The aim of this study is to investigate the correlation between clinical and pathology findings regarding diameter, number of foci and number of adenopathies together with factors affecting this correlation.

RESULTS DIAMETER

The mean diameter of mammography was 22.50 ± 14.26 mm while that of ultrasound was 21.64 ± 25.53 mm. Mammography underestimated the tumor size, with an average difference of 14.64 ± 21.15 mm compared to pathology, as shown in the scatter plot and the Bland Altman plot.

Correlation between mammography and pathology

The mean diameter estimated by ultrasound (19.08 ± 11.61 mm) was lower than that by pathology (17.76 ± 26.28 mm). The scatter plot and Bland Altman plot showed that ultrasound significantly underestimated pathology with a mean difference of 18.19 ± 21.66 mm.

Correlation between ultrasound and pathology

RESULTS NUMBER OF FOCI

Considering adenopathies, the false positive rate of ultrasound was 3.0%. The false negative rate was 68.3%.

RESULTS NUMBER OF ADENOPATHIES

RESULTS BREAST DENSITY & YEAR OF DIAGNOSIS

Results showed that a higher breast density level is associated with a larger difference between diameter of pathology versus mammography.

Impact year of diagnosis

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ABBREVIATIONS

• BC: Breast cancer
• ILC: Invasive lobular carcinoma
• MRI: Magnetic Resonance Imaging

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CONCLUSIONS

• The local extent of pathology in ILC is underestimated by conventional imaging techniques. Unlike previous reports, our results suggest that tumor size in ILC is also underestimated by MRI.
• Ultrasound was inferior to mammography and MRI in estimating tumor size in our series.
• It was confirmed that mammography and MRI tends to overestimate the number of foci which might lead to unnecessary secondary ultrasounds and biopsies.
• The presurgical underestimated of lymph node involvement might increase the need of secondary surgeries.

It is crucial to address these limitations in imaging of ILC and to prioritize the development of enhanced imaging techniques to improve diagnostic accuracy for these patients.

BACKGROUND AND AIMS

• In the western world, invasive lobular carcinoma (ILC) represents 15% of all invasive breast cancers (BC). 1, 2
• ILC is characterized by loss or dysfunction of adhesion molecule E-cadherin, leading to a unique infiltrative growth pattern that is unlikely to disrupt the normal architecture of the breast tissue. 3-6
• This unique growth pattern, combined with the characteristic that ILC typically does not form a palpable mass, makes it challenging to detect on standard breast imaging techniques and to establish an accurate diagnosis. 7-10
• Mammography is believed to underestimate ILC, while Magnetic Resonance Imaging (MRI) tends to overestimate the extent of ILC. 11

The aim of this study is to investigate the correlation between clinical and pathology findings regarding diameter, number of foci and number of adenopathies together with factors affecting this correlation.