



Challenging Ultrasound Cases

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Challenges

- Tomosynthesis findings
 - Architectural distortion
 - US of Radial Scar/Complex Sclerosing lesions
- Calcification lesions
- Screening Whole breast US findings
- MRI second look

Architectural distortion

- AD seen on tomosynthesis can often be identified on US
 - Most malignant lesions will be found
 - Many RS/CSL lesions can be identified
- Vague hypoechogenicity and radiating distortion of the tissues
- Requires precise localization and careful scanning
- BB technique can help confirm correlation

Benign and malignant AD may look identical on tomosynthesis and ultrasound

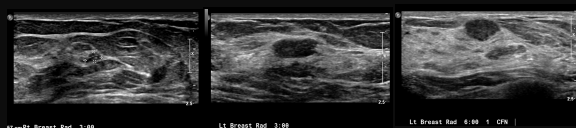
A metallic BB placed on the overlying skin can be useful to determine if a subtle ultrasound finding corresponds to a tomosynthesis AD

Screening Whole breast Ultrasound findings

- The objective of screening whole breast US is to detect cancers missed by routine mammography
- Like mammography, many benign findings will be encountered on WBUS
- Many/most need to be disregarded

False positives in WBUS BI-RADS 3

- Follow up recommended in 6% (24 cases)
 - 17 probably benign masses
 - 7 cysts (clustered or complicated)
- Reduction of follow-up of such benign cases should be attempted
- Small, oval hypoechoic masses can usually be dismissed



Targeted Ultrasound to Assess Tomosynthesis Findings

- Correlating tomosynthesis and ultrasound imaging can sometimes present challenges
 - Distance from the nipple in centimeters on ultrasound is often different from what is measured on mammography
- Landmarks, such as cysts, large calcifications, or lymph nodes, in the vicinity may aid in detection of a subtle sonographic finding
- Use of a skin marker (such as a BB) placed on the skin directly overlying the ultrasound findings with subsequent full or spot tomosynthesis images, can be very helpful to correlate findings between modalities

Correlate Imaging findings

- Use careful focused US scanning
- Look for subtle findings
 - Vague hypoechoic areas
 - Distorted architecture
 - Small cysts
- BB technique to determine correlation
- Post biopsy clip confirms match

US for calcification lesions

- US can help detect an invasive carcinoma in cases of mammographic calcifications
- Can facilitate biopsy
- Make better histologic diagnosis (invasive rather than DCIS)