به نام

خدا

سلام

The role of radiologist in treatment plan of breast cancer.

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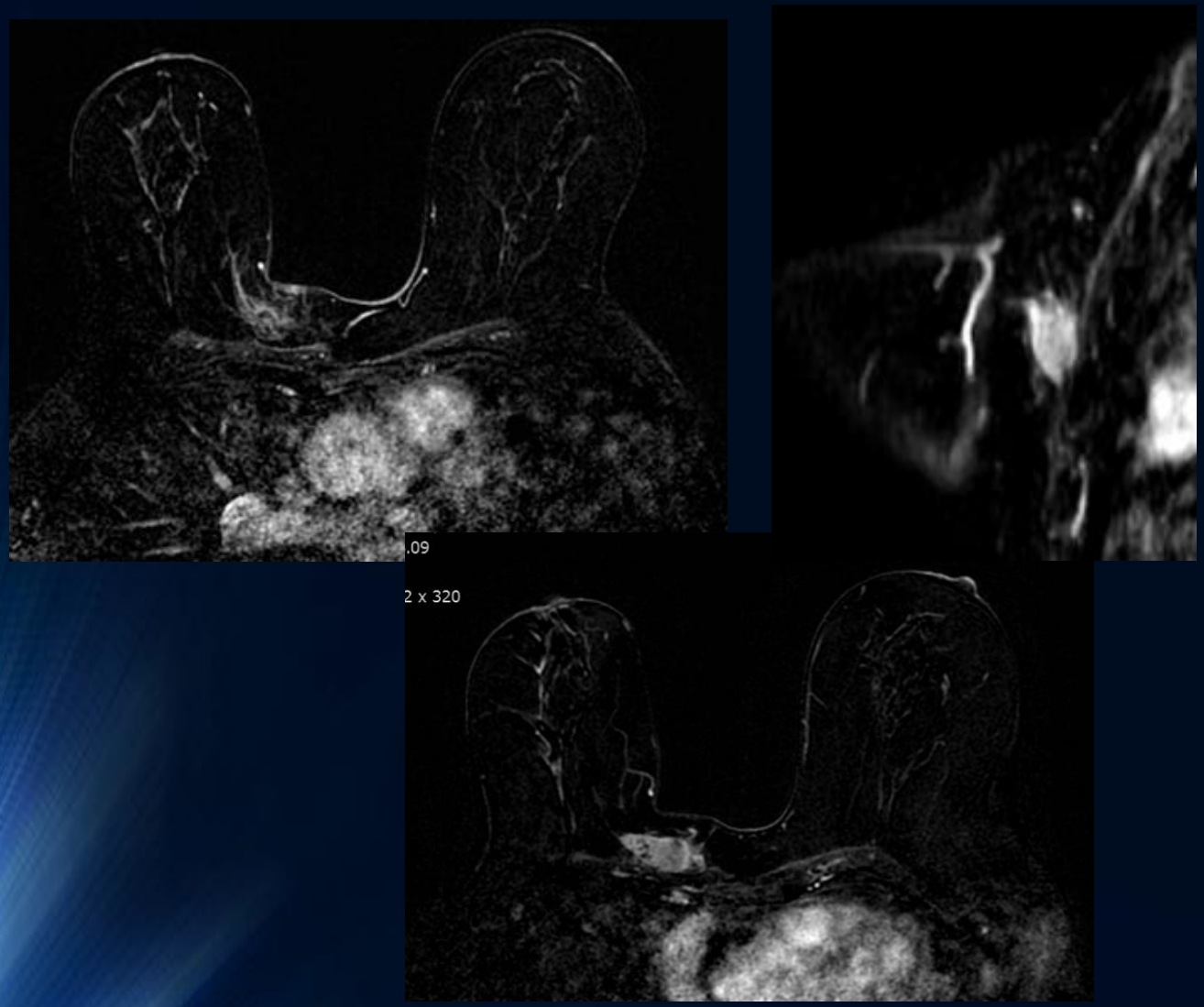
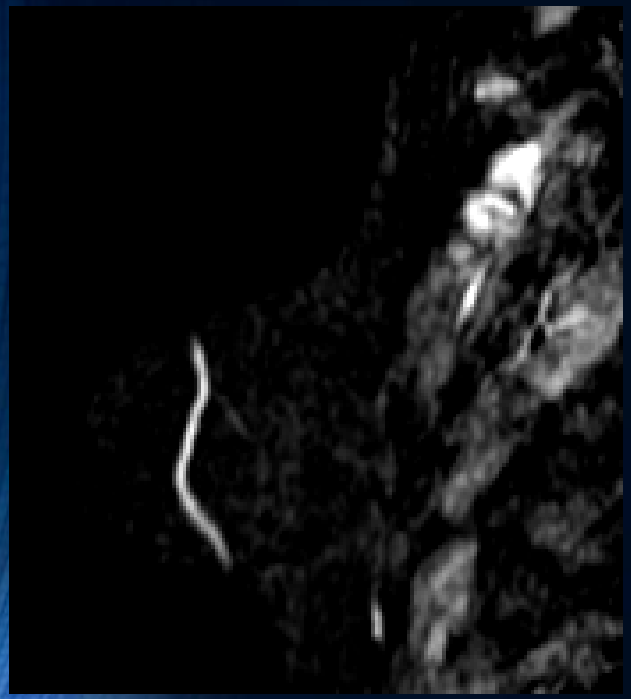
ADIR

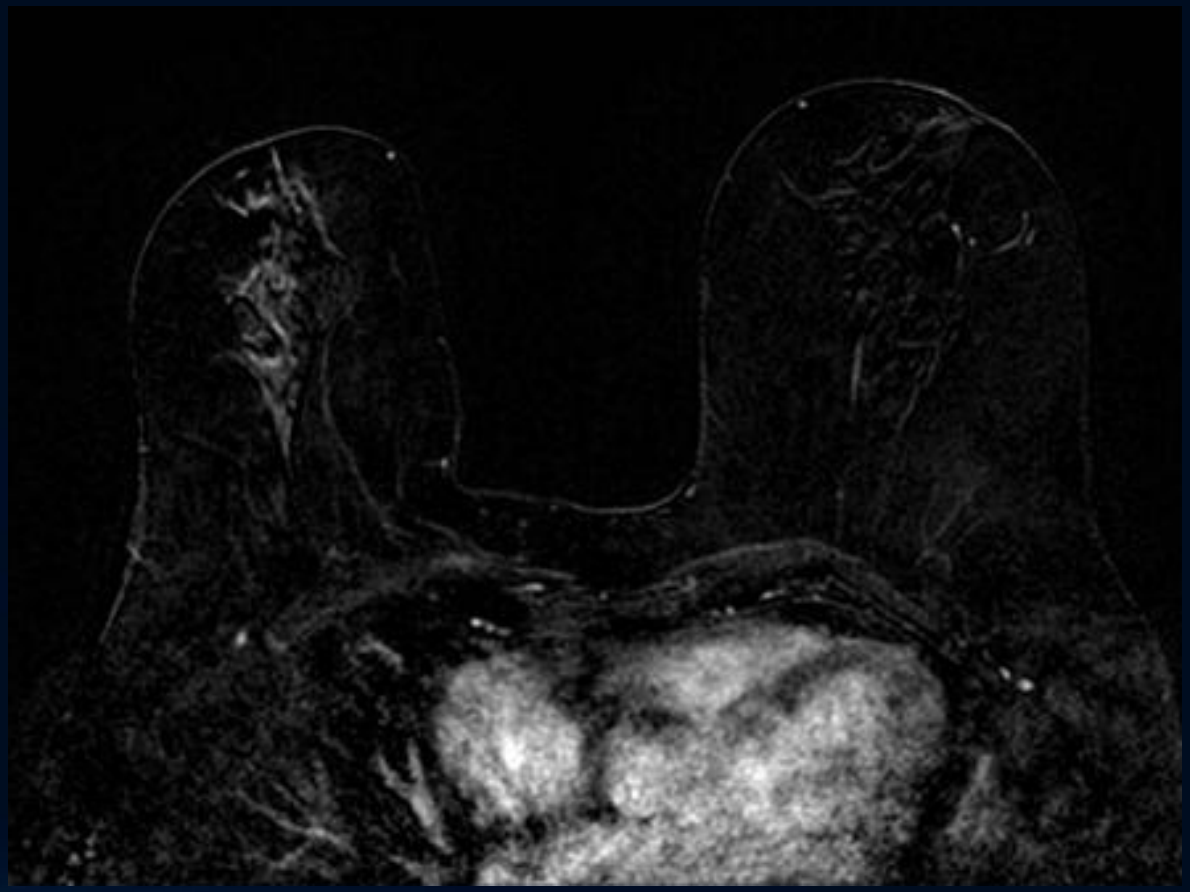
CASE:1

A 55yr old woman with palpable lump in UIQ of the right breast, which proved to be IDC on CNB.

MRI was performed for local staging.







The mass showed invasion to skin and the pectoralis muscle.

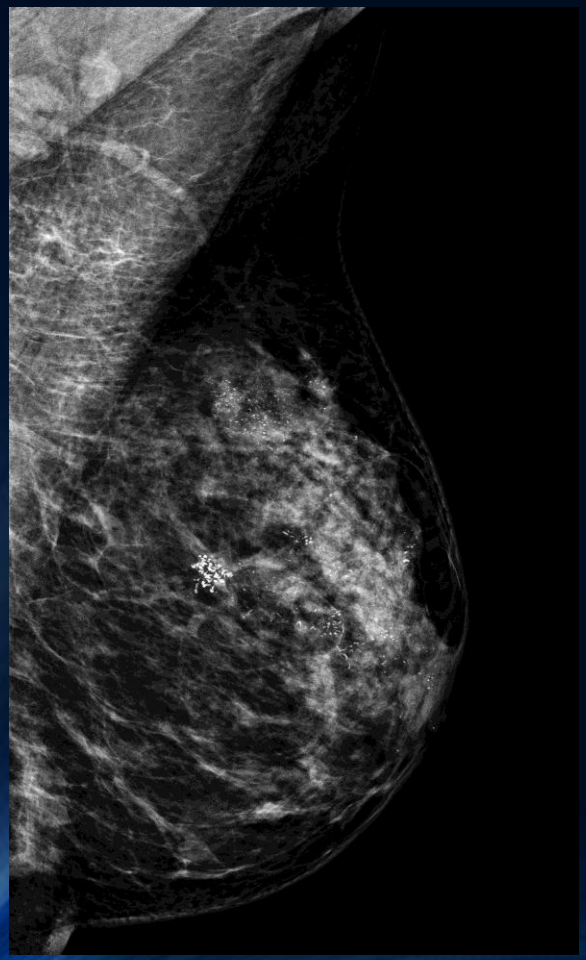
Extensive DCIS was also discovered on MRI in right breast.

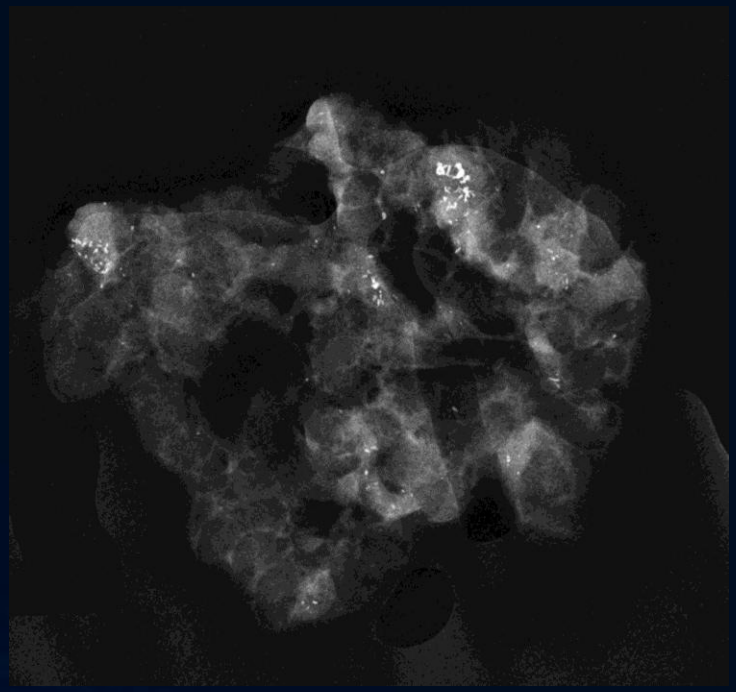
Infiltrated lymph nodes in right axilla are also noted.

CASE: 2

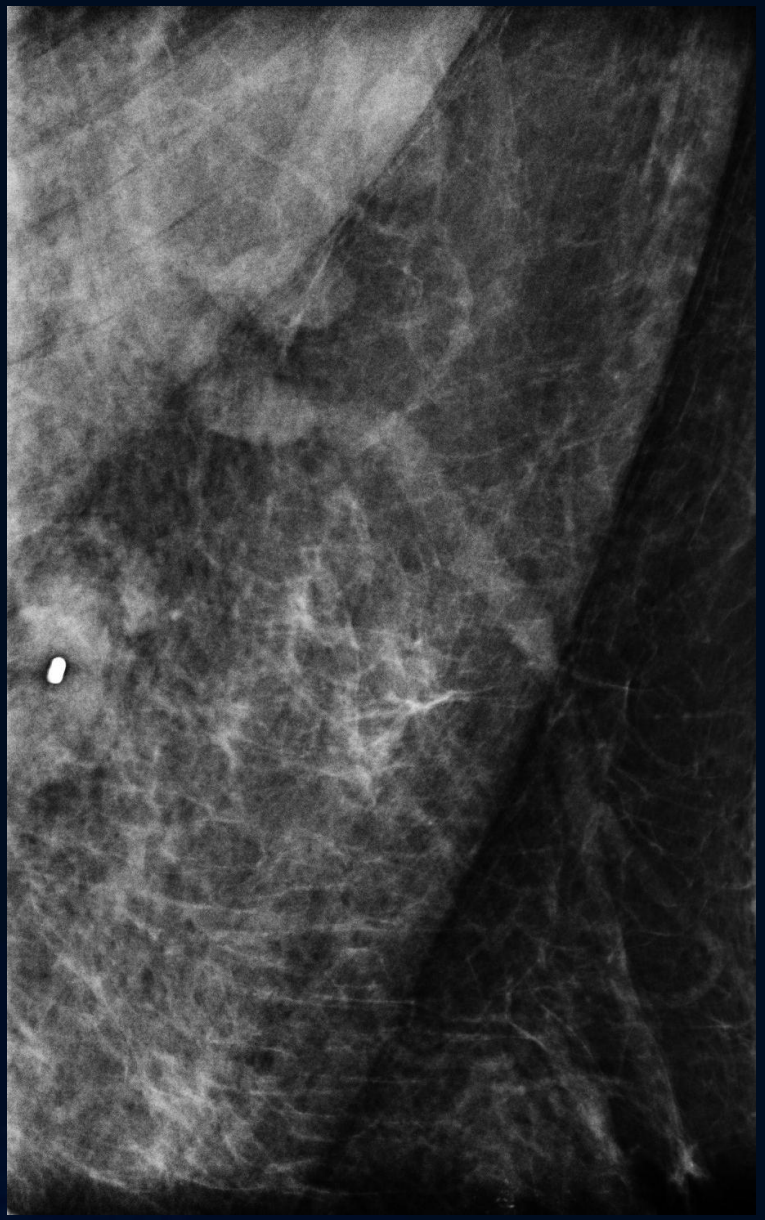
A 43yr old woman, with palpable lump in left breast UOQ and heterogeneous mass on sonography , with pathology of IDC on CNB.

On mammography, multiple groups of suspicious microcalcifications were detected, which proved to be DCIS on VAB.



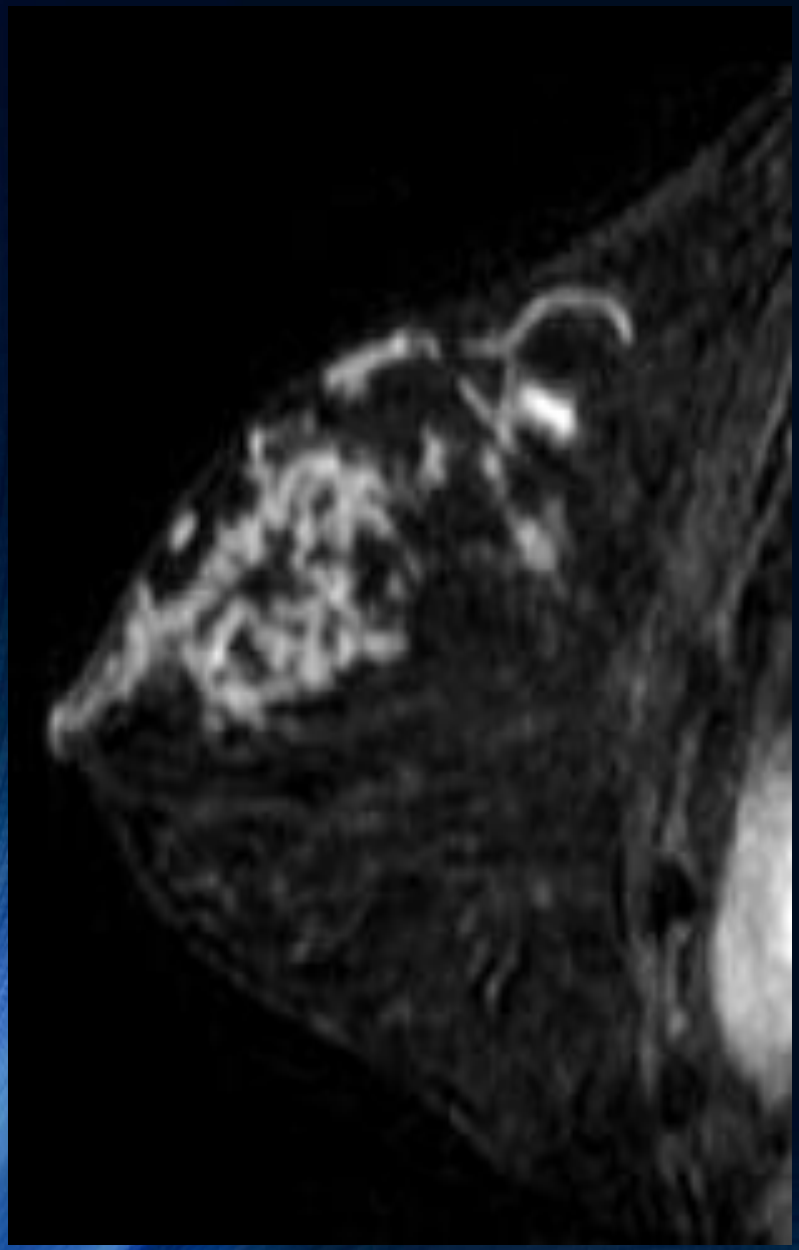


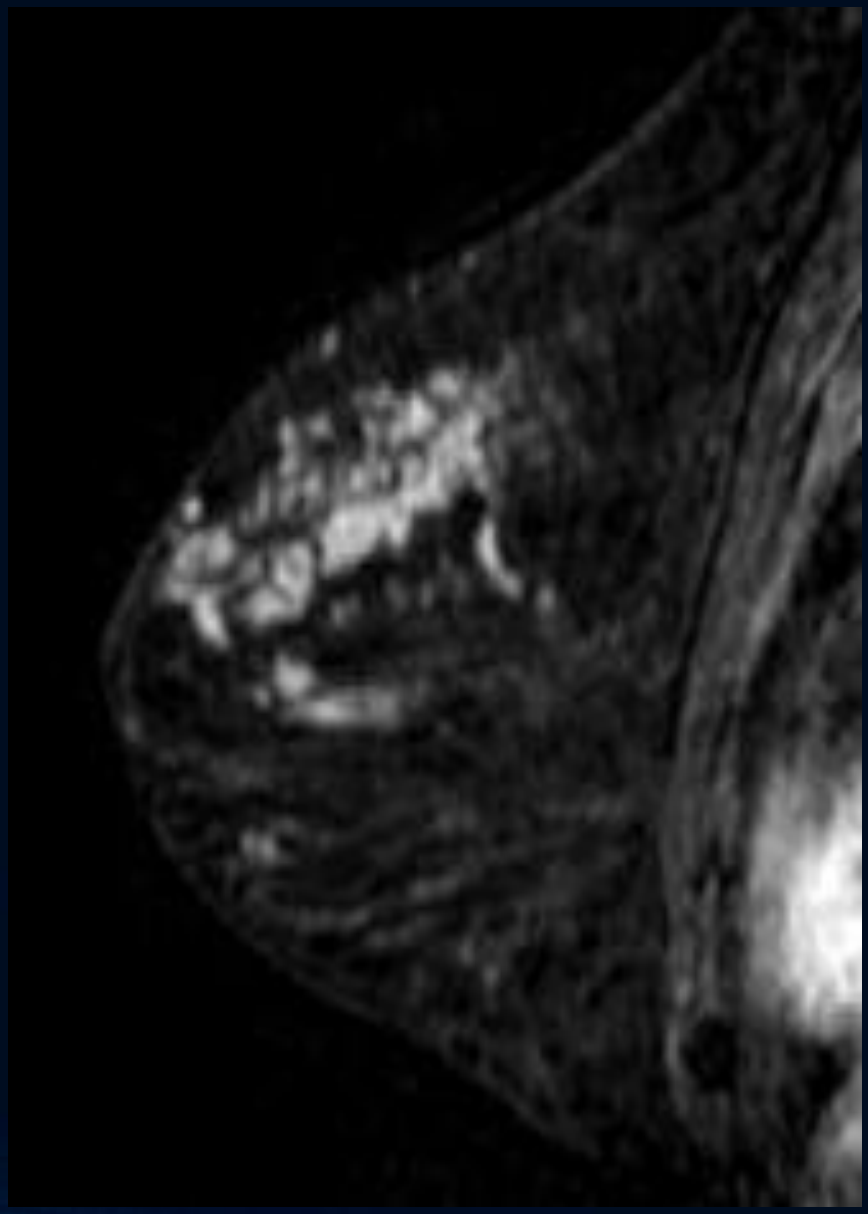
- …Marker was inserted in an involved LN in left axilla.



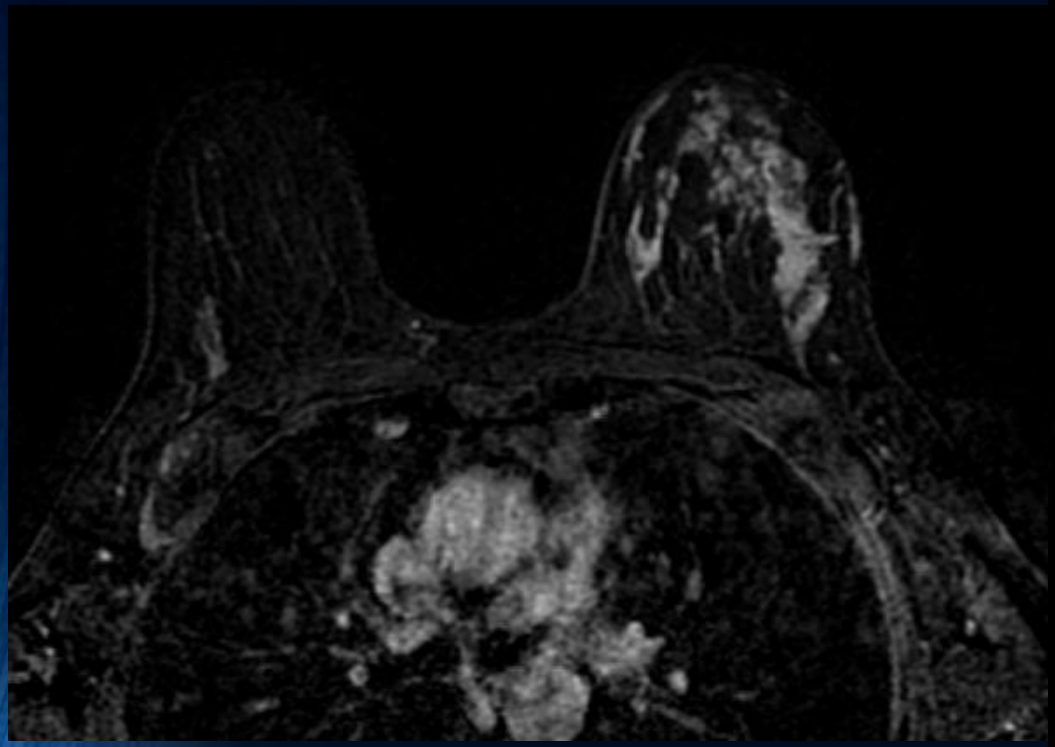
The patient desired breast preservation.

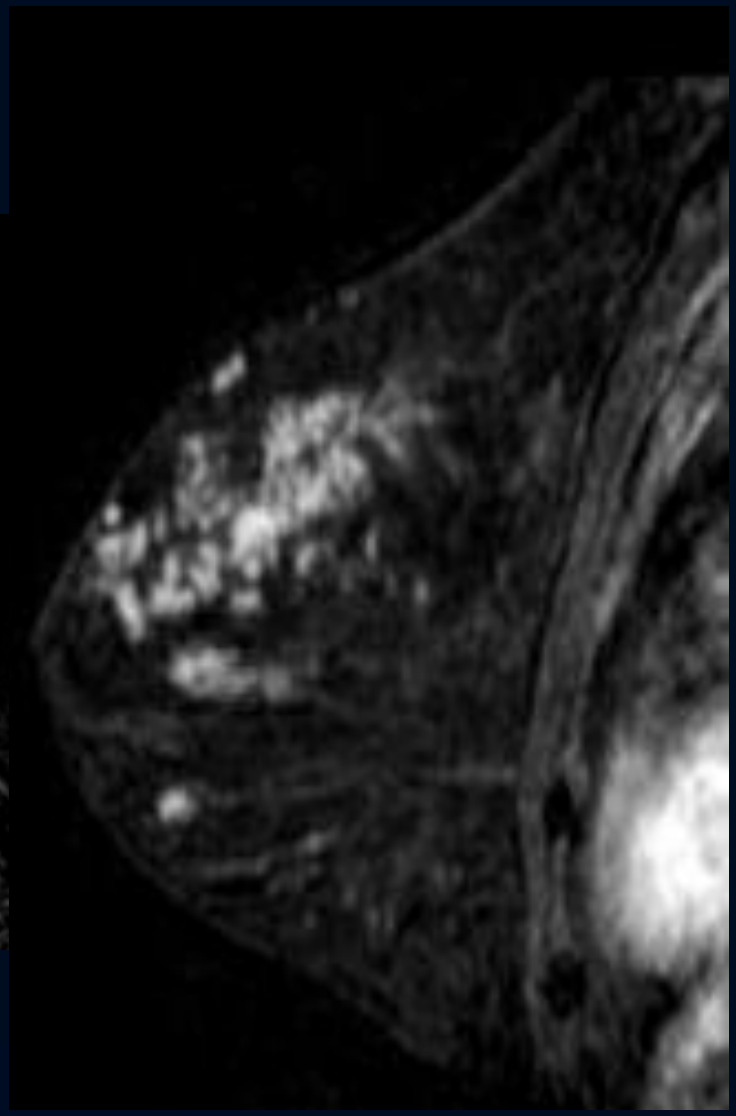
MRI was performed for local staging and to R/O non-calcified DCIS , which showed extensive disease in left breast, with involvement of retroareolar region , just posterior to the nipple.

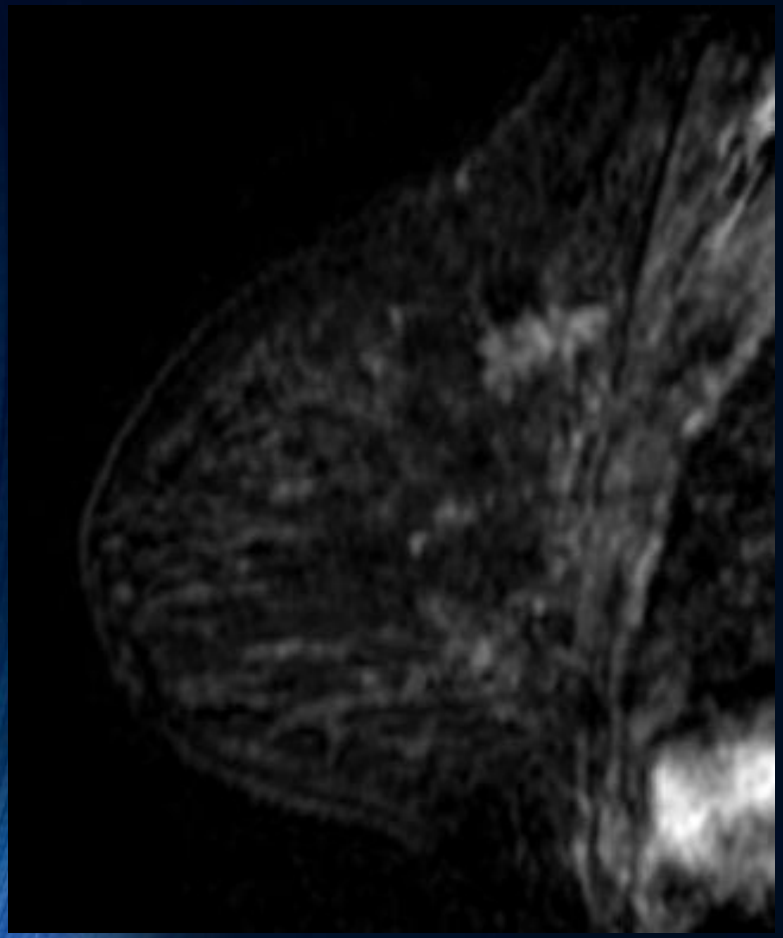


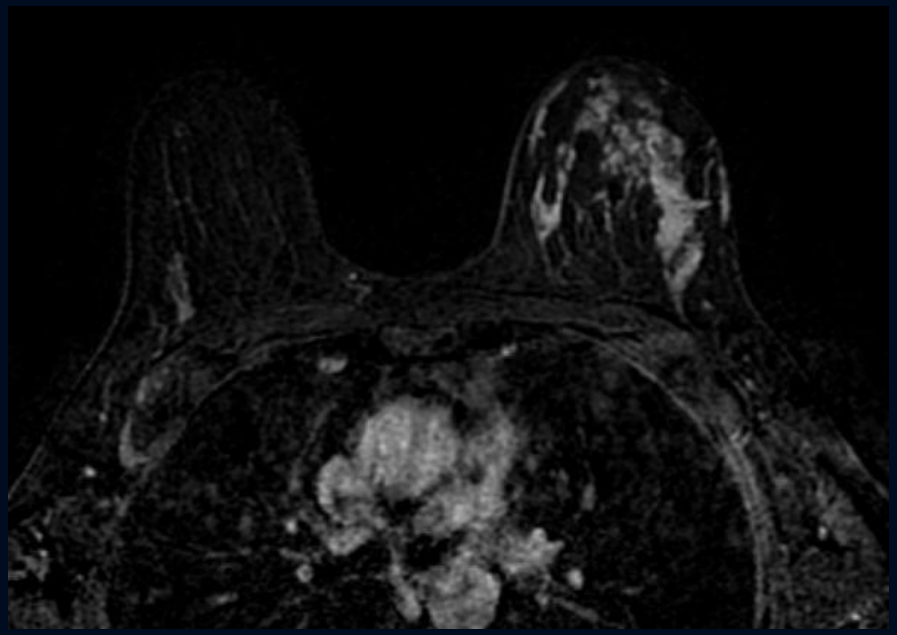


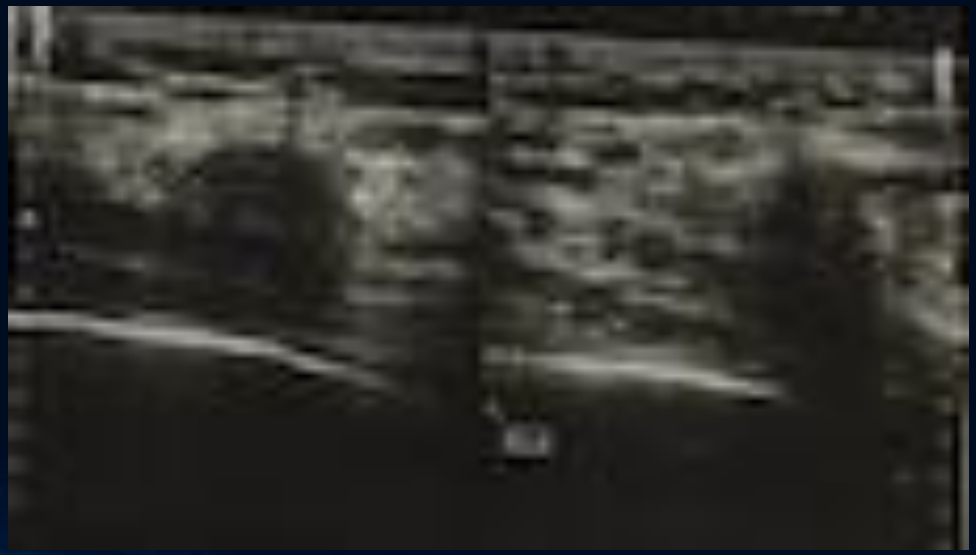
An NME was also detected on MRI in right breast , which was visible by US and proved to be papilloma and benign breast changes on pathology of VAB.





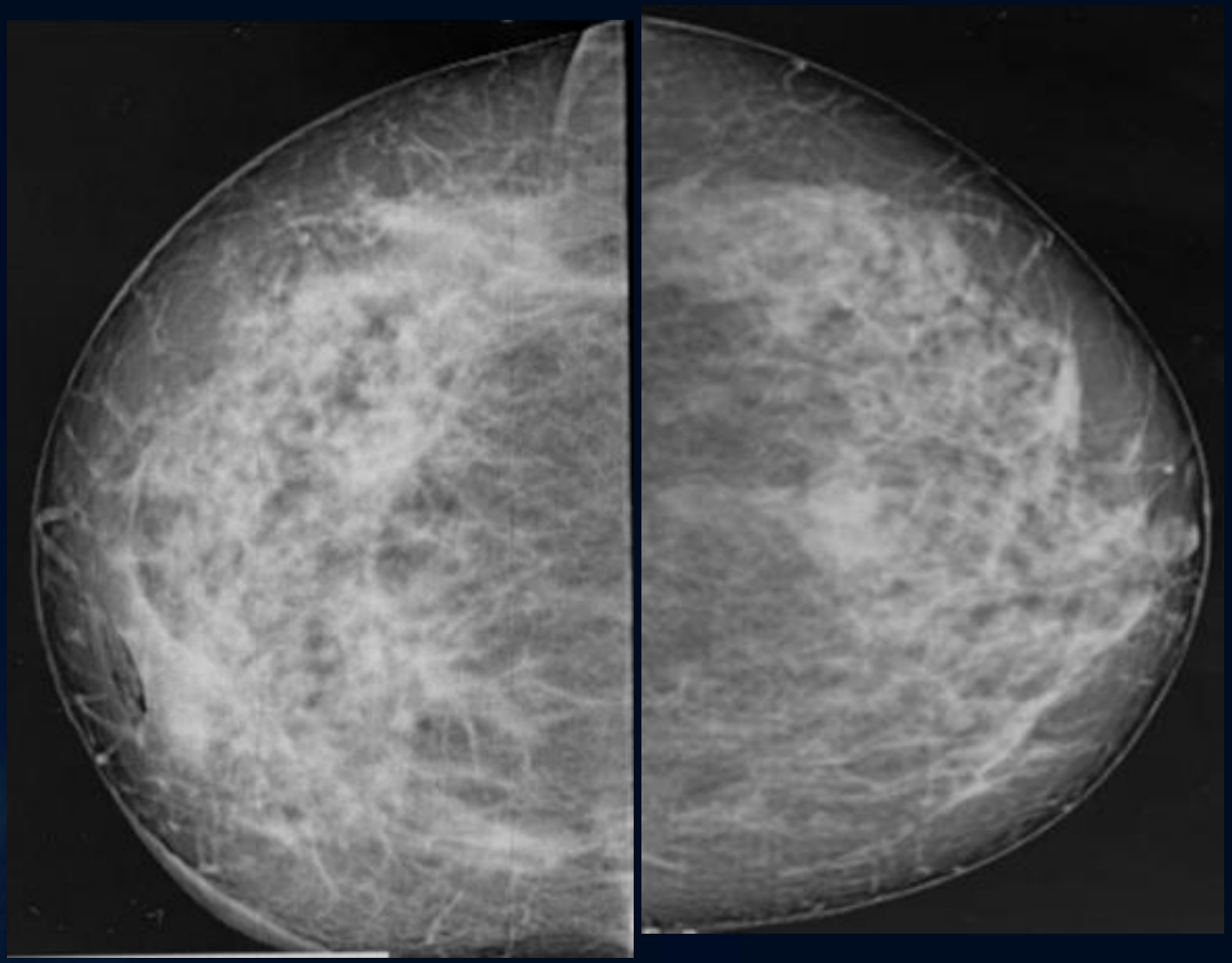


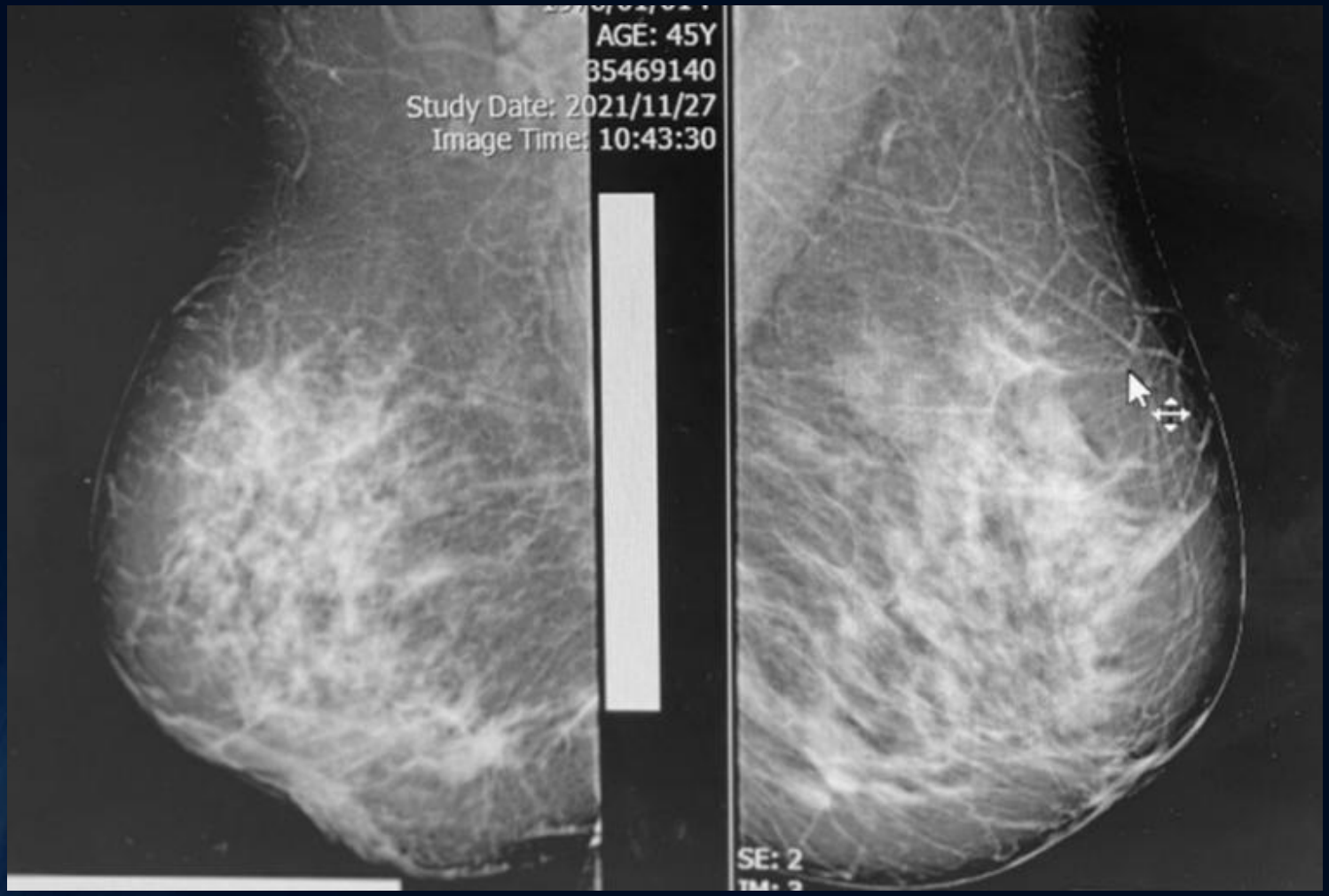




CASE :3

A 45yr old woman, with right breast CNB-proven ILC, under NAC, was referred for marker insertion.

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سونوگرافي پستان ها+ اگزيلاري

دربررسي اولتراسونيك:

افزايش اكوي پارانشيم با نواحي هيپواكو دربين آنها به طورپراكندهٔ درهردو پستان مطرح كننده Benign Breast changes (F.C.C) مشهود بود.

درساعت 4 و 8 پستان راست دو ضايعه هيپودنس و ill-defined با ايجاد نامنظمي درپارانشيم اطراف و به سايزهاي تقريبي 8*12 ميليمتر و 17*18 ميليمتر با رتركسيون جلدي و ادم جلدي درسطح ضايعات مذكور دردرجه اول به نفع ضايعات نئوپلازيك مشاهده مي گردد انجام FNB تحت گايد سونوگرافي توصيه مي گردد.

درآگزيلاري راست سه لنف نود راكتيو و پاتولوژيك به سايزهاي 15 و 18 و 21 ميليمتر مشاهده شدند.

Diagnosis

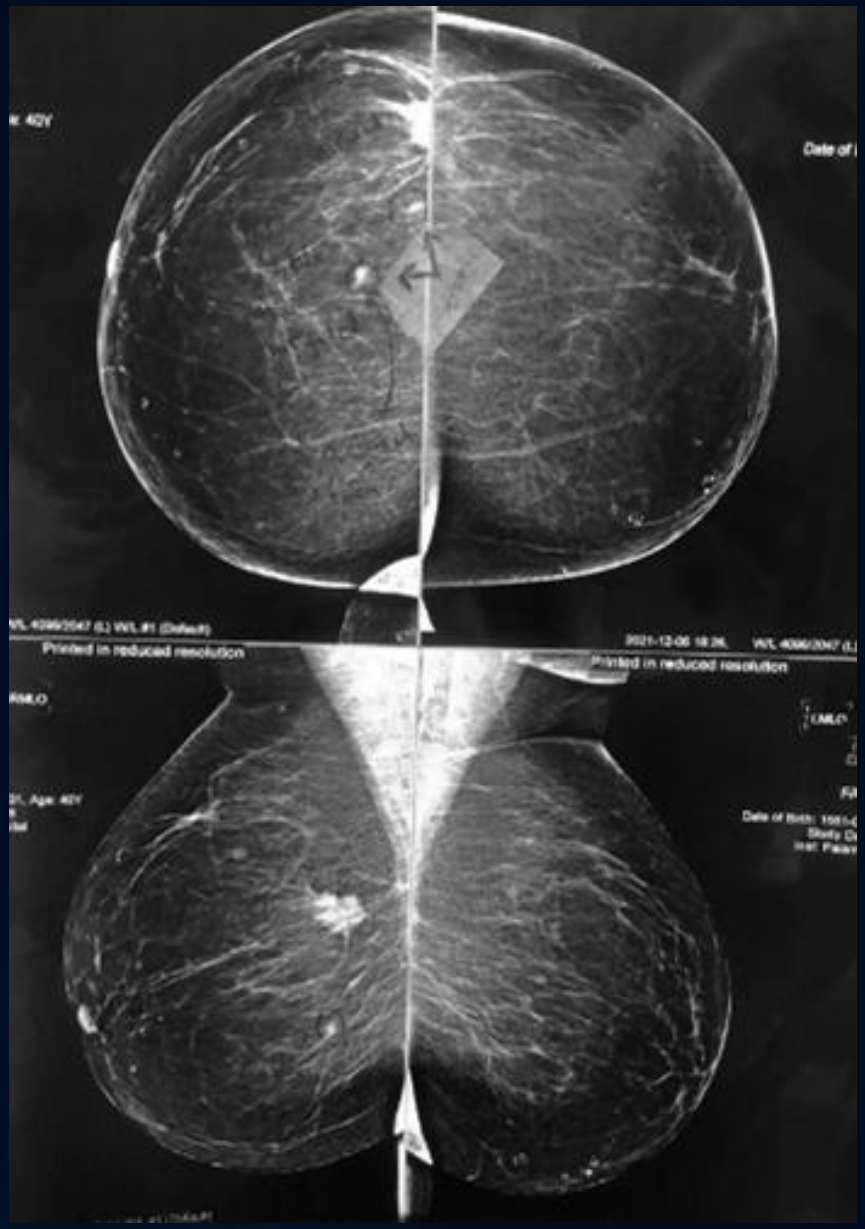
Right breast mass (4 o`clock) core needle biopsy:

-Invasive lobular carcinoma.
-Insitu lobular carcinoma is seen too.

Considering the multicentricity on ultrasound exam, the pathology of lobular carcinoma and dense breast tissue on mammography, the procedure was cancelled and dynamic breast MRI was recommended to R/O bilaterality and possible additional tumor foci in other parts of the right breast, which may change the plan of surgery.

Case:4

A 40 yr old woman was referred for localization of the suspicious masses in right breast.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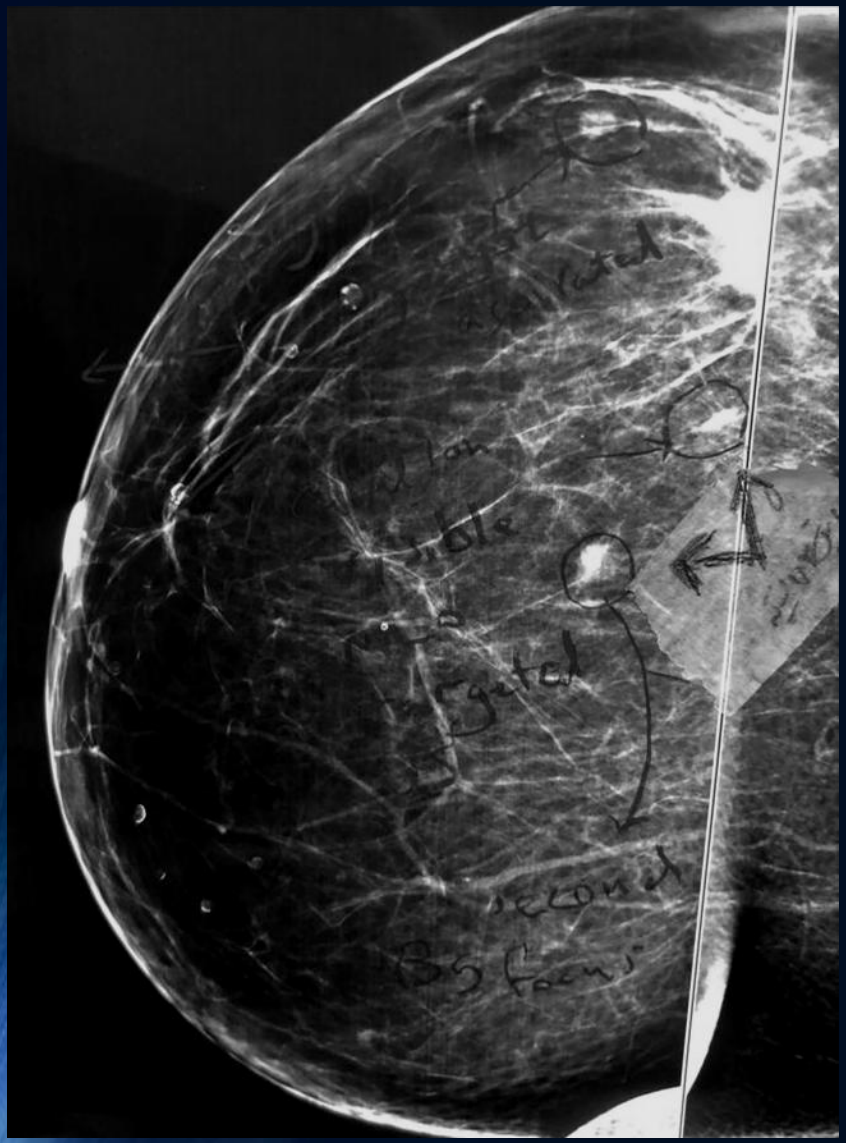
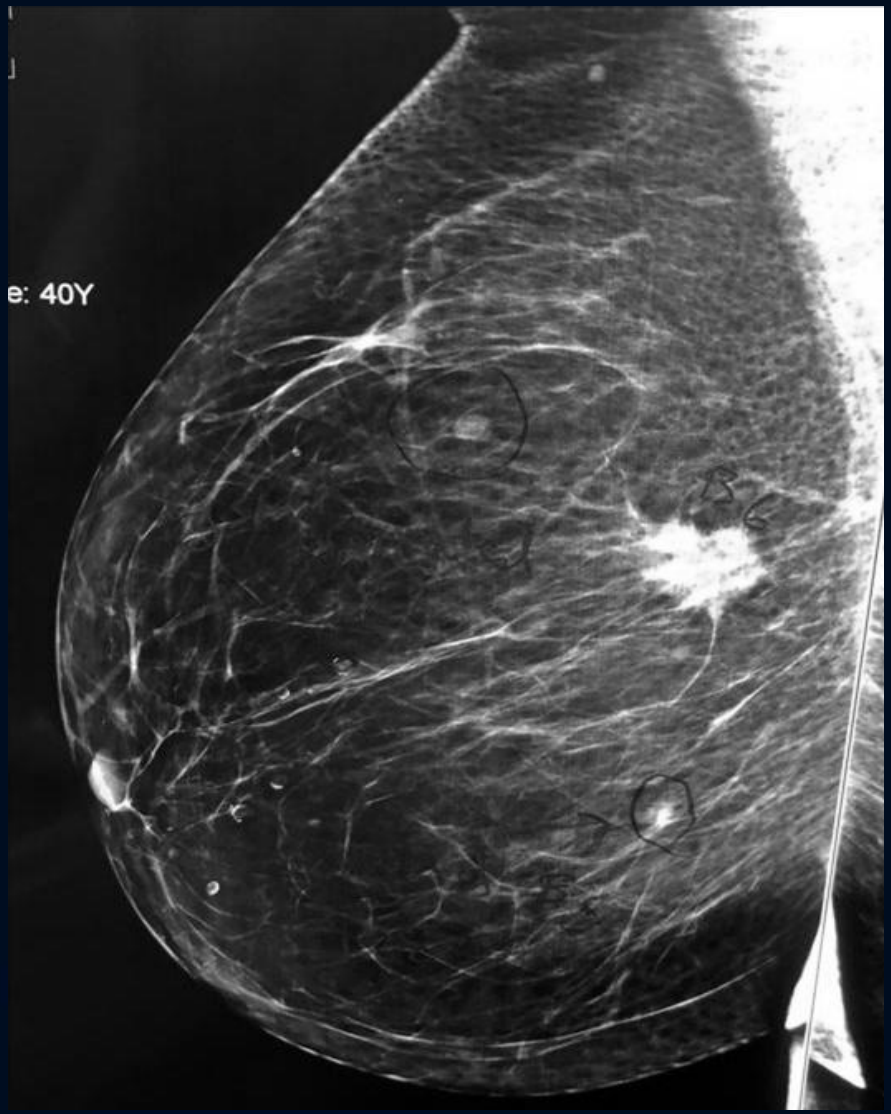
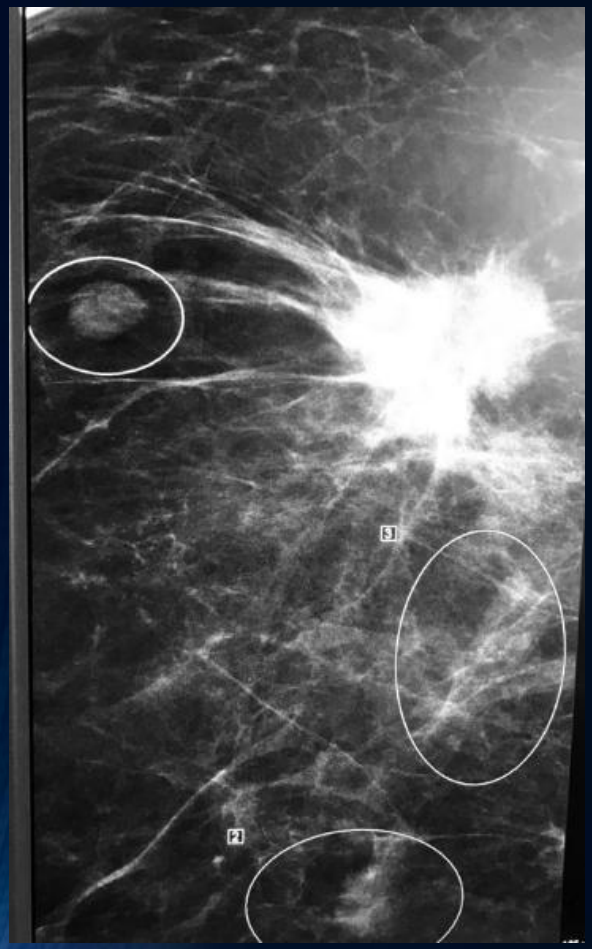
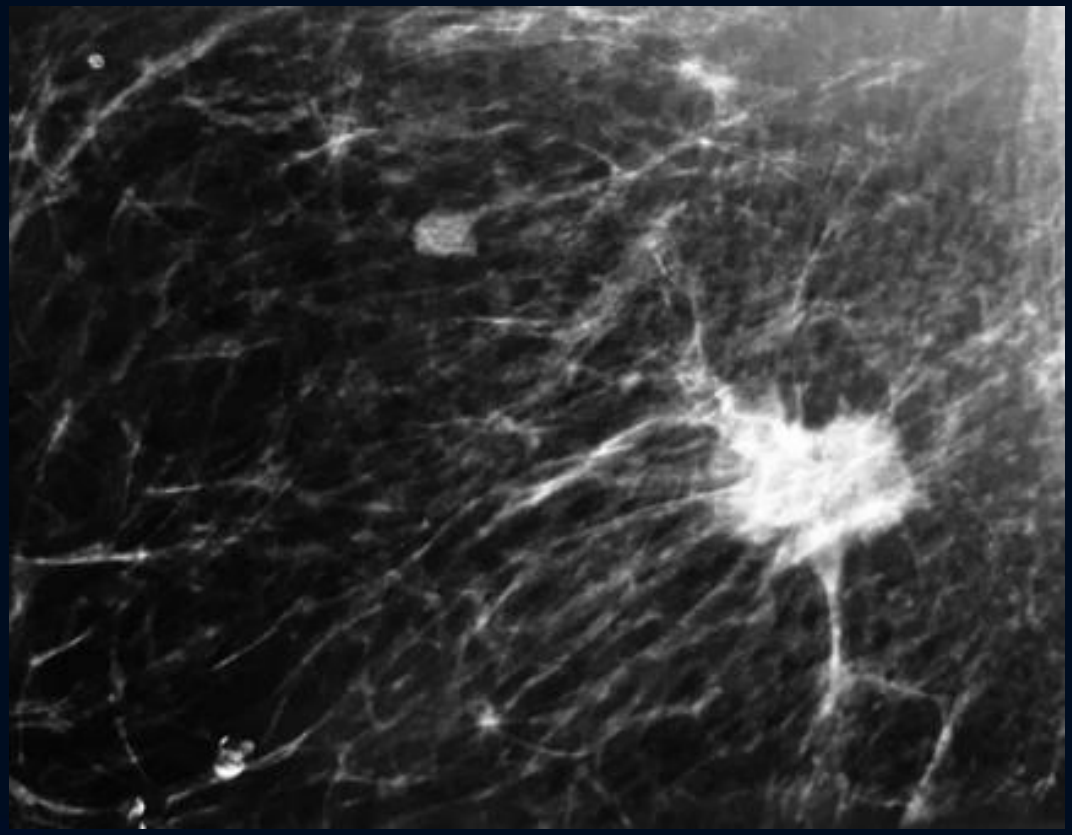
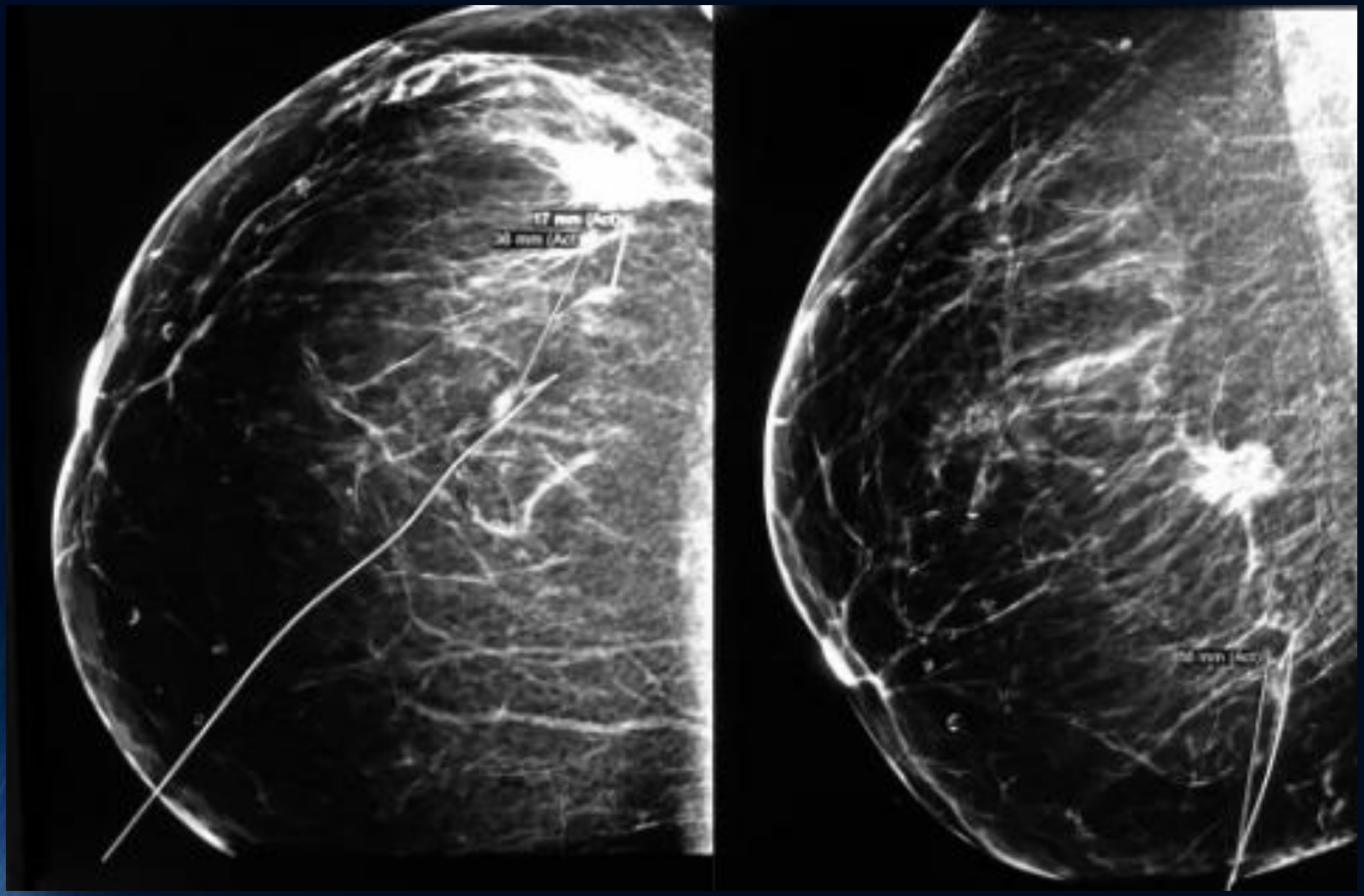


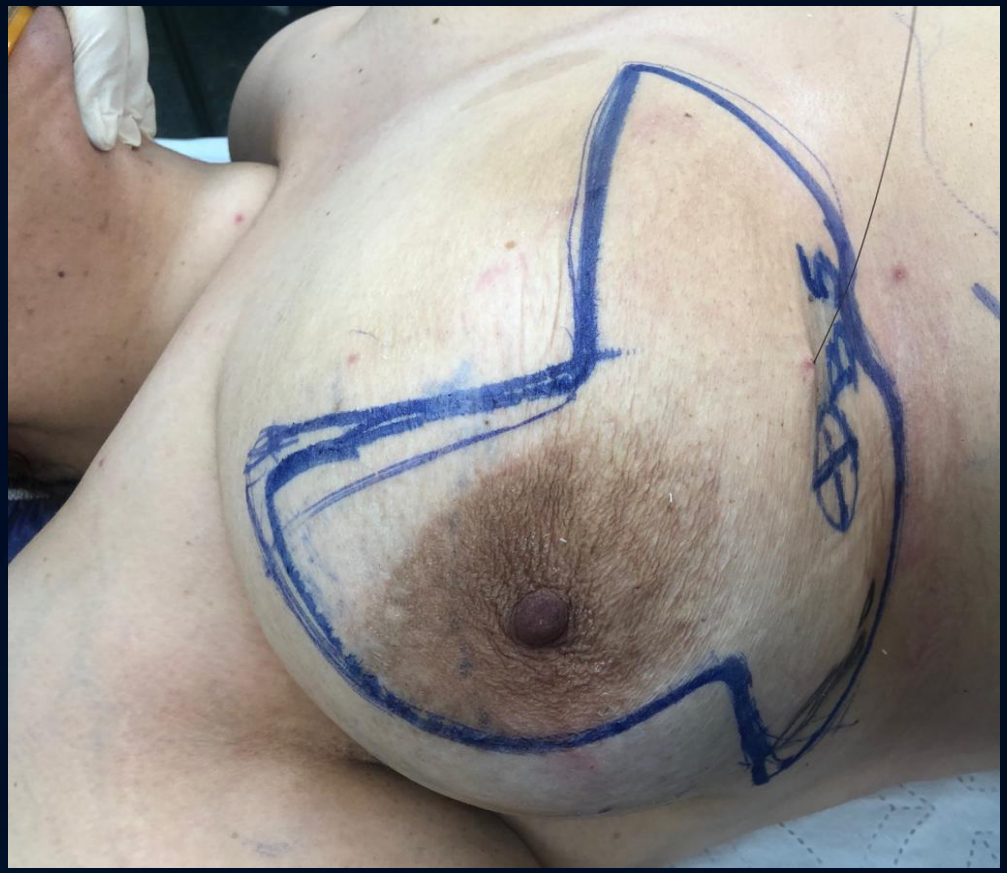

e: 40Y







The plan of surgery was influenced by surgeon/radiologist discussion.



Case: 5

A 55 yr old lady without risk factor.

Two masses in screening mammography:

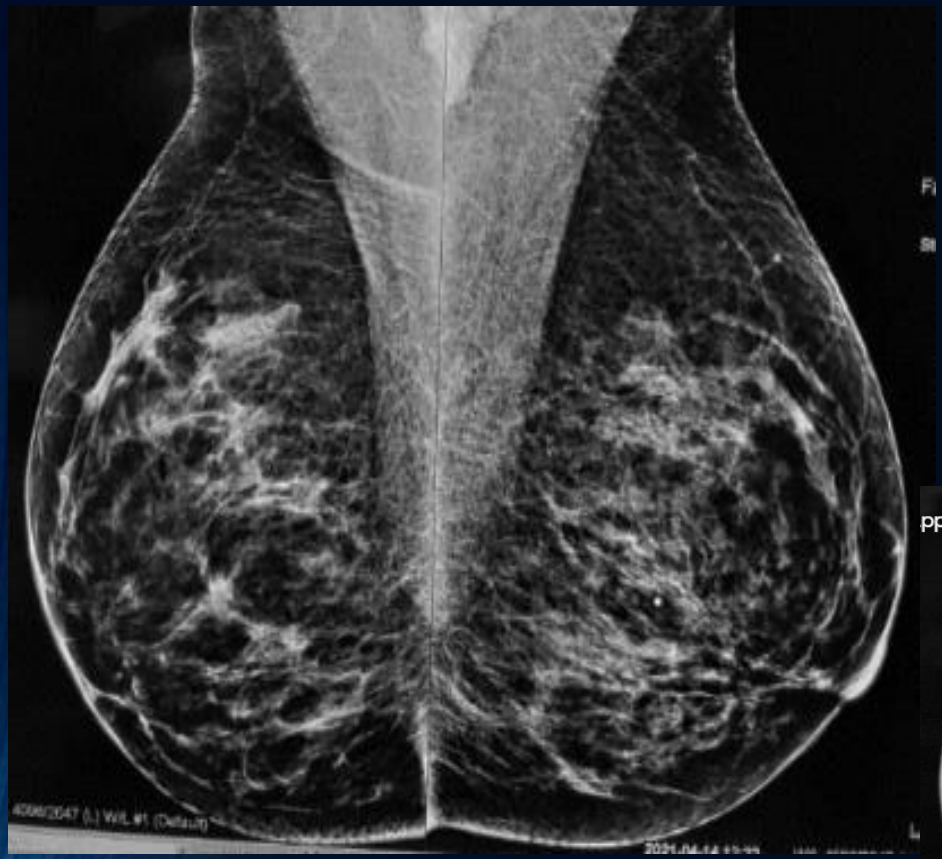
two dense ill- defined masses with tissue

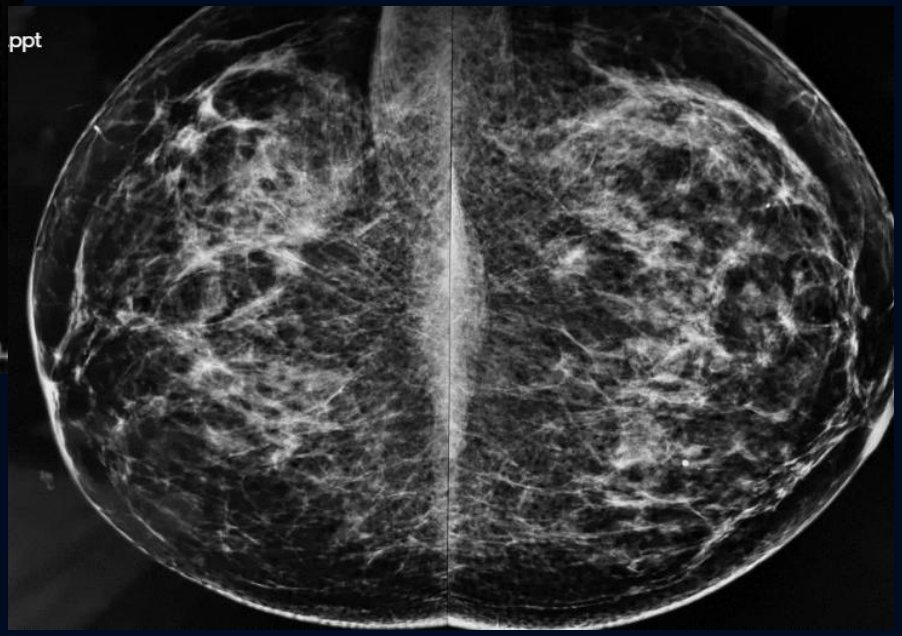
distortion (B4) in digital mammography

-at 6 o'clock near zone: 8.7*5mm with tissue

distortion(B4c)

-at 6 to 7 o'clock, far zone,:8*4.9mm heteroechoic mass,with oblique orientation (B4b)

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Bilateral full field digital mammography:

Images reviewed on workstation.
This is screening mammogram and comparison was made with previous mammogram from 01/2019.
No significant personal or family history is claimed.
Residual fibroglandular tissue is noted (breast composition is type b).
In central and LOQ of right breast, two dense ill-defined masses with tissue distortions are seen, which are suspicious (B4) core needle biopsy is recommended.
Few punctate benign type calcifications are noted in left breast.
There is no evidence of suspicious mass, suspicious microcalcification or parenchymal distortion in **left** breast.
In comparison with previous mammogram, there is no evidence of developing density or any suspicious change in **left** breast.

Right breast:
BIRADS category : 4 (suspicious findings).

Left breast:
BIRADS category : 2 (benign findings). /k

U.S.exam of both breasts and axillary regions by 12 MHz probe with color Doppler:

Homogeneous fibroglandular tissue is noted in background of both breasts.

In LOQ of right breast, compatible to mammographic finding, two hypoechoic ill-defined masses are seen, which are suspicious and biopsy is recommended:

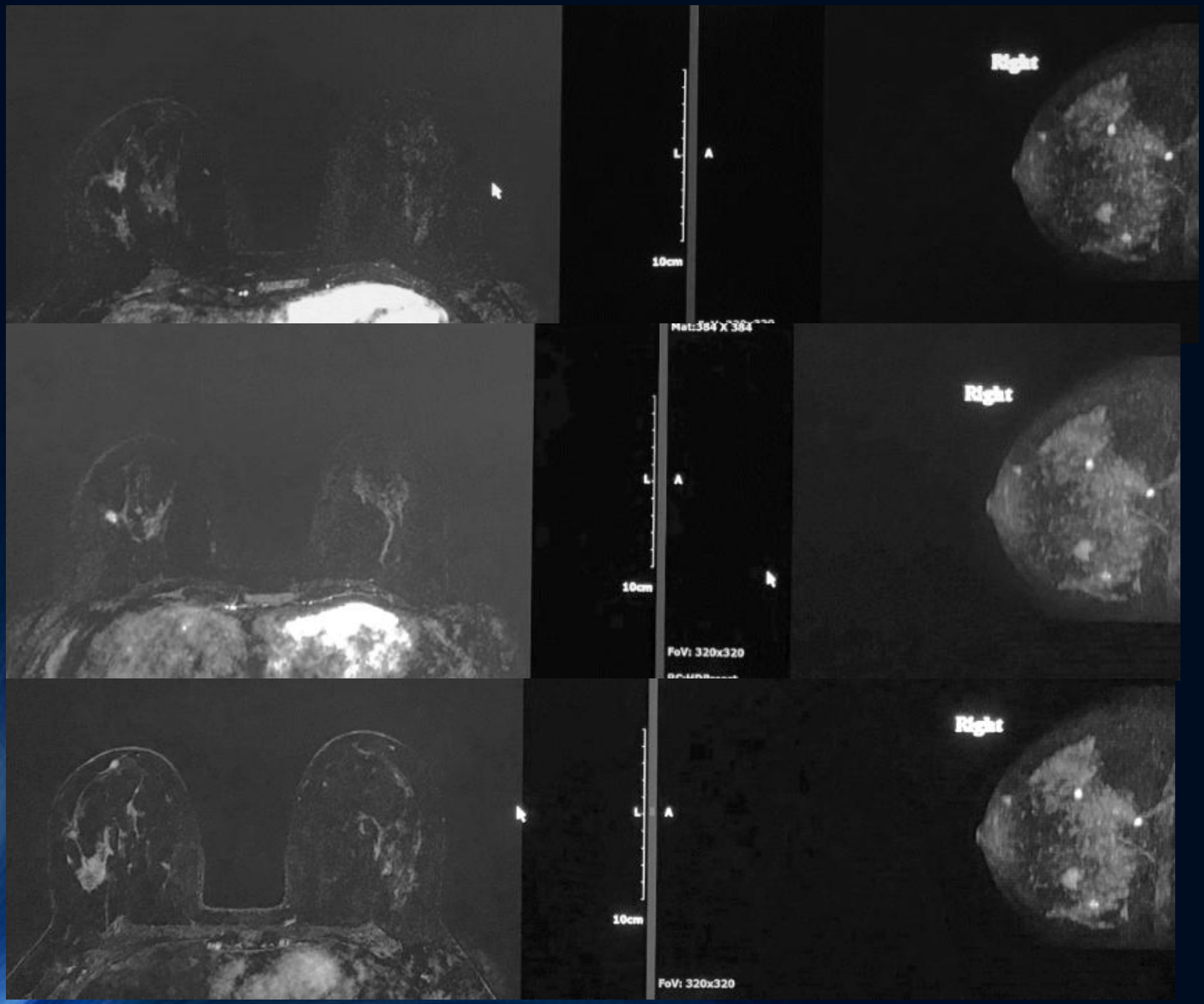
- at 6 o'clock near zone: 8.7x5mm, with tissue distortion (B4c)

- at 6-7 o'clock far zone: 8x4.9mm, heteroechoic oblique orientated (B4b)

With respect to the heterogeneously dense breasts and

multifocal suspicious masses,

MRI OF BREASTS REQUESTED…


Right
L
A
10cm
Right
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10cm
FoV: 320x320
Right
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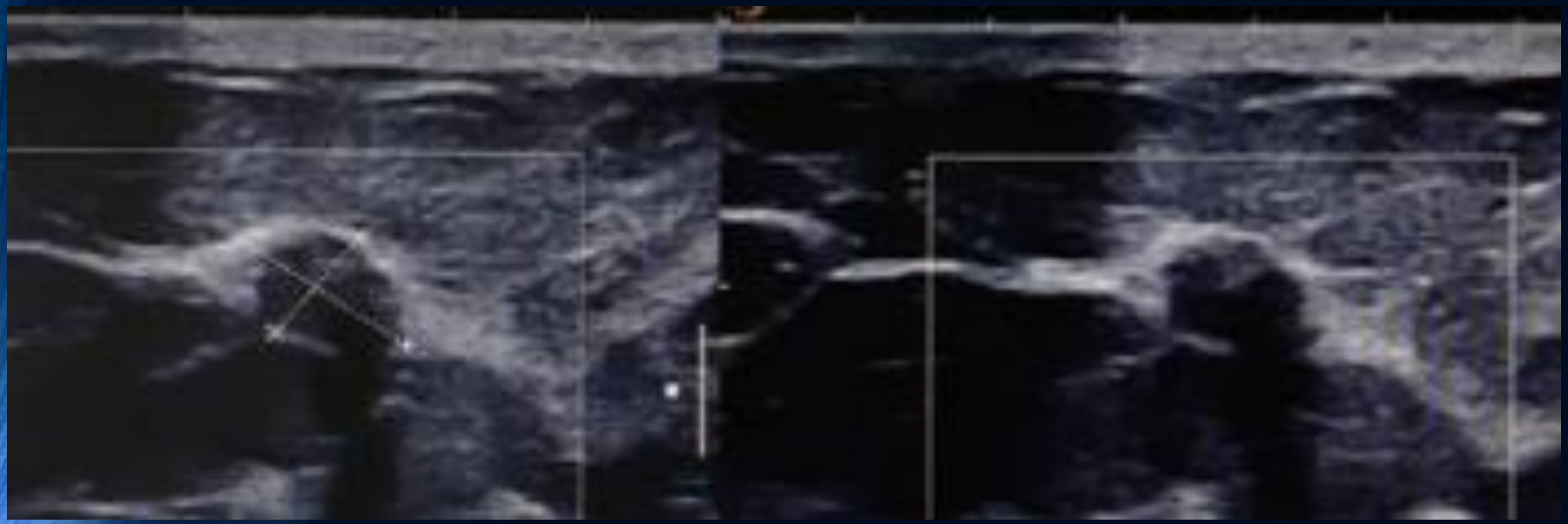
10cm
FoV: 320x320

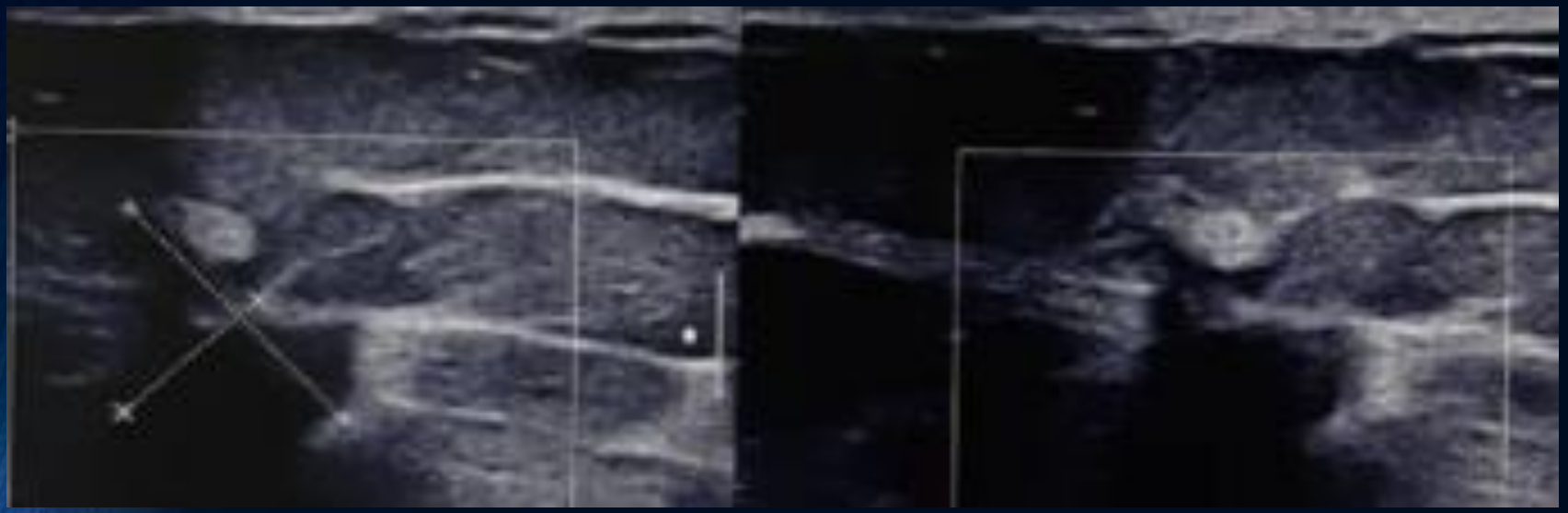
There are two small irregular enhancing masses in right breast LOQ mid zone (15x11mm) and right UOQ mid zone (7x6mm) which show suspicious morphology and type II-III dynamic curves. Biopsy of both masses recommended (B4c).

A smaller irregular mass with fine speculated borders is noted in the LOQ far zone measuring 9x8mm which appears suspicious (B4c).

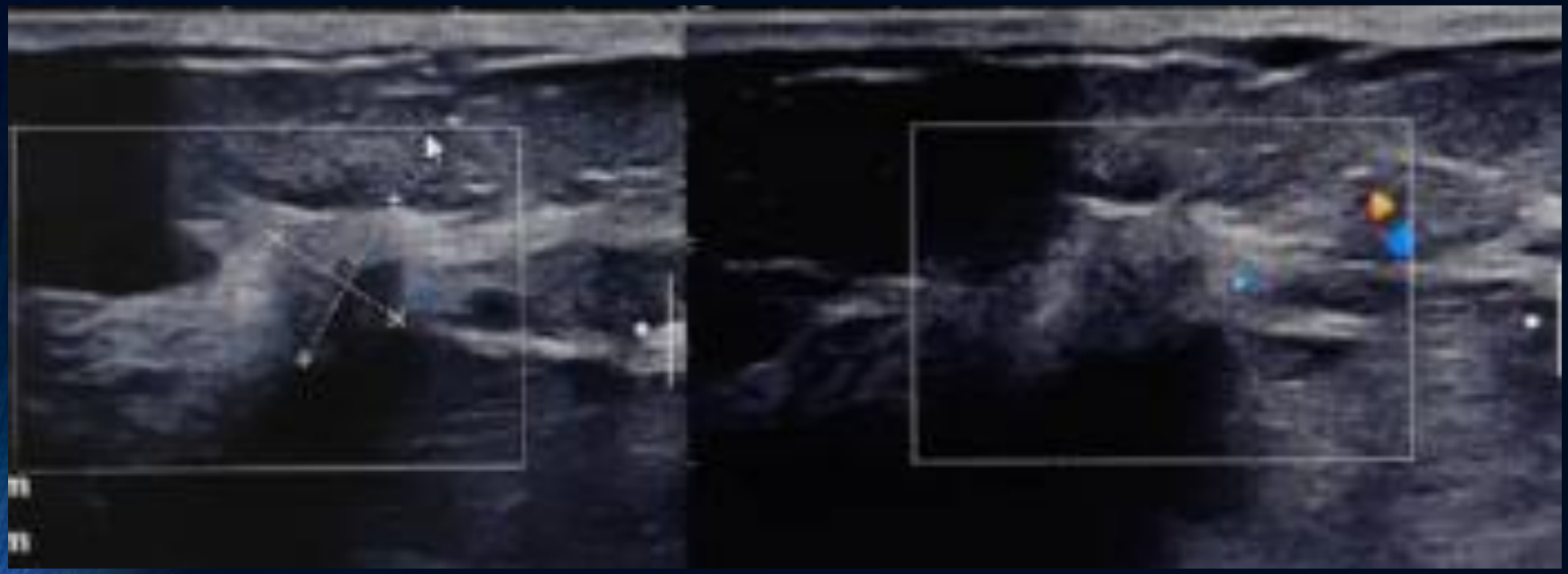
Second look targeted US exam:
Rt breast LOQ, mid zone



Rt breast 8 o'c midzone:

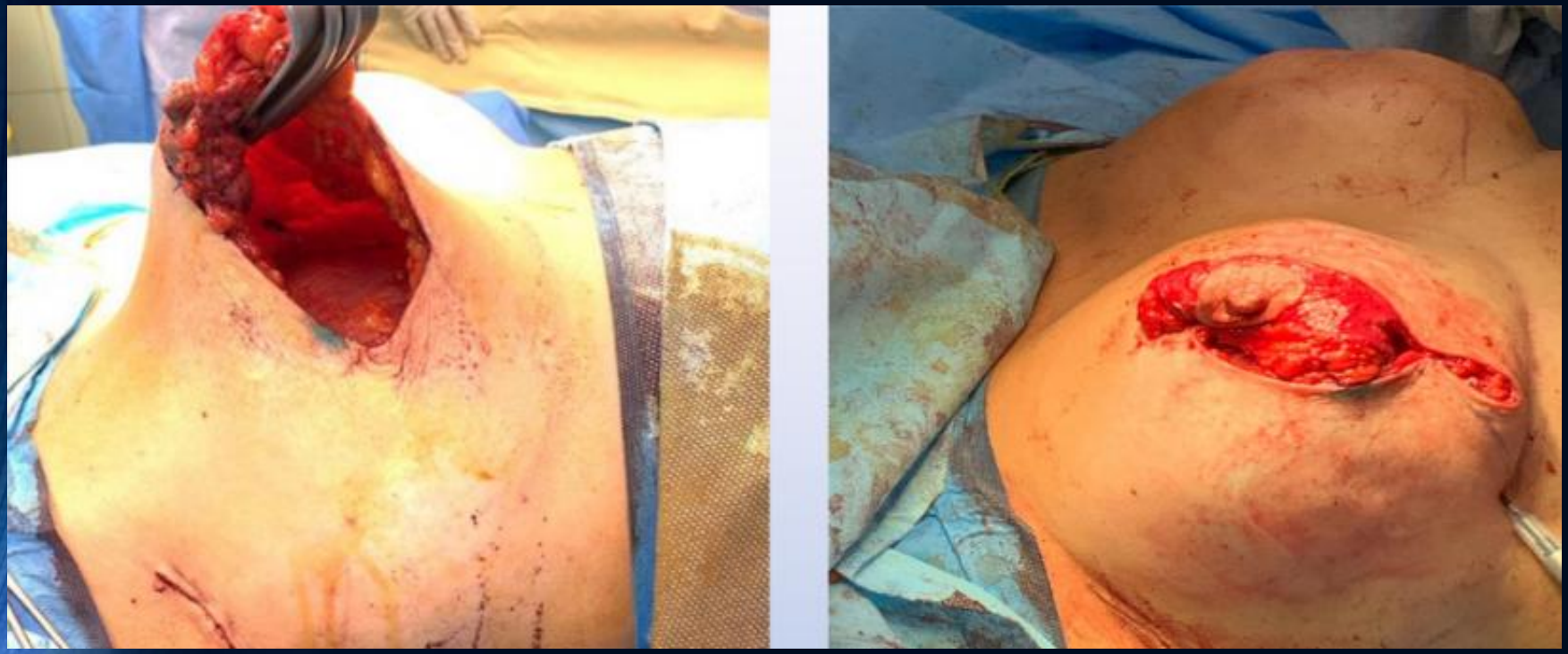


RT breast UOQ:



All proved to be IDC on CNB

The plan changed from BCT to SSM



The breast cancer ‘core’ treatment team involves the surgeon, pathologist, radiologist, and oncologist.

The role of the radiologist in breast cancer management will **vary** during the diagnostic and treatment phases.

A radiologist plays the primary role in the **initial diagnosis of breast cancer** in the identification of suspicious lesions on screening mammography, ultrasound, and MRI.

Subsequently, a radiologist also performs a biopsy,

pre-surgical planning

pre-treatment localization, and

evaluation of treatment and operative breast cancer success.

- MRI is the modality of choice for evaluation of response to NACT.
- Tumor size reduction after NAC is reliable for response to treatment.
- Microcalcification is not always a sign of residual tumor.
- Tumor necrosis ,fibrosis and additional benign lesions may overestimate residual tumor.