



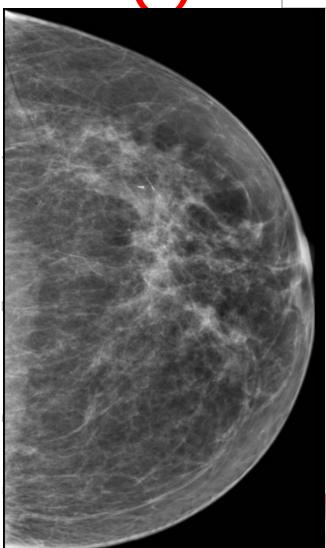


فَفَهَ مَنَهَا سُلَيْمَنَ وَكُلَّا ءَاتَيْنَا حُكُمًا وَعِلْمَأُوسَخُونَا مَعَ دَاوُودَ ٱلْجِبَالَ يُسَبِّحْنَ وَٱلطَّيْرُ وَكُنَّا فَاعِلِينَ ٥

Breast

Case (1)

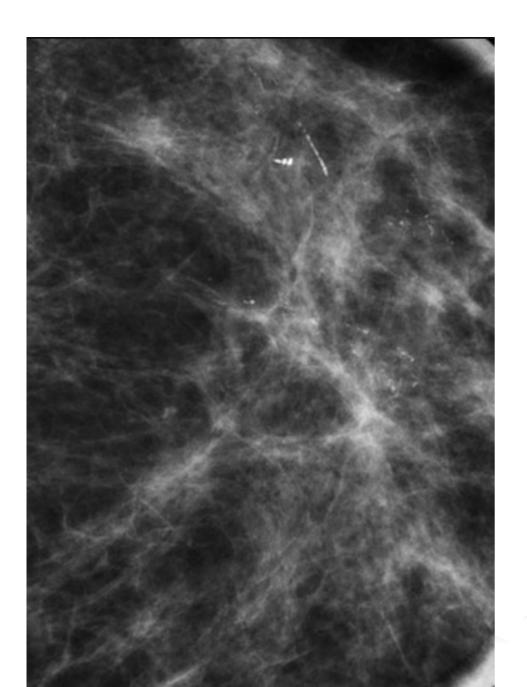
History: Routine screening



- Left CC view showing:
- ACR: B scattered fibrofatty parenchyma
- Parenchymal distortion is seen at retro-areolar regio extend to the outer quadrant

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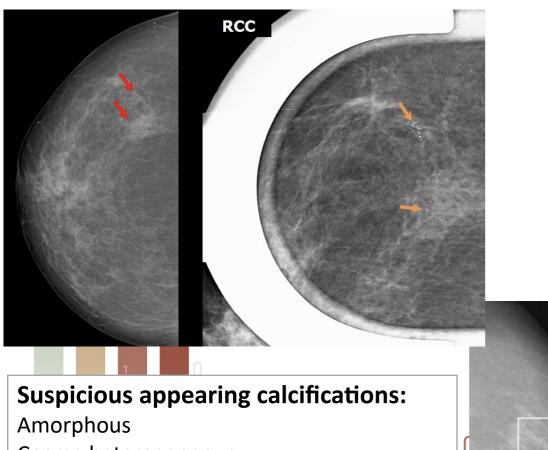
Next step? Magnification compression view



- Magnification revealed scattered groups of suspicious amorphous microcalcifications
- BIRADS 4c

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Cluster of microcalcifications



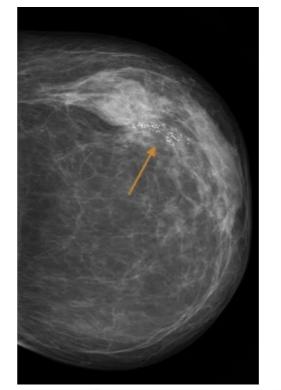
Coarse heterogeneous

High probability of cancer:

Fine Pleomorphic

Fine Linear or fine Linear Branching

Suspect: DCIS/ invasive CA



Suspicious microcalcifications

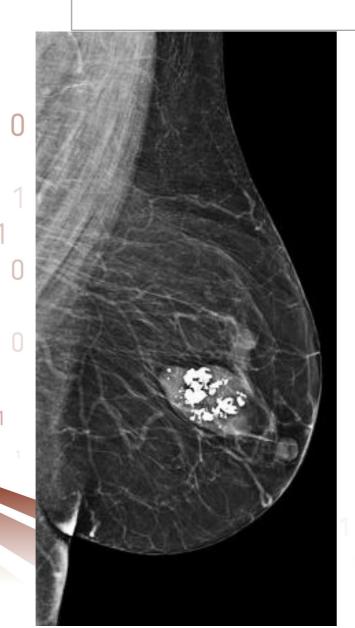
Morphology: Linear/ segmental

Size: Small

Number: The greater the number of microcalcifications in a small area, the more suspicious for malignancy (5< 1cc)

Stability:
Calcifications stable
for more than 2
years is against
malignancy

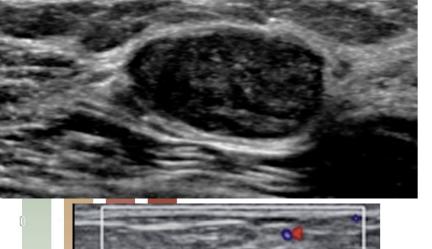
Case (2)

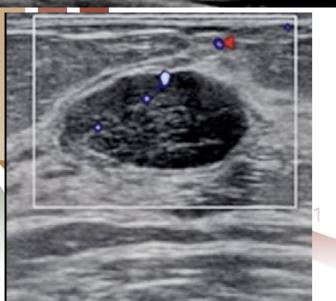


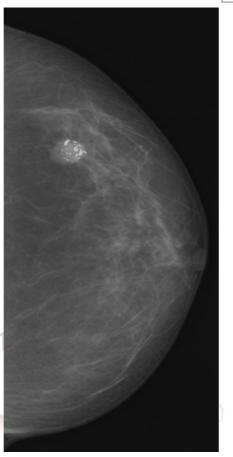
History: Routine screening

- Left MLO view
- ACR: A, almost fatty parenchyma
- Retro-areolar circumscribed oval shaped isodense mass that harboring macrocalcifications (pop corn calcifications
- BIRADS 2

Involuting fibroadenoma (Pop corn calcification)



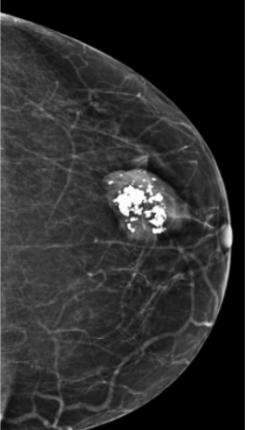


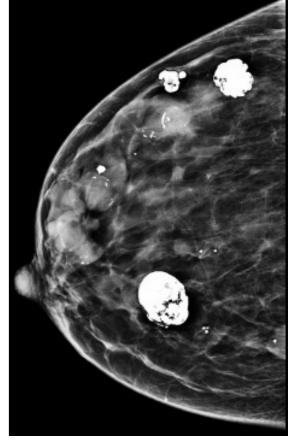


Benign calcifications:

Rim (eggshell)/ punctuate/ round

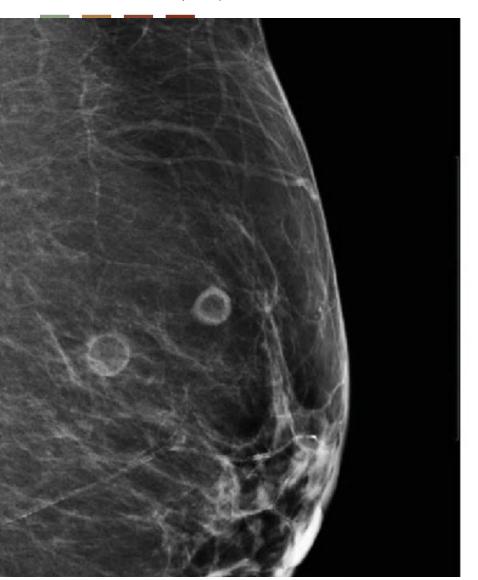
- 1-Calcified oil cyst (eggshell calcification)
- 2-Dystrophic calcification (fat necrosis)
- 3-Dermal calcifications
- 4-Popcorn (Involuting fibroadenoma)
- 5-Milk of calcium (tea cup calcification)





Case (3)

History: Routine screening

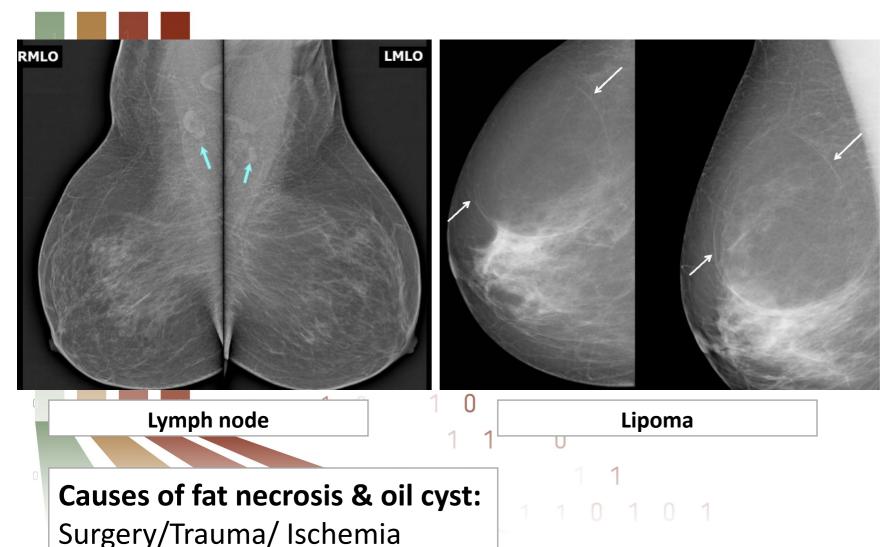




Left CC and MLO view revealed .

2 UIQ circumscribed oval rounded fat density lesion surrounded by hyperdense rim Picture suggestive of fat necrosis BIRADS 2

Fat necrosis / oil cyst



DD Fat containing masses on mammogram (benign)

1-Lymph node (ovoid + fatty hilum)

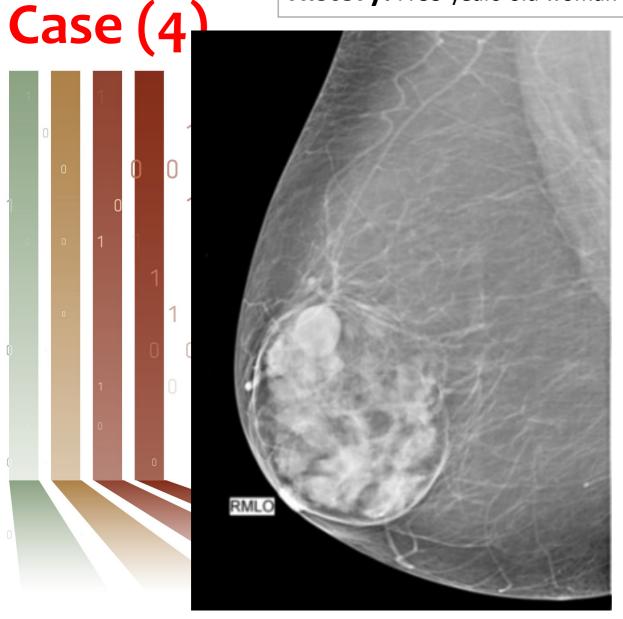
2-Lipoma (radiolucent + thin capsule)

3-Fat necrosis (egg shell calcification + central fat density)

4-Galactocele

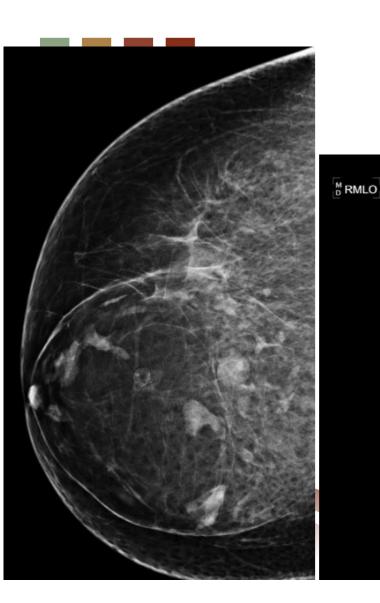
5-Hamartoma

History: A 33-years-old woman with breast lump



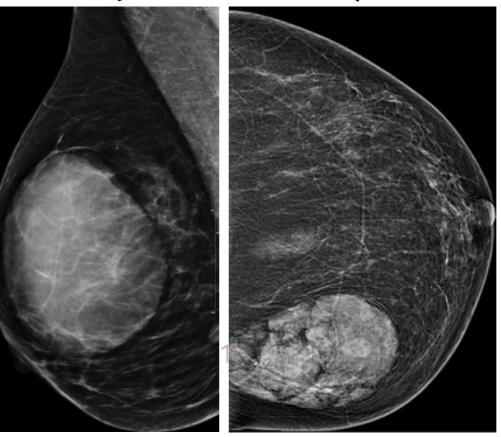
- Right MLO view:
- ACR: A almost fatty parenchyma
- Retro-areolar circumscribed encapsulated mixed density mass give the picture of breast within breast likely hamartoma
- BIRADS 2

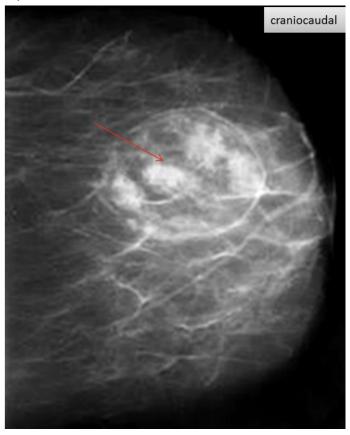
Breast Hamartoma (breast within breast)



Benign lesion containing (fat + connective tissue + pseudocapsule) = fibroadenolipoma

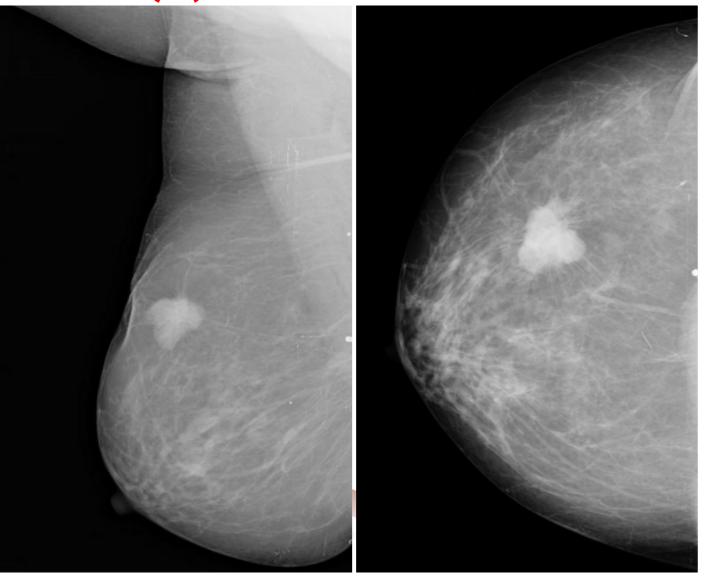
DD: Fatty breast lesions (see before)





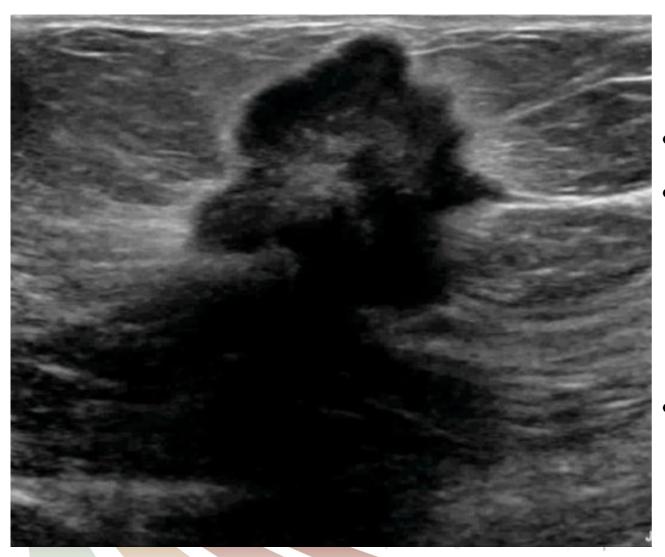
History: A 71-years-old woman with incidentally detected breast lump

Case (5)



- Right CC and MIO views
- ACR: B scattered fibrofatty parenchyma
- UOQ spiculated dense antiparallel mass
- No other suspicious microcalcifications
- BIRADS 4c for ultrasound

Next step?



- By ultrasound:
- Irregular spiculated hypoechoic solid mass with posterior accosting shadowing, surrounded by echogenic desmoplastic reaction
- BIRADS 5 for biopsy

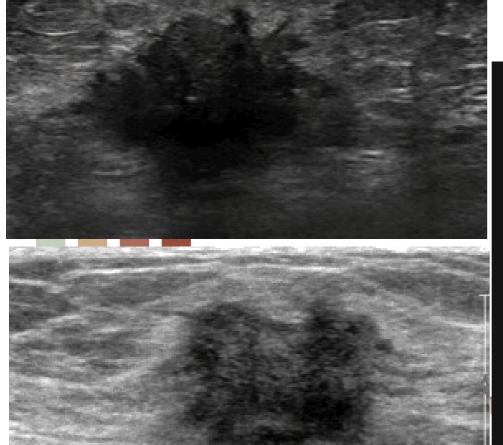
Next step?

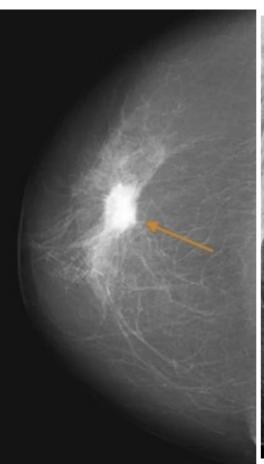
Breast cancer (BIRADS V)

Next step is biopsy

U/S guided biopsy: Trucut biopsy needle 14x10G

Stereotactic if only calcifications with no ultrasound findings: 14x10g







U/S Posterior acoustic features:

Enhancement = cyst Shadowing = cancer Combined = fibroadenoma

Category	Category1	Management	Likelihood of Cancer		
0- Assessment	Incomplete Assessment	Additional imaging required	Not applicable yet		
1	Negative	Routine annual screening	No cancer detected	CC Left external	CC Right external
2	Benign	Routine annual screening	0%	internal	internal
3	Probably Benign	Follow-up scan after 6 months or earlier, as advised by your doctor	0% to 2%	MLO Left	MLO Right
4	Probably Malign	Breast tissue biopsy recommended by the doctor	4A - 2% to 10% 4B - 10% to 50% 4C - 50% to 95%	lower	upper
5	Malignant	Biopsy to be done essentially	>95%		
6	Biopsy- Proven Malignancy	Further treatment evaluation is done by the oncologist	Cancer already present		

Case (6)

History: Withheld

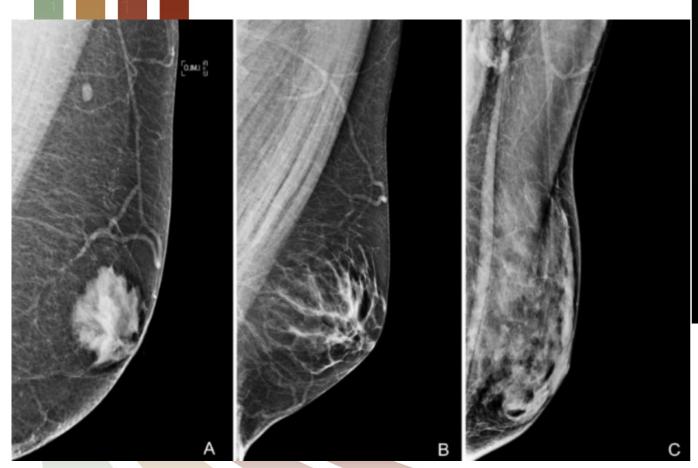


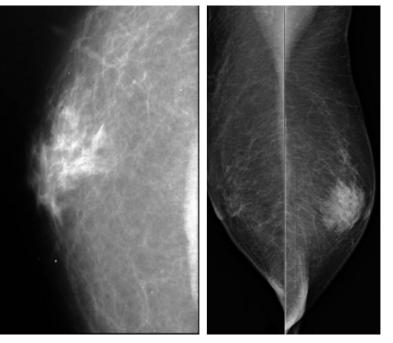
- Male patient
- Bilateral CC views
- Bilateral retro-areolar central flame shaped heterogenous density
- Likely gynecomastia

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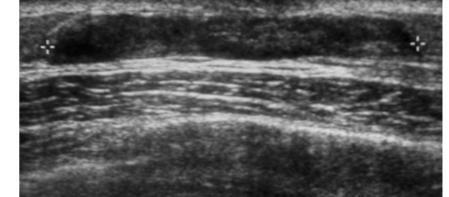
Gynecomastia

Gynecomastia: Flame shaped \triangle subareolar density Cancer: Spiculated mass, however, benign male breast mass is very rare, so it may present as round or circumscribed



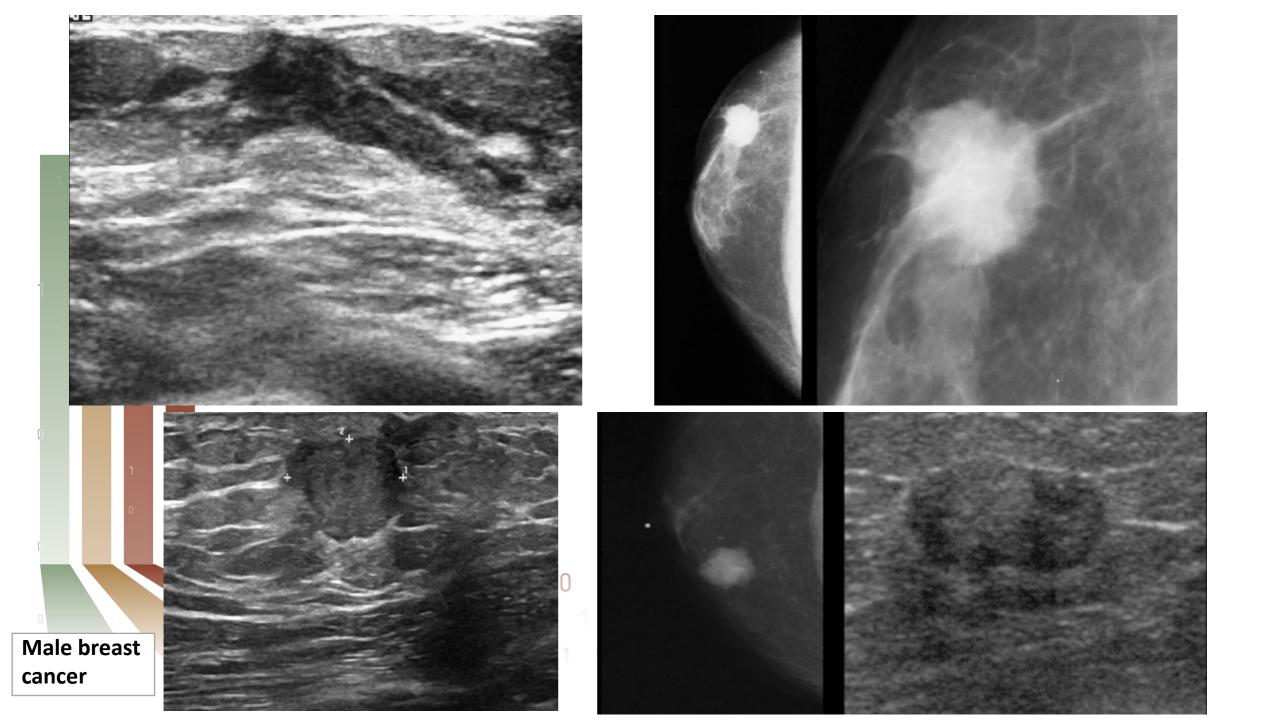


BIRADS II



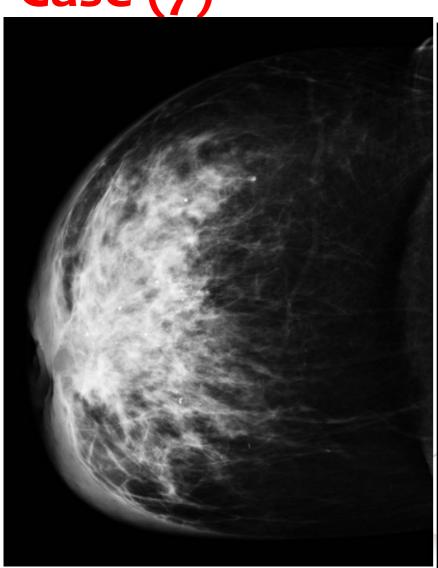
Radiologic patterns in gynecomastia

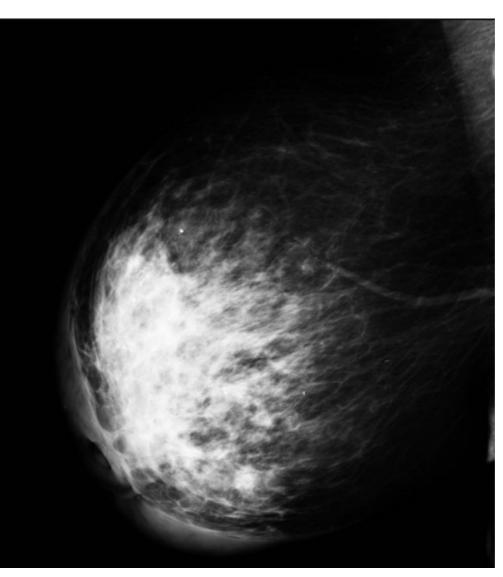
a Nodular b Dendritic c Diffuse



History: A 54-years-old woman with diagnostic workup of a large red swollen right breast

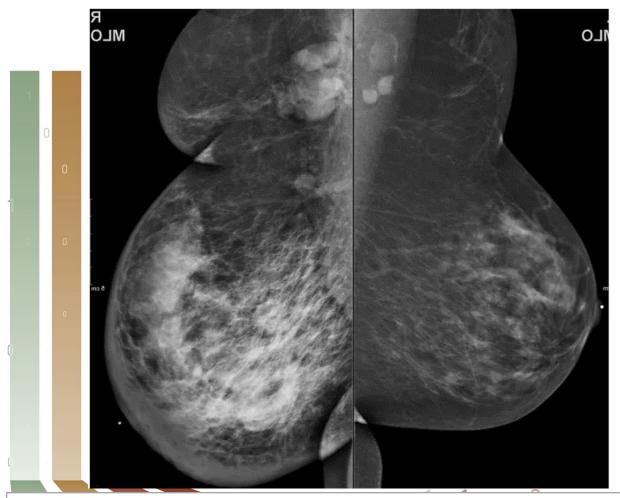
Case (7)





- Right CC and MLO views
- Diffuse breast edema in the form of skin thickening and coarse trabeculation
- Scatted multiple suspicious pleomorphic microcalcifications
- BIRADS 0
- For ultrasound assessment

Inflammatory breast carcinoma



Focal asymmetries involving most of the anterior and mid right breast with diffuse skin thickening, trabecular coarsening and increased overall density of the right breast + abnormally enlarged right axillary lymph nodes

DD: Unilateral breast skin thickening:

1-Inflammatory breast cancer:

Ductal or lobular carcinoma with invasion of the dermal lymphatics >> skin thickening, erythema, pain & swelling

Peau d'orange

Aggressive: mets to axillary LNs

2-Invasive breast cancer:

Ductal or lobular carcinoma with involvement of the skin by local extension

3-Mastitis:

Focal skin thickening, erythema (focal rather than diffuse as in inflammatory breast cancer)

NB: Bilateral breast skin thickening(systemic cause):

CHF, SVC obstruction, RF & volume over load

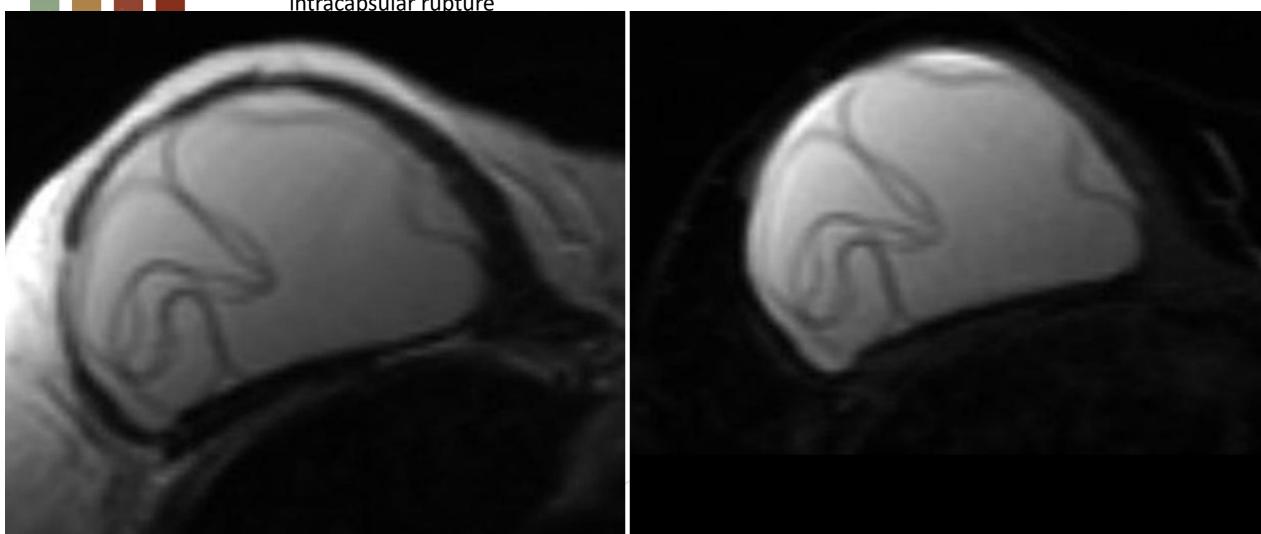
History: Withheld

Case (8)

MRI breast:

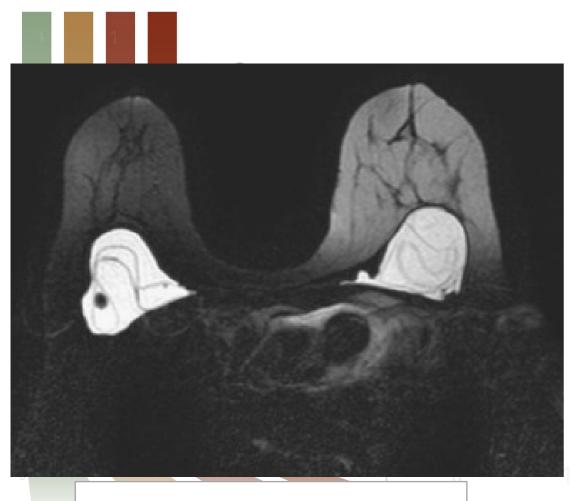
Silicon breast implant showing intracapsular lobulated line (linguine sign) suggestive of

intracapsular rupture



Intracapsular breast implant rupture

Detected on T2& STIR



Intracapsular rupture, linguine sign

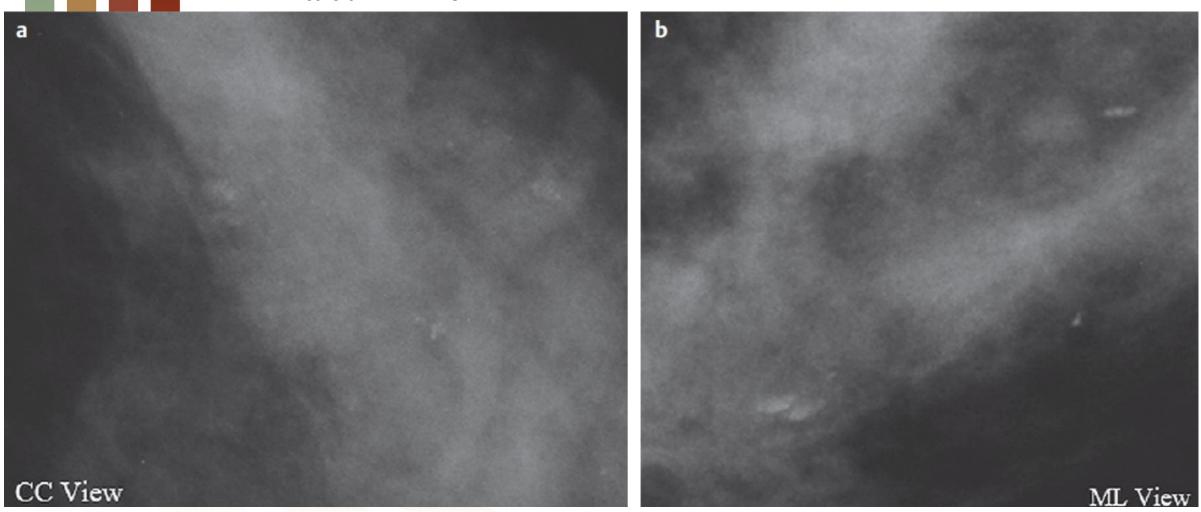


Extracapsular rupture

Case (9)

History: A 43-years-old woman with amorphous calcifications on mammogram

ML views revealed: layering of the calcifications giving the appearance of milk of calcium. BIRADS 2



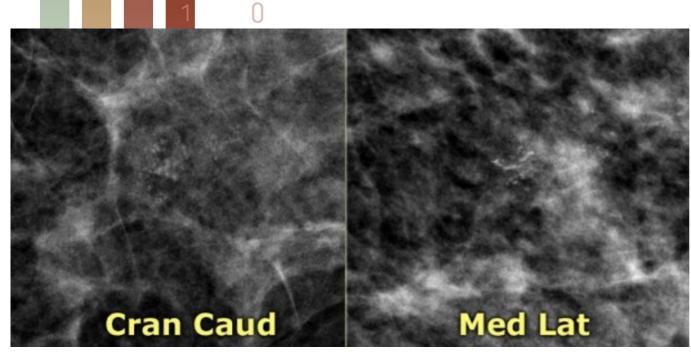
Milk of calcium

In this case:

a) Magnified craniocaudal mammographic view reveals calcifications with a somewhat amorphous appearance, (b) A subsequent horizontal beam magnification view shows that these calcifications are now more linear or crescentic in configuration, suggestive of a "tea cup" appearance, amorphous calcifications on craniocaudal (CC) view which appear crescentic on lateral view

Milk of calcium is a descriptor used when calcium accumulates in benign microcysts and is identified in 4 to 6% of women obtaining a mammogram The calcium, also referred to as sedimented calcium, appears smudgy or amorphous on CC mammographic views

Horizontal beam views will show these calcifications to have a crescentic or linear appearance secondary to the layering within the cysts (tea cup) Benign finding and requires no further work-up





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