

RADY 413 Case Presentation

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Editor John Lilly, MD

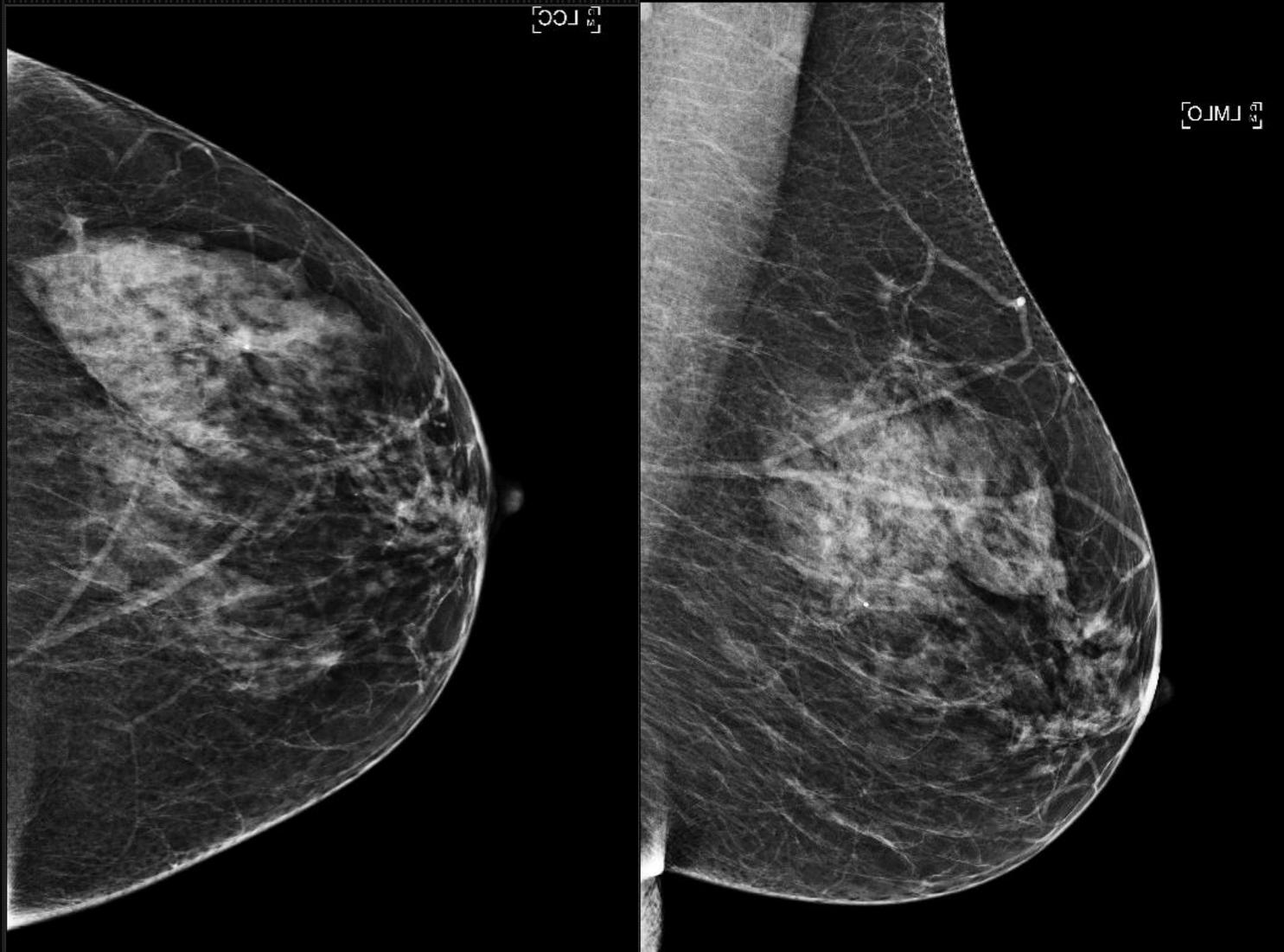
Focused patient history and workup

- Ms. LL is a lovely 69 year old female with a history of HTN who presented from an outside hospital with an abnormal screening and subsequent diagnostic mammogram. After receiving the results, she came to UNC for a second opinion.

List of imaging studies

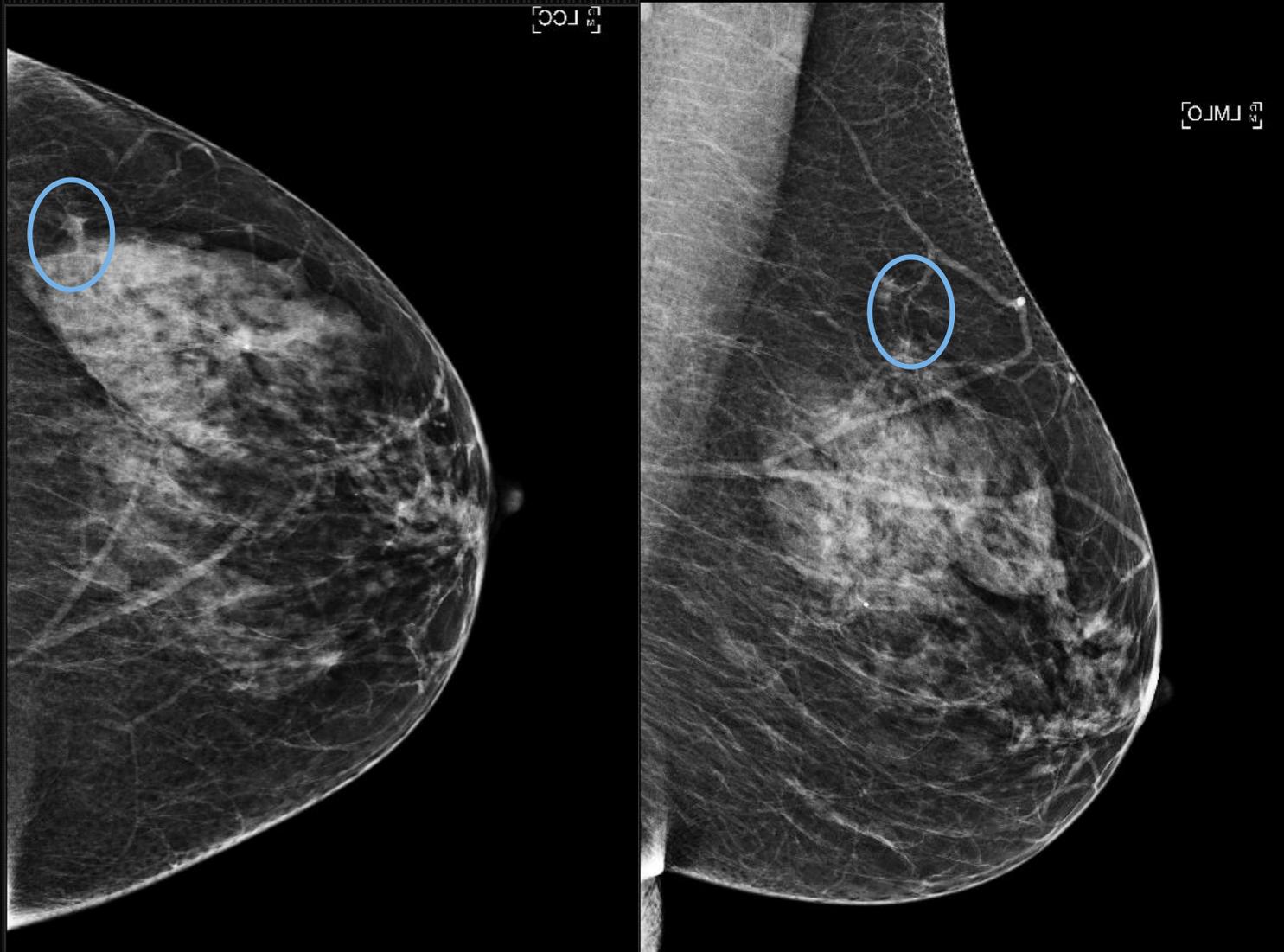
- OSH: Screening and diagnostic mammogram
- L breast and axilla ultrasound

OSH Left Screening Mammograms



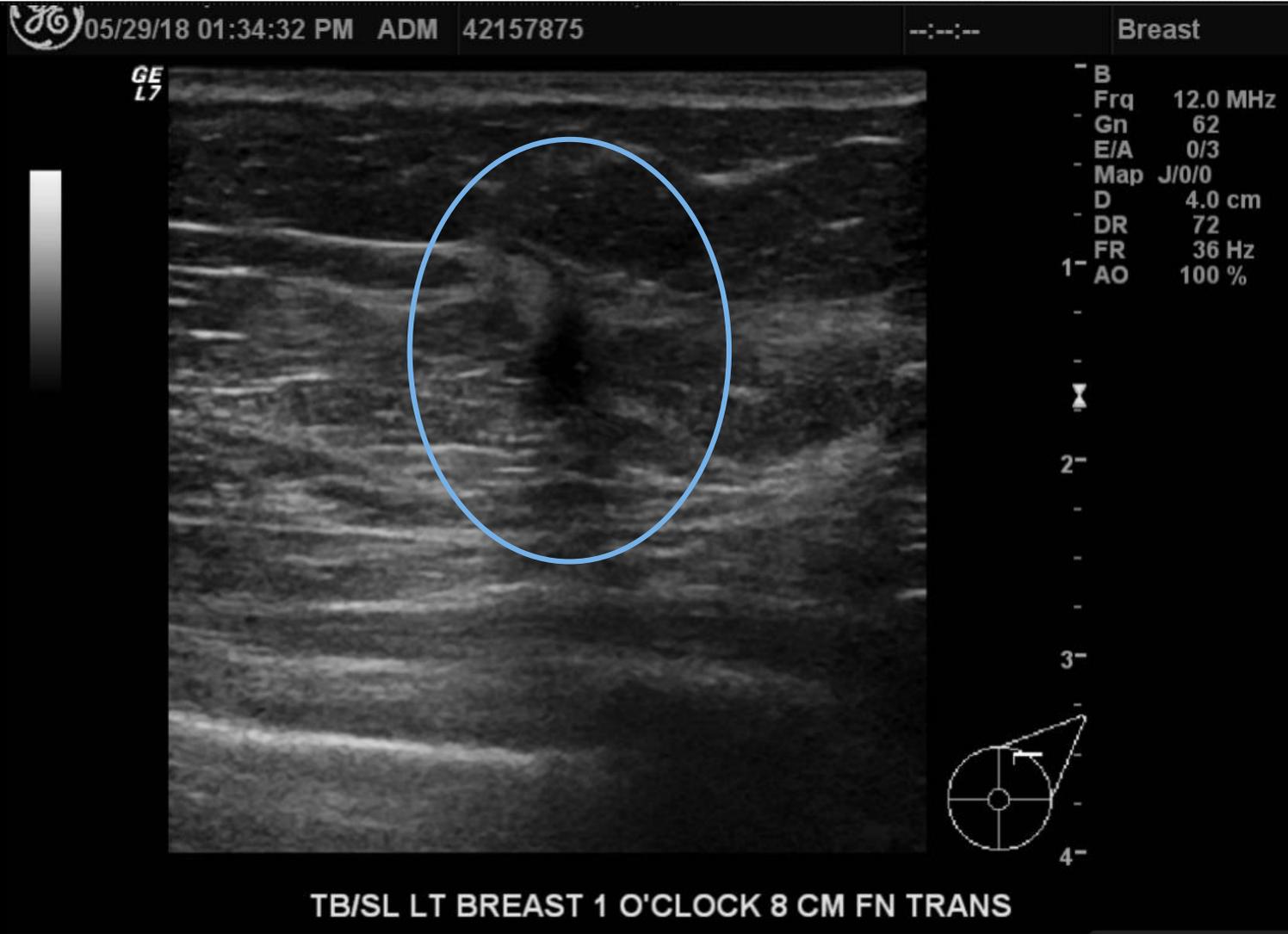
Findings?

OSH Left Screening Mammograms



1 cm irregular, spiculated high density mass in the left breast upper outer quadrant middle depth

UNC Left Breast Ultrasound



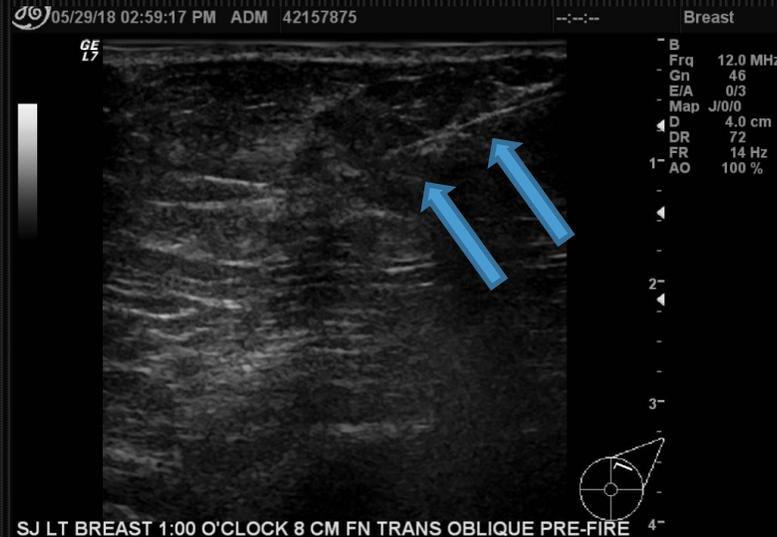
Corresponding 0.7 x 0.4 x 0.4 cm irregular, not parallel, not circumscribed (spiculated), hypoechoic mass with posterior shadowing in the 1:00 position 8 cm from nipple = BI-RADS 5

List of procedures performed

- Ultrasound-guided core needle biopsy (CNB) of left breast mass
- Savi scout needle localization left breast biopsy-proven malignancy

Ultrasound-guided CNB

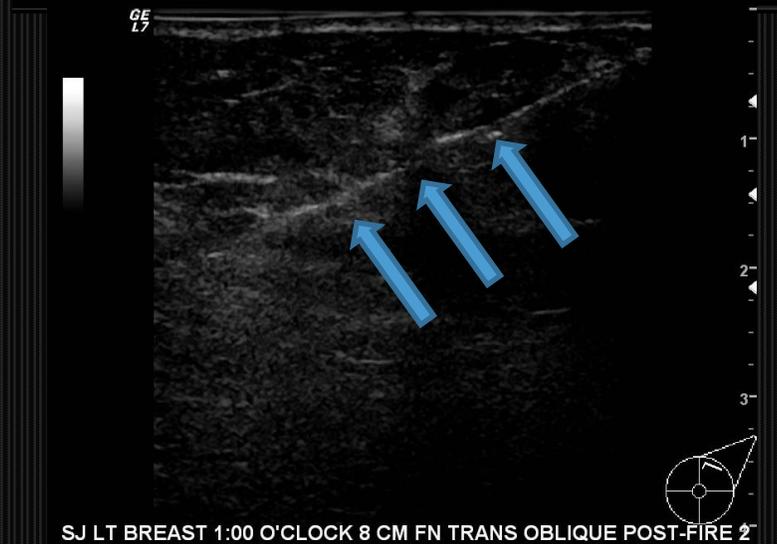
Pre-fire



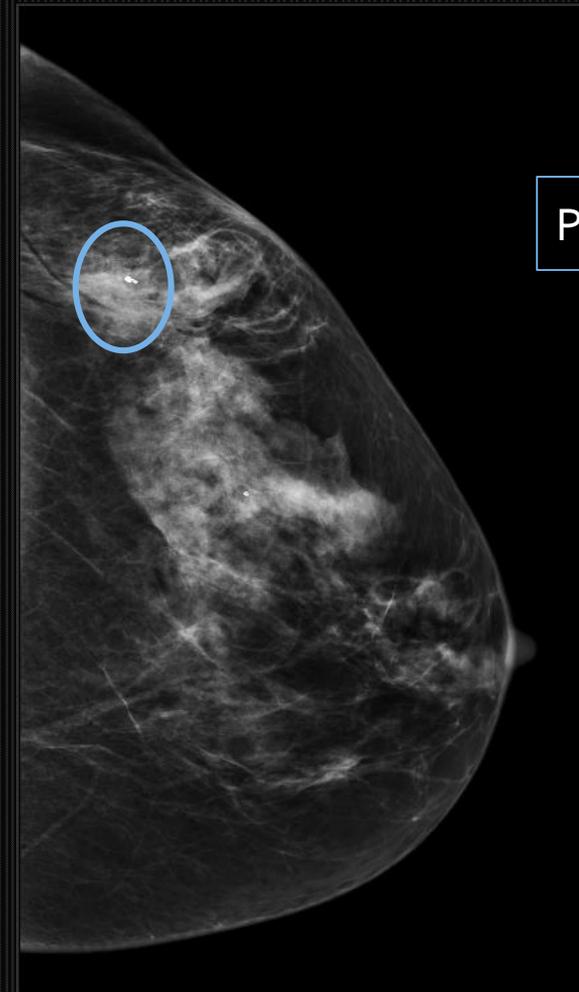
Final pathology: IDC/ILC of the left breast, grade 2, ER (95%) positive, PR (95%) positive, Her2 negative

Invasive carcinoma with mixed ductal and lobular features, grade 2, measures approximately 7 mm in this specimen

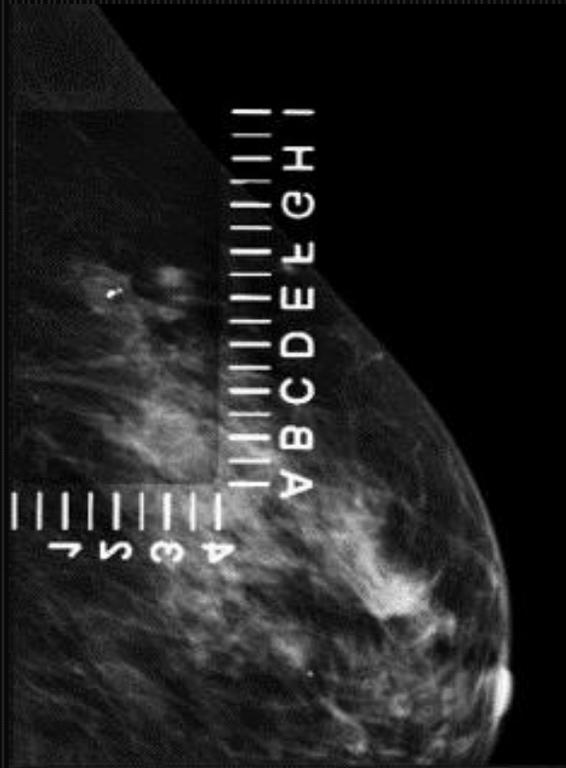
Post-fire



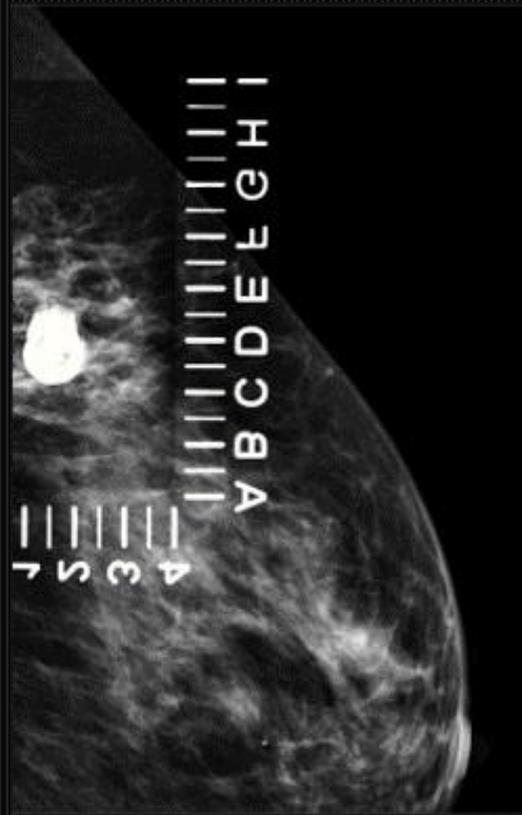
Post with clip



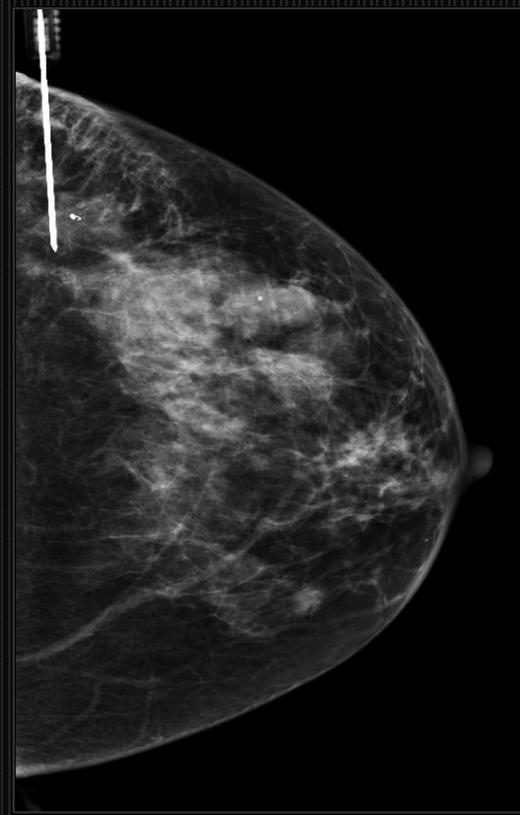
Savi Scout needle localization



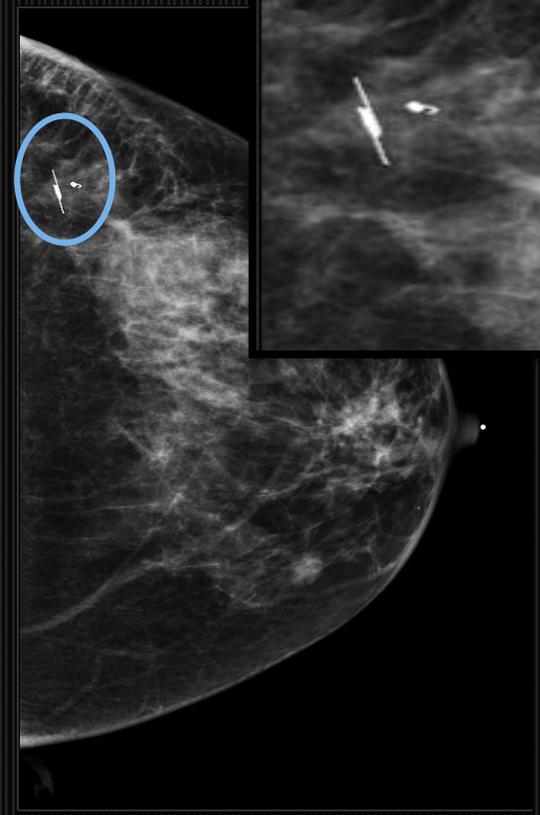
Pre-procedure - note metallic clip from prior + biopsy



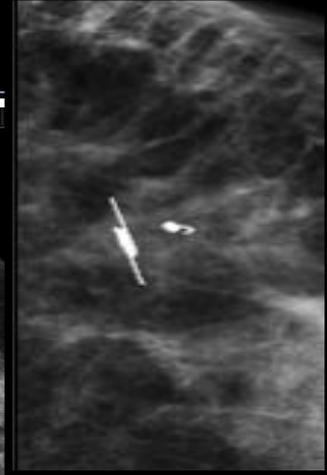
Savi scout localization



Pre-deployment



Post-deployment



Patient treatment

- Ms. LL is an otherwise healthy 69 y.o. with biopsy proven IDC/ILC of the left breast, cT1No, grade 2, ER (95%) positive, PR (95%) positive, Her2 negative. She was discussed at Multidisciplinary Conference and was dispositioned to breast-conserving surgery (BCS) with 5 years of endocrine therapy. Assuming that she remains early stage pending final surgical pathology, she will defer further conversation with Radiation Oncology and Medical Oncology.

RADIOLOGY DISCUSSION!

Triaging BI-RADS 4 vs. BI-RADS 5 Mass

Suspicious vs Highly Suggestive of Malignancy

BI-RADS 4: "SUSPICIOUS"

- Lesions do not have the classic appearance of malignancy but are sufficiently suspicious
- Very wide range of probability of malignancy (2 - 95%)
- 4a
 - Partially circumscribed mass, suggestive of (atypical) fibroadenoma
 - Palpable, solitary, complex cystic and solid mass
 - Probable abscess
- 4b
 - Grouped amorphous or fine pleomorphic calcifications
 - Nondescript solid mass with indistinct margins
- 4c
 - Grouped fine linear calcifications
 - Irregular solitary mass, esp if new

BI-RADS 5: "HIGHLY SUGGESTIVE OF MALIGNANCY"

- Classic breast cancers
- Have a >95% likelihood of malignancy hence benign biopsy results = discordant
- Characteristics:
 - Spiculated, high density, irregular mass
 - Segmental or linear arrangement of fine linear calcifications
 - Irregular spiculated mass with associated pleomorphic calcifications

BI-RADS 4 vs BI-RADS 5: Making the Call

ASSESSMENT CATEGORY BI-RADS 4 -> suspicious enough to warrant a biopsy, but of variable risk of malignancy, *biopsy should be performed in the absence of contraindication*

-- Examples of concordant benign diagnoses: sclerosing adenosis, PASH (pseudoangiomatous stromal hyperplasia), fibroadenoma, fat necrosis

ASSESSMENT CATEGORY BI-RADS 5 -> highly likely to be breast cancer, *biopsy should be performed in the absence of contraindication*

-- Appropriate if a combination of highly suspicious findings are present

-- Any nonmalignant pathology result is viewed as discordant and additional biopsy is required

EMERGING KNOWLEDGE!

Ms. LL will receive BCS without radiation or chemotherapy

Landmark Trials in Breast Conserving Therapy (BCT)

BCT vs total mastectomy: NSABP B-06

Patients with early stage (IIA or earlier, some subsets of IIB) generally undergo primary surgery, sometimes followed by radiation therapy and systemic therapy¹.

The NSABP B-06 trial, which evaluated the efficacy of breast-conserving surgery (BCS) with radiation compared with total mastectomy in stage I breast cancer, demonstrated no significant difference in disease-free survival, distant-disease-free survival, or overall survival. These findings have been consistent, most recently shown at 20 years².

Similar results have been demonstrated in patients with stage II breast cancer (tumor size >2cm)³.

BCT without radiation therapy: Hughes trial

Years later, investigators questioned the necessity of even radiation therapy. The Hughes trial, which randomized women with early stage and HR positive breast cancer to either BCS with endocrine therapy (tamoxifen) alone or BCS with endocrine and radiation therapy, found that women aged 70 and older in either group were no different in rates of overall survival or distant disease-free survival, with consistent findings 12 years later⁴.

Per these results, Ms. LL, as a nearly-70 year old woman with early stage, HR positive breast cancer is an excellent candidate to undergo BCS without radiation therapy.

BCT without adjuvant chemotherapy: Tailor trial

As it pertains to systemic therapy, patients with hormone receptor-positive breast cancer should receive endocrine therapy (i.e. tamoxifen). Adjuvant chemotherapy is generally administered to patients with high-risk characteristics, including high grade (grade 3 or 4), pathologically positive nodes, large size (2cm or greater), and/or high 21-gene recurrence score¹.

While it had been shown that patients with low grade tumors (grade 1) had no survival benefit from systemic chemotherapy, until recently there was no data for patients with intermediate cancers (grade 2) - like Ms. LL.

The Tailor trial showed that endocrine therapy was noninferior to chemoendocrine therapy for women with intermediate grade (as measured by 21-gene recurrence score), early stage, HR positive breast cancer⁵.

References

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