

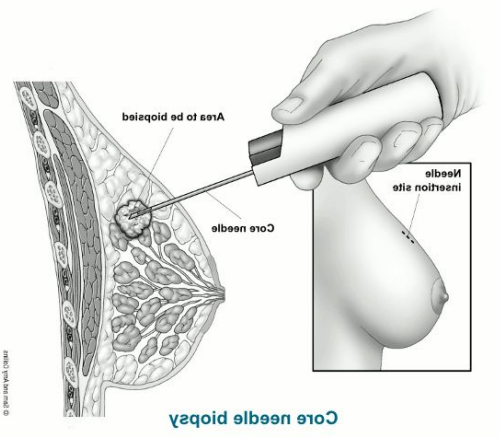
"Interpreting Discordance: False Core Needle Biopsy in Breast Cancer and the Imperative for Precision-guided Revision Surgeries"

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INTRODUCTION:



Breast cancer, a pervasive threat, often undergoes diagnostic scrutiny through core needle biopsy. However, the prevalence of false-negative results introduces complexities, prompting a closer examination of the need for surgeries to ensure accuracy in diagnosis and treatment planning.

OBJECTIVE:

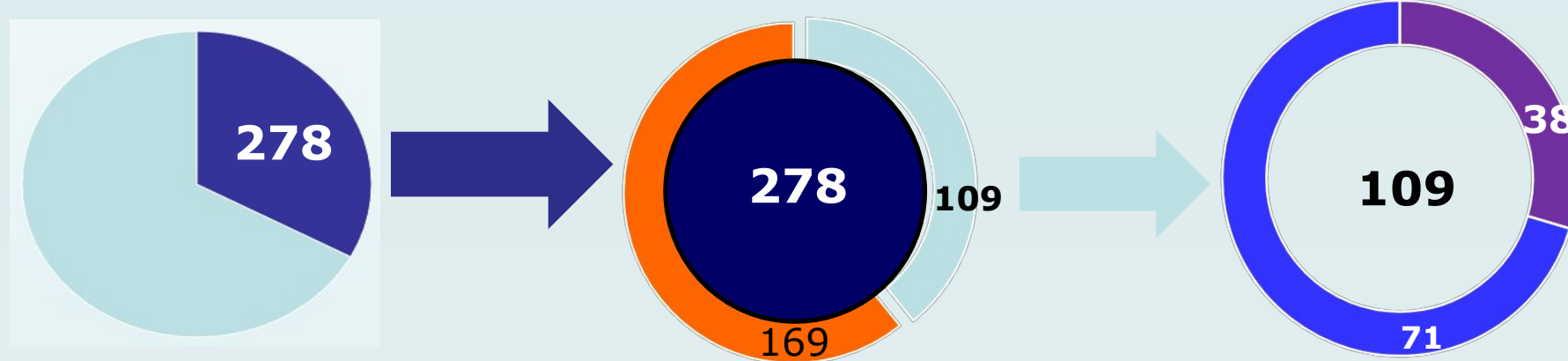
To investigate and evaluate cases, wherein false-negative core needle biopsy outcomes led to critical interventions, including wide local excision and modified radical mastectomy.

METHODOLOGY:

A retrospective review analysis was conducted at a tertiary medical hospital in India, of patients who had undergone image-guided (USG) core-needle biopsy (ICNBs) of breast from the period of January, 2023–December, 2023.

A total sample size of $n=846$ was obtained and within the cohort group, revision histopathological specimens of breast lump with discordant core needle biopsies, their resection and the subsequent need for surgeries over a year were reviewed and investigated for in study.

RESULT



Of the total sample size of 846 core needle breast biopsies (ICNBs), 568 (64.10%) cases were **Malignant lesions**. The remaining 278 (benign/inconclusive), **Wide local excisions** were done in 39.2% (109/278) as USG was suspicious due to higher BIRADS, and high risk clinical profile. 34.86% (38/109) were benign, while 65.1% (71/109) were malignant.

Surgery, including conversion to modified radical mastectomy, was required in 17.3% (19/109) of cases due to positive resection margins. **The false-negative rate requiring surgery reached 8.3% (71/846)**, underscoring the need for comprehensive histopathological reassessment.

CONCLUSION

In light of ICNBs as an established reliable diagnostic tool for breast cancer, the occurrence of false negatives value of 8.3% in the study may be attributed to discrepancies between imaging findings and pathology results.

This underscores the critical importance of rigorous imaging-pathology correlation, Effective communication in clinical practice for achieving concordance and minimizing diagnostic errors.

This collaborative effort ensures comprehensive evaluation and appropriate follow-up, thereby optimizing patient care outcomes in breast cancer diagnosis and management.