Reactive sentinel lymph node enlargement post breast core biopsy in breast cancer patients undergoing MRI

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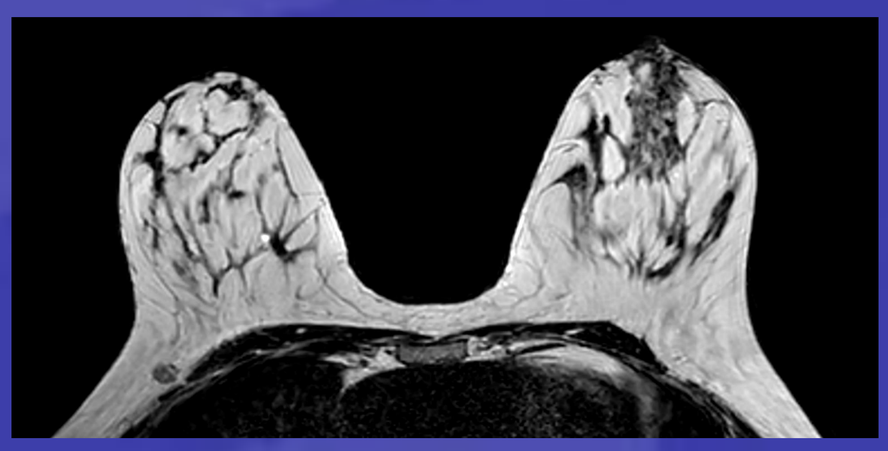
Introduction

- Ipsilateral axillary sentinel lymph node (SLN) histology is gold standard for staging breast cancer, guiding treatment.
- This study aims to explore whether anecdotal reactive enlargement of the SLN post diagnostic core needle biopsy can reliably be identified on imaging- in this case MRI, and therefore possibly used to target the SLN.

Methods

- All patients that underwent breast MRI following unilateral invasive lobular cancer diagnosis and normal axillary ultrasound from October 2012-June 2018 were identified from MRI workstation records.
- Other imaging and pathology was identified from hospital electronic records.
- Neoadjuvant chemotherapy patients were excluded.
- MRI images were retrospectively reviewed, blinded to final surgical pathology, descriptive statistics performed.

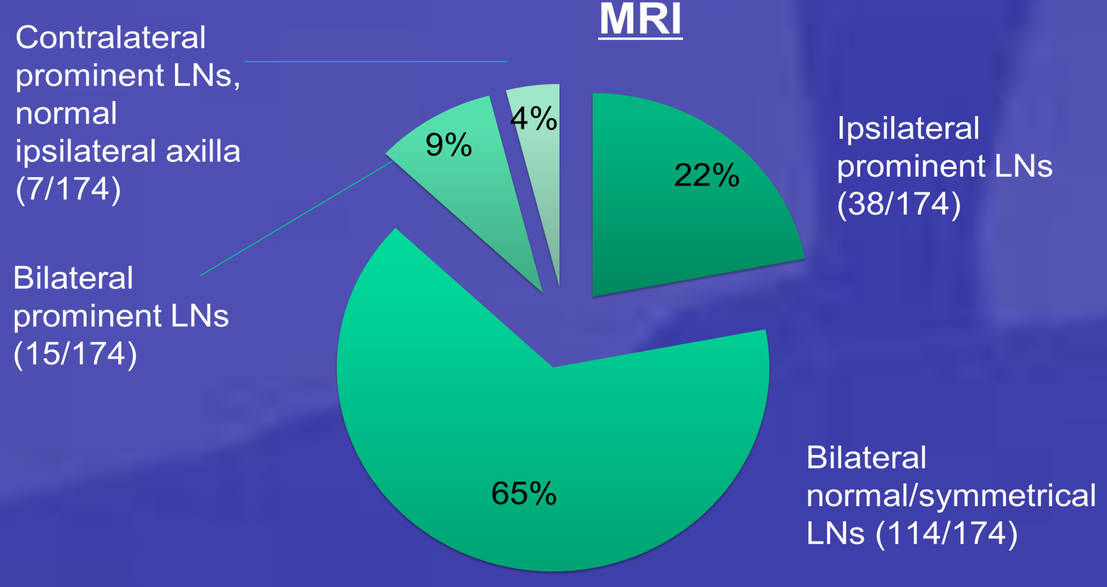
MRIs were reviewed to identify lymph node enlargement. The image below demonstrates an ipsilateral bulky lymph node following core needle biopsy of the right breast:



Results

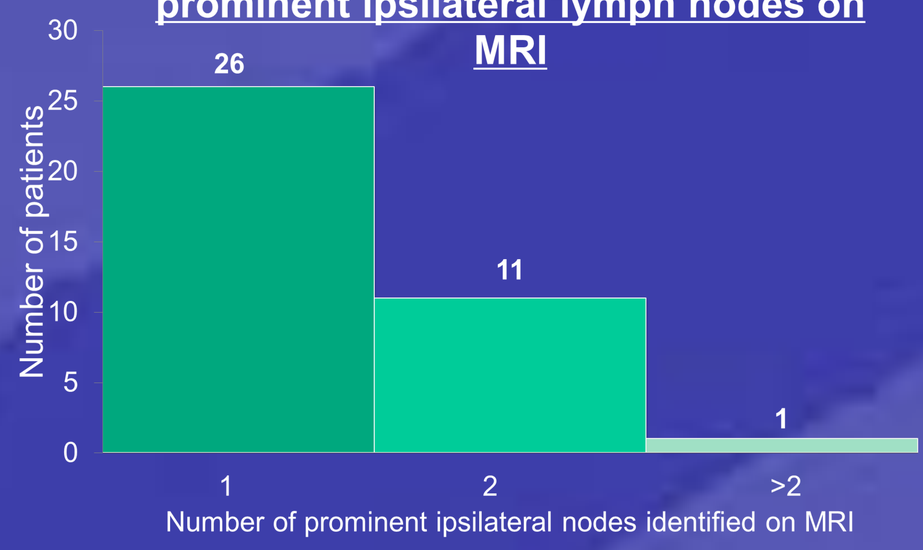
- 174 eligible women underwent breast MRI between 2 and 51 days (mean 17, median 16) post diagnostic breast needle biopsy.

Overall lymph node (LN) assessment on MRI



Results continued

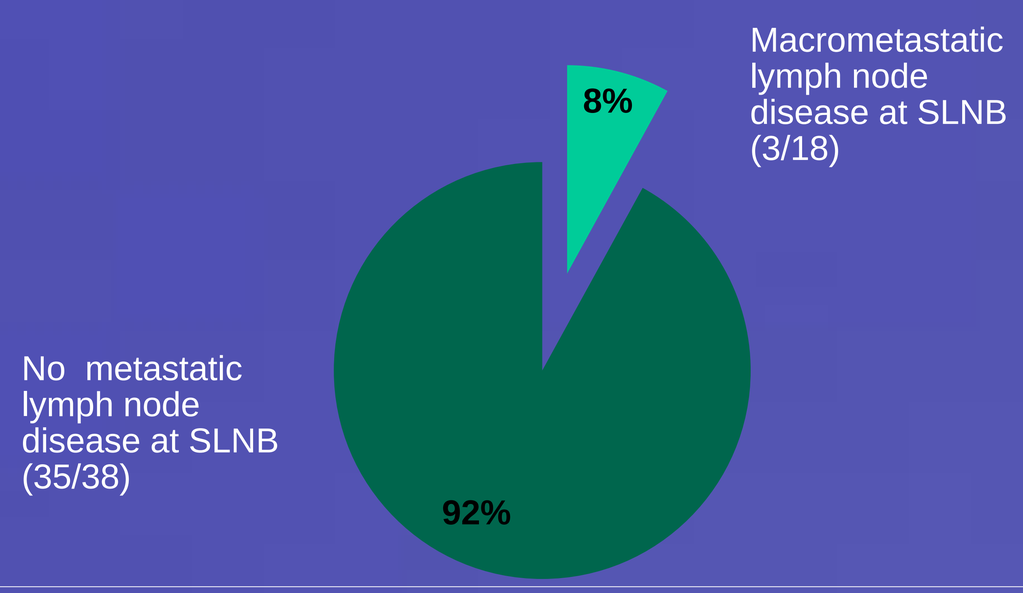
Number of patients identified with prominent ipsilateral lymph nodes on MRI



- In patients with prominent ipsilateral lymph nodes, the mean time from core needle biopsy to MRI was 18 days with median time of 16 days.

- Of the patients identified with prominent ipsilateral lymph nodes, 8% (3/38) had macrometastatic lymph node disease on final surgical pathology, versus 10% (114/174) of the whole group studied.

Sentinel lymph node biopsy results in those patients identified with ipsilateral enlarged nodes on MRI



Discussion and Conclusion

- Post biopsy reactive sentinel lymph node enlargement is not reliable, consistent, or proven by this study. Where present, ipsilateral bulky lymph node(s) may be due to causes other than breast biopsy.
- Bulky lymph nodes on MRI have a low rate of metastatic disease when compared to definitive axillary surgery.
- These findings do not suggest radiologically obvious and consistent SLN enlargement post-breast biopsy within this population of patients and within our biopsy-to-MRI time frame, noting the limitations involved when comparing two different imaging modalities (ultrasound then MRI).