

Diagnostic Accuracy of Axillary Ultrasound for Detecting Nodal Metastasis in Clinically Node-Negative Breast Cancer: Correlation with Final Histopathology

Sarmad Saeed Aziz¹, Shakeel Ahmad,¹ Mehria Ahmad, Afroz Mushtaq Khattak ,Bushra Rehman¹

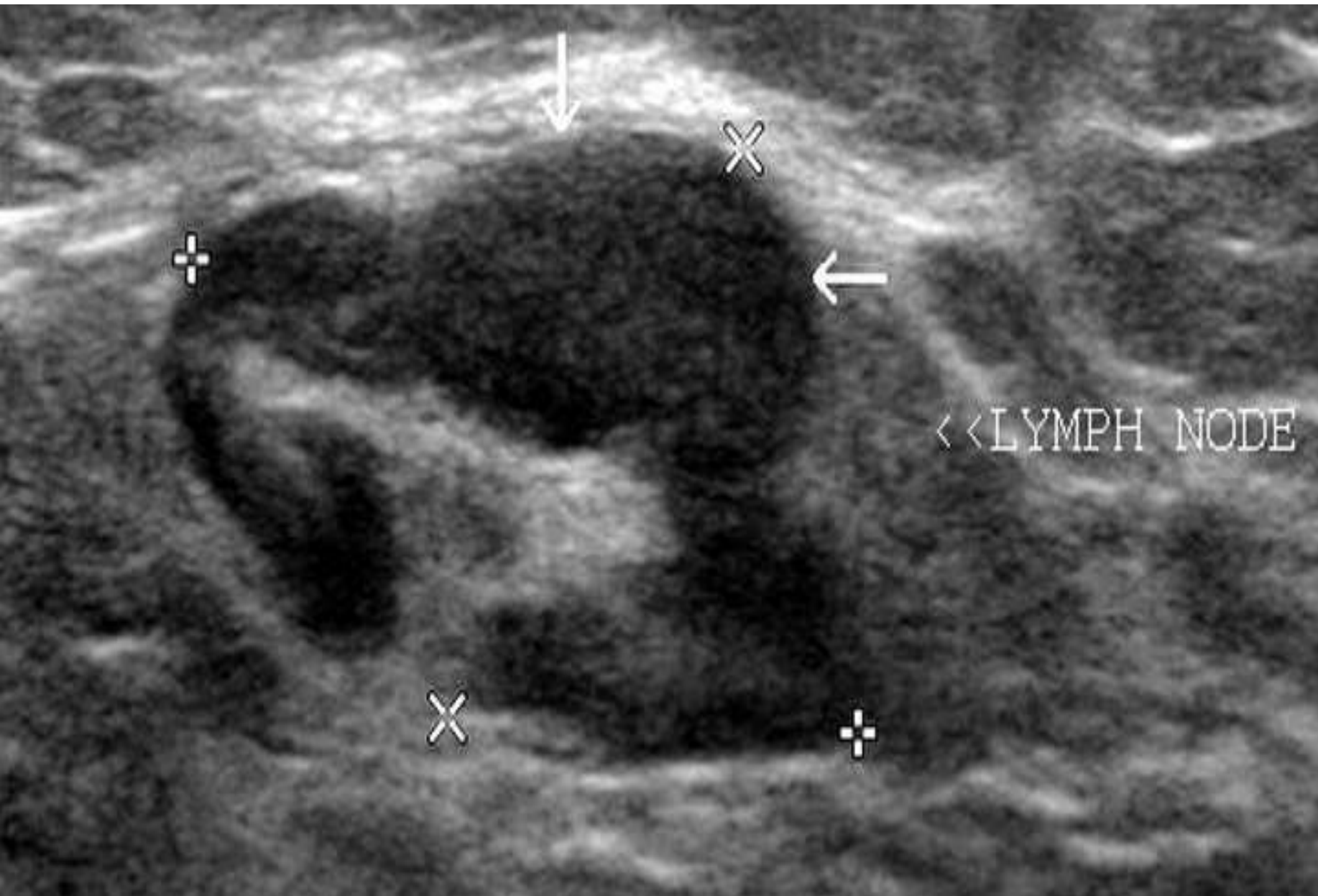
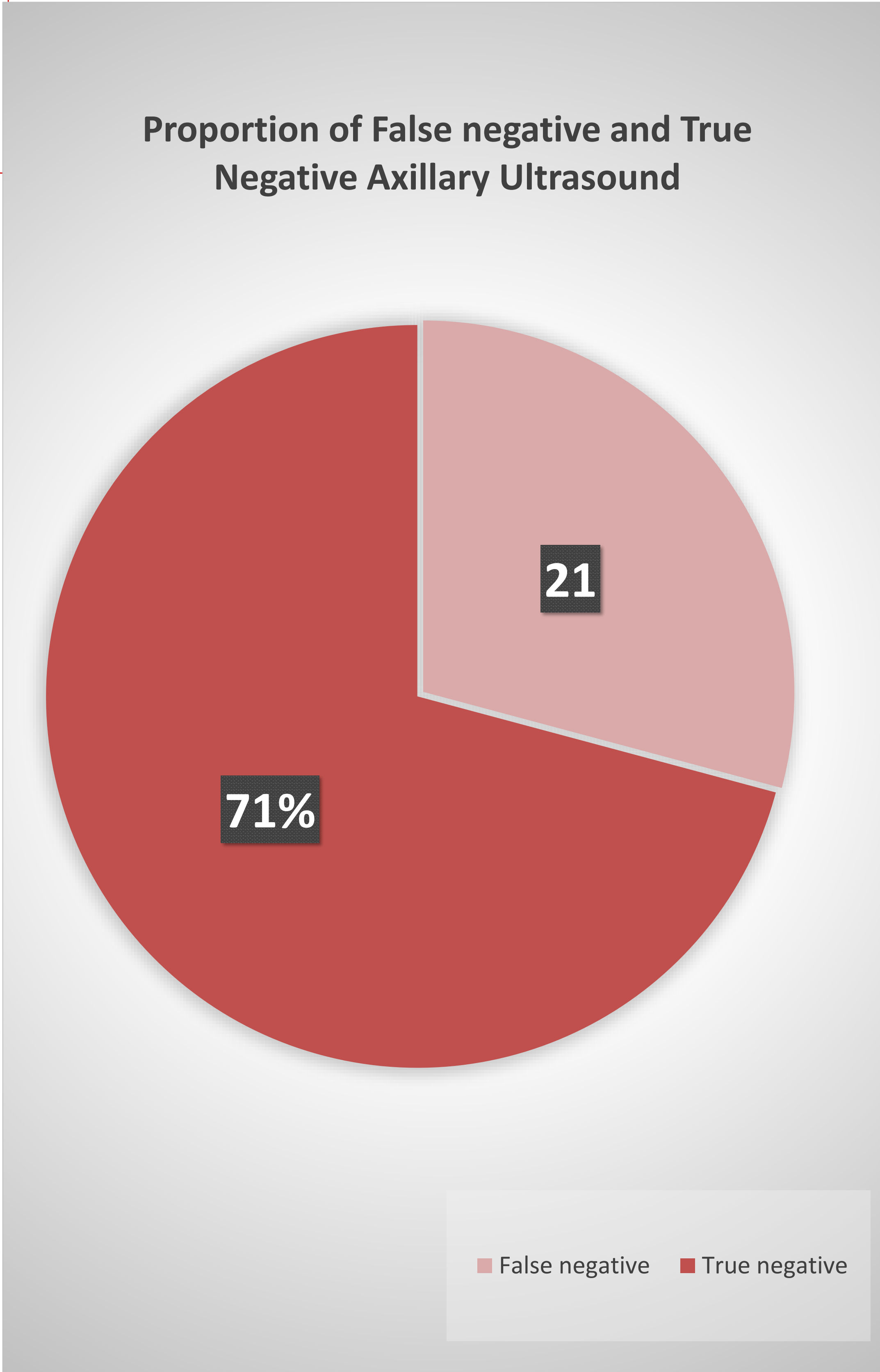
¹Shaukat Khanum Memorial Cancer Hospital and Research Centre, Surgical Oncology, Peshawar, Pakistan.

OBJECTIVE

- Axillary ultrasound (AUS) is routinely used to evaluate nodal involvement.
- However, its ability to exclude occult nodal metastasis in clinically node-negative patients remains uncertain
- To evaluate the frequency of nodal metastasis detected on sentinel lymph node biopsy (SLNB) among patients with benign preoperative AUS findings.

Benign Axillary Ultrasound Summary (Deduplicated Cohort)

Category	Number	Percentage
Total benign ultrasound patients	72	100.0%
True negatives (Node-negative SLNB)	51	70.8%
False negatives (Node-positive SLNB)	21	29.2%



RESULTS

- A total of **72 unique patients** with benign preoperative axillary ultrasound findings were included.
- Sentinel lymph node biopsy identified nodal metastases in **21 patients (29.2%)**
- 51 patients (70.8%)** had node-negative pathology
- Thus, nearly one-third of patients with benign sonographic findings harbored occult nodal metastases despite the absence of suspicious radiological features.
- The negative predictive value of benign AUS for excluding nodal metastasis was **70.8%**.

METHODS

- A retrospective review of 72 patients who underwent Upfront Surgery with SLNB was performed.
- Inclusion Criteria:** Clinically node-negative, curative intent, early breast cancer, pre-chemo disease
- Primary outcome** was the occult nodal metastasis rate, defined as the proportion of patients with benign AUS findings who were subsequently found to have metastatic nodal disease on final pathology.

CONCLUSION

- Benign axillary ultrasound demonstrated limited ability to exclude nodal metastasis in clinically node-negative breast cancer
- Our findings highlight the limitations of ultrasound as a stand-alone staging modality and support the continued role of sentinel lymph node biopsy for accurate axillary staging in clinically node-negative breast cancer

