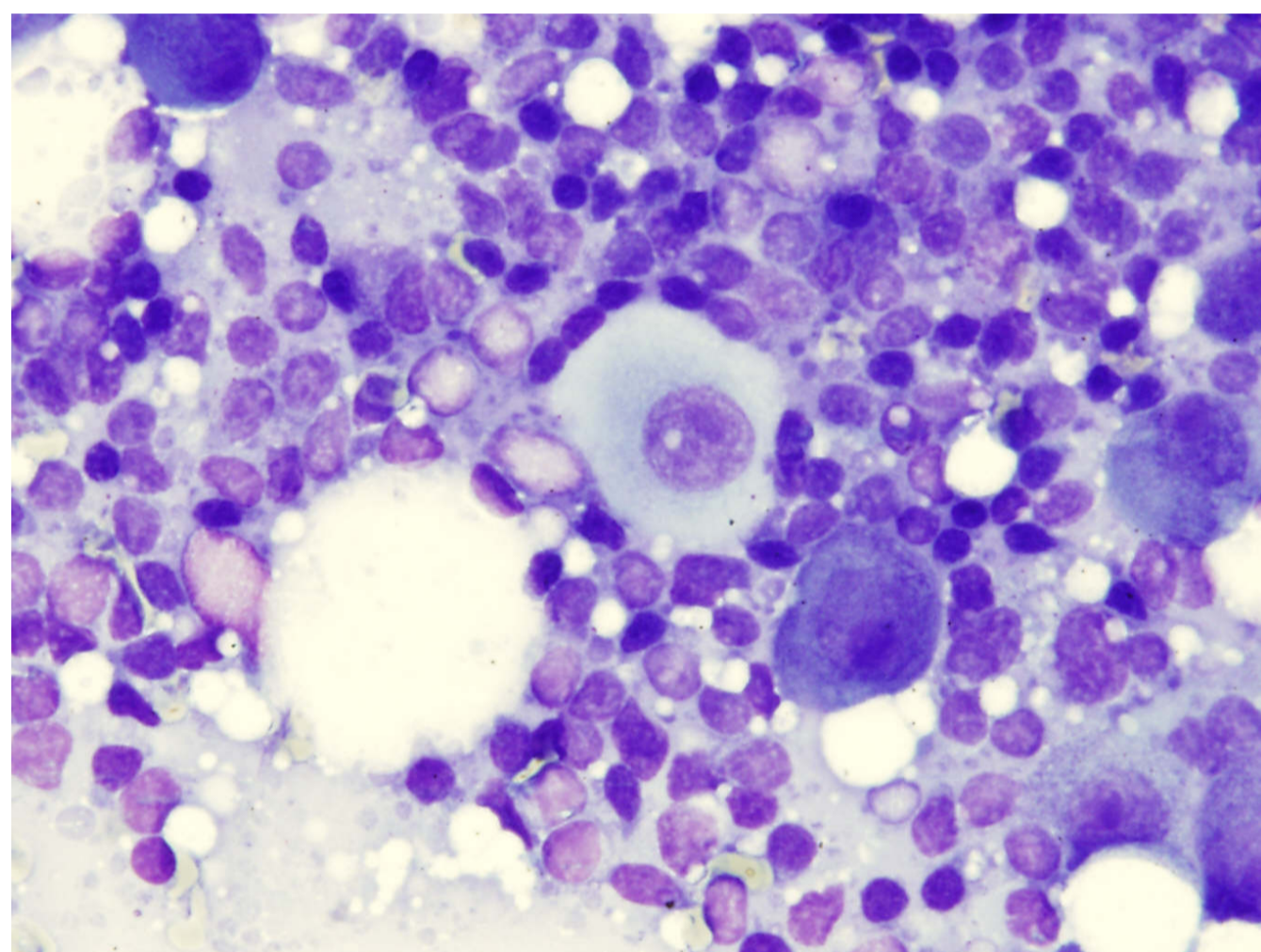


Figure 4. single malignant cells in the lymph node, MGG, 1000x

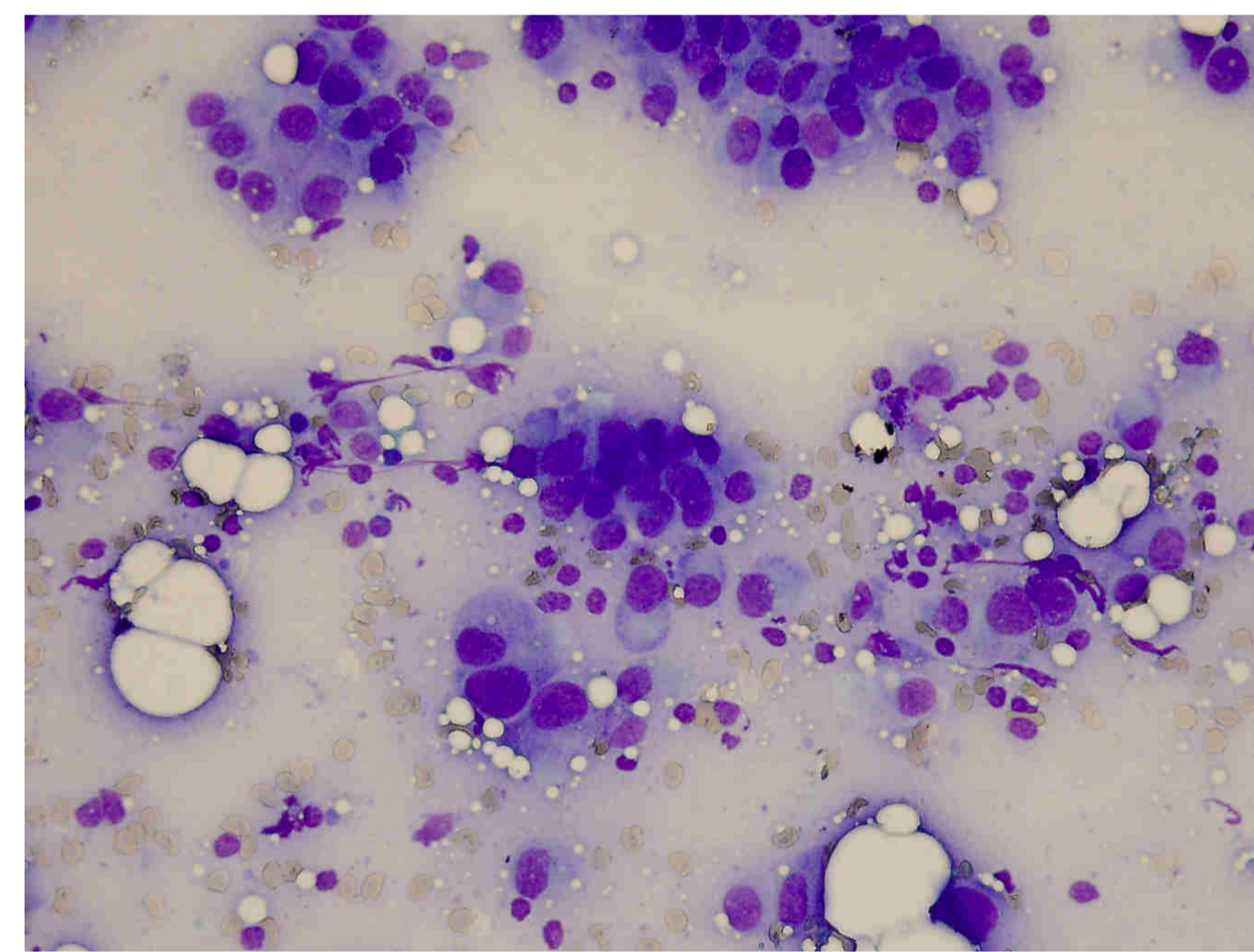


Figure 3. Numerous malignant cells, axillary metastasis from a breast cancer, MGG, 400x

**Results:** 96 breast cancer patients out of 346 breast cancer patients treated in our center, underwent preoperative US-guided FNA of axillary lymph nodes during the three-year period. All patients with negative FNAC of lymph nodes were evaluated with the sentinel lymph node biopsy. 42 patients had positive lymph nodes on preoperative cytology, while 52 were negative. All positive nodes were found to be positive on histology. Two patients had positive nodes preoperatively and were negative on histology after neoadjuvant chemotherapy. Eleven patients that were negative on preoperative cytology had positive histology (21 % false negative) of at least one lymph node. We found 10 patients with positive nodes on histology, that were not evaluated preoperatively with FNA. Thus, sensitivity of preoperative FNA was 80%, specificity 100%, negative predictive value (NNP) 79% and positive predictive value (PPV) 100%.

Year	Preoperative FNA (Nr)	FNAC Positive (Nr)	Histology Positive (Nr)
2015	47	22	22
2016	18	9	10
2017	31	11	28
Total	96	42	60

Table 1. results

**Conclusion:** Due to its high specificity and PPV, US-guided FNA of axillary LN is an effective, simple and reliable method for preoperative evaluation of ALN status, thus directing the patient management. Regardless, when preoperative FNA is negative for malignancy, SNB should be performed, since it has reportedly better sensitivity.

**References:**

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