

Mastite Granulomatosa Idiopática

{

IMAGEM

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PAPEL DA RADIOLOGIA

- Estabelecer a multiplicidade e a localização das lesões
- Documentar o tamanho das mesmas
- Identificar a formação de abscesso e possibilidade de intervenção
- Avaliar a resposta ao tratamento
- Identificar recidiva e/ou doença metacrônica

LIMITAÇÕES

Variedade de aparências inespecíficas

Diagnóstico diferencial com câncer

RECOMENDAÇÃO

- USG
- USG e MMG (pacientes > 30 anos)
- RM

Avaliação de quadros avançados, agressivos ou refratários, ou quando densidade mamária e/ou edema prejudicarem a avaliação por MMG/USG

330

 **Idiopathic Granulomatous Mastitis:
Manifestations at Multimodality
Imaging and Pitfalls¹**

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Pluguez-Turull et al 331

356 March-April 2018

radiographics.rsna.org

Table 1: Reported Imaging Findings of IGM

Finding	Prevalence (%)
Mammography	
Focal or global asymmetry	36–75
Irregular focal mass	11–67
Normal findings	8–45
Axillary adenopathy	15–18
Skin thickening with edema or trabecular thickening	5–21
Asymmetrically increased breast density	4.5–17.0
Architectural distortion	9
Circumscribed mass	9
Calcifications	Very rare

US

Irregular hypoechoic mass with tubular extensions	40–100
Axillary adenopathy	28–60
Circumscribed hypoechoic mass	25–52
Skin thickening and edema	17–60
Abscess and/or sinus tract	6.6–54.0
Heterogeneous hypoechoic mass (or confluent masses) with indistinct, lobulated, or angular margins	6.6–33.0
Parenchymal distortion with or without acoustic shadowing, no discrete mass	4.0–26.7
Normal findings	3.4–20.0
Heterogeneous parenchyma or parenchymal edema	10–13

Multiparametric MR imaging

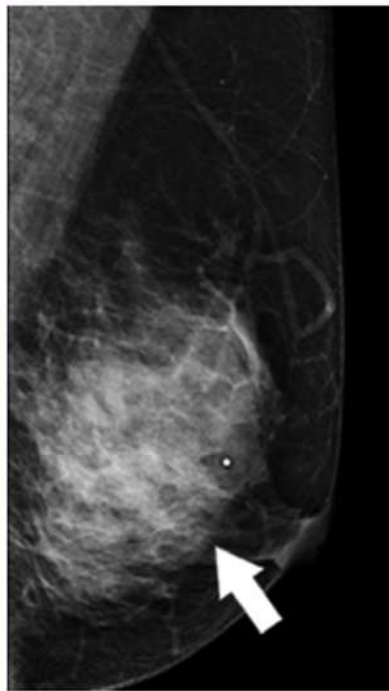
T2 hyperintensity (edema) of breast stroma	Majority
Rim-enhancing lesions (microabscesses) or heterogeneously enhancing masses, with or without NME	71–86
Segmental or regional NME	30–80
Contrast enhancement with variable kinetic properties:	
Type I	38.0–82.7
Type II	13.8–40.0
T2-hypointense enhancing mass with irregular margins	20

Note.—MR = magnetic resonance, NME = nonmass enhancement.

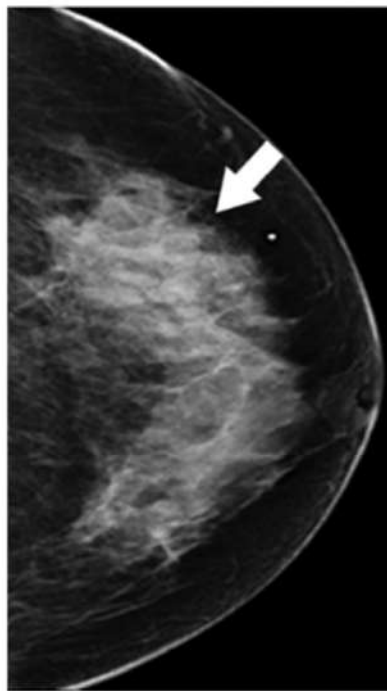
Table I: Studies with their reference number including demographic data and diagnostic techniques.

Reference number	Number of patients (n)	Age (year) (mean \pm SD/median)	Range (year)	US n (%)	MG n (%)	MRI n (%)
2	30	33	21-50	30 (100)	11 (36.7)	5 (16.7)
5	11	38.7	29-61	11 (100)	11 (100)	9 (81.8)
6	41	34 ^{β}	--	29 (70.7)	29 (70.7)	--
7	8	37	27-78	8 (100)	6 (75)	4 (50)
8	27	38	21-73	26 (96.3)	19 (70.4)	--
9	10	35.2	24-48	10 (100)	4 (40)	4 (40)
11	48	--	--	48 (100)	--	--
12	54	33.1	22-44	54 (100)	45 (83.3)	--
13	36	37	21-51	36 (100)	18 (50)	36 (100)
14	29	35.14 \pm 9.9	20-69	29 (100)	14 (48.3)	29 (100)
15	20	38	25-58	--	--	20 (100)
16	11	38	27-53	11 (100)	9 (81.8)	7 (63.6)
17	43	33.5	24-49	39 (90.7)	--	--
18	43	34	22-47	22 (51.2)	6 (14)	--
19	15	36	24-59	15 (100)	15 (100)	--
20	14	46 \pm 12	27-78	25 (67.6)	--	1 (3)
21	206	32	22-40	206 (100)	186 (60.3)	--
22	24	38.4	28-60	24 (100)	7 (29.2)	1 (4.2)
23	21	36.3 \pm 11.4	20-67	21 (100)	19 (90.5)	6 (28.6)
24	9	45.2	35-57	9 (100)	9 (100)	9 (100)
25	40	39.1 \pm 11.5	21-71	40 (100)	20 (50)	20 (50)
26	17	44	25-72	15 (88.2)	16 (94.1)	5 (29.4)
27	11	34.8	19-42	11 (100)	10 (90.9)	2 (18.2)
28	20	38.1	19-66	12 (60)	20 (100)	--
29	27	37.81 \pm 7.1	24-56	27 (100)	9 (33.3)	--
30	16	34 ^{β}	24-51	16 (100)	9 (56.3)	4 (25)
33	39	40.33	24-58	--	--	39 (100)
34	37	36 \pm 8	20-67	--	--	37 (100)
35	7	35	28-41	7 (100)	3 (42.9)	7 (100)
36	12	38	--	--	--	12 (100)

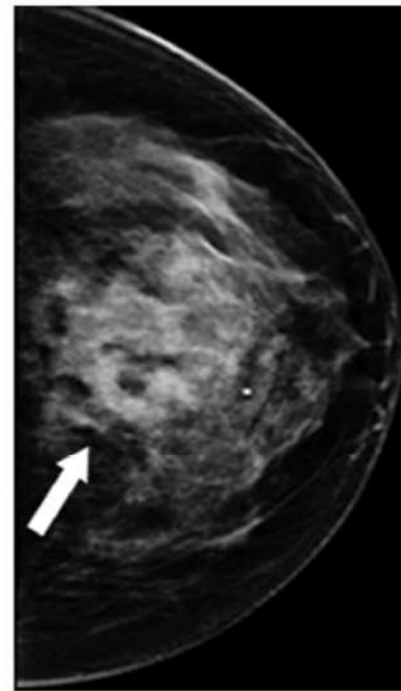
β median; SD = Standard deviation; US = Ultrasonography; MG = Mammography; MRI = Magnetic resonance imaging.



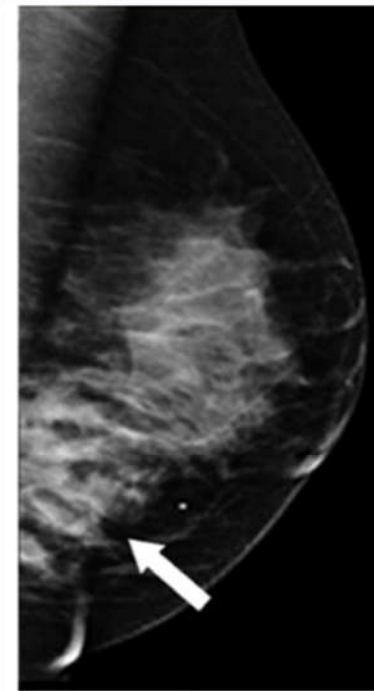
2a.



2b.



3a.



3b.

2. 37a, nódulo e dor nos QQLL ME

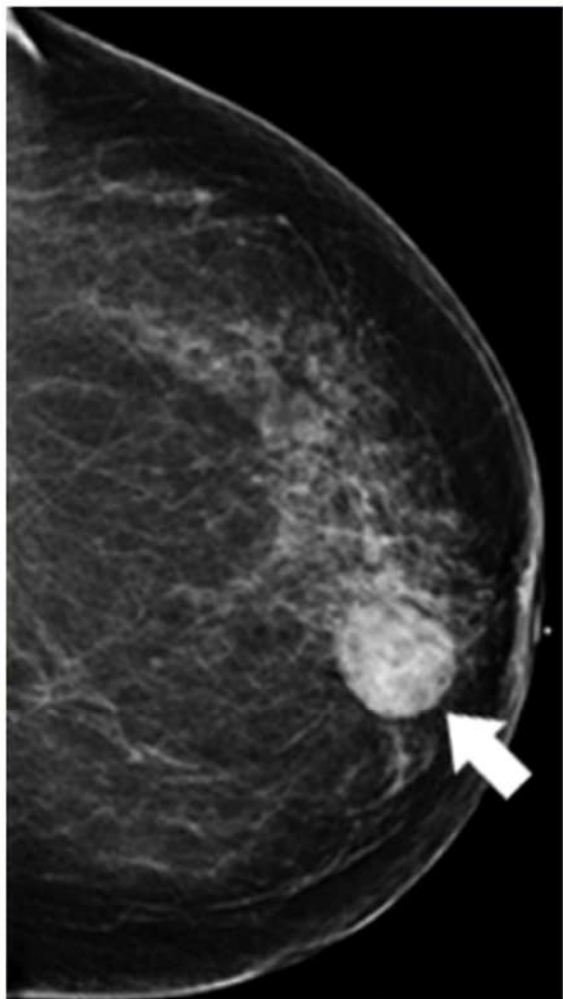
3. 32 a, nódulo e dor QQII ME



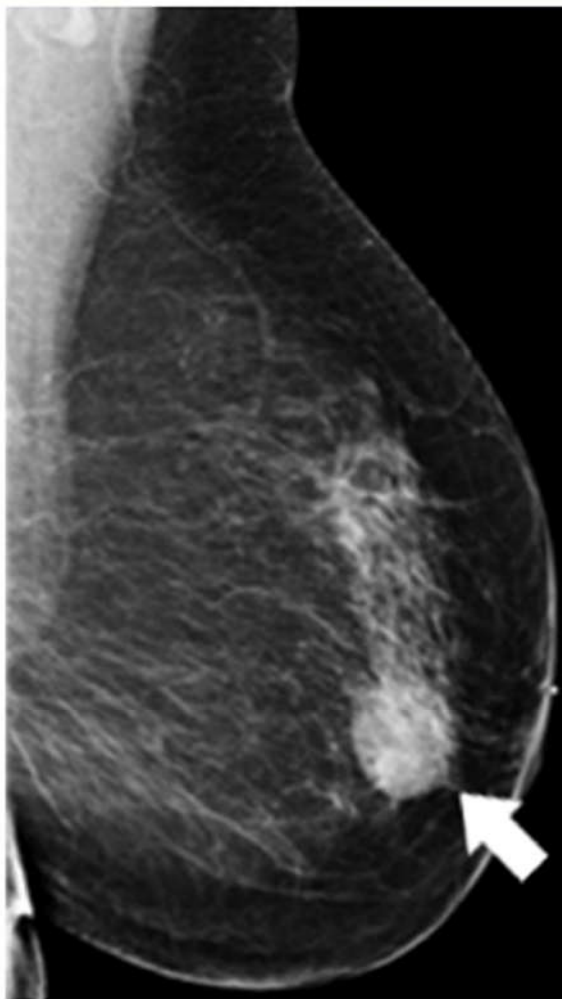
2c.



3c.



a.



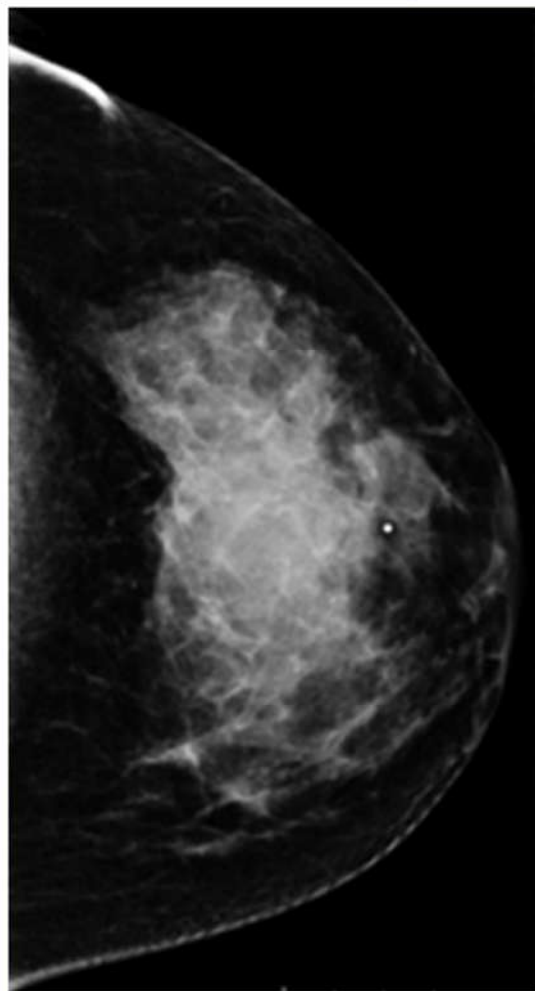
b.

52a, nódulo RRA ME

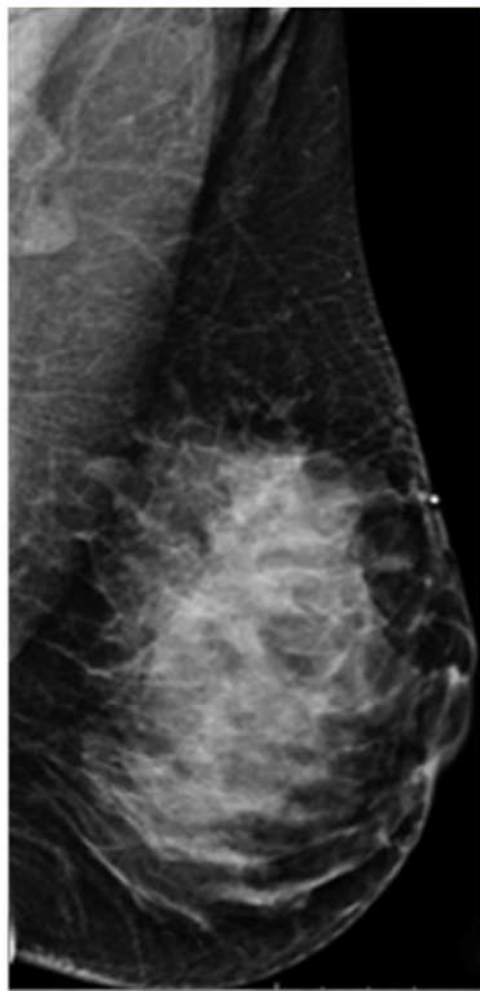


Left sub areolar Rad

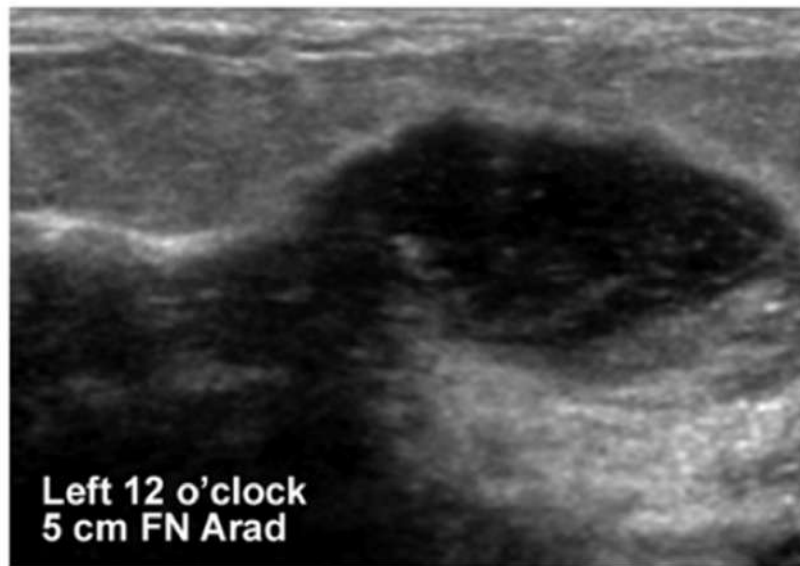
c.



a.

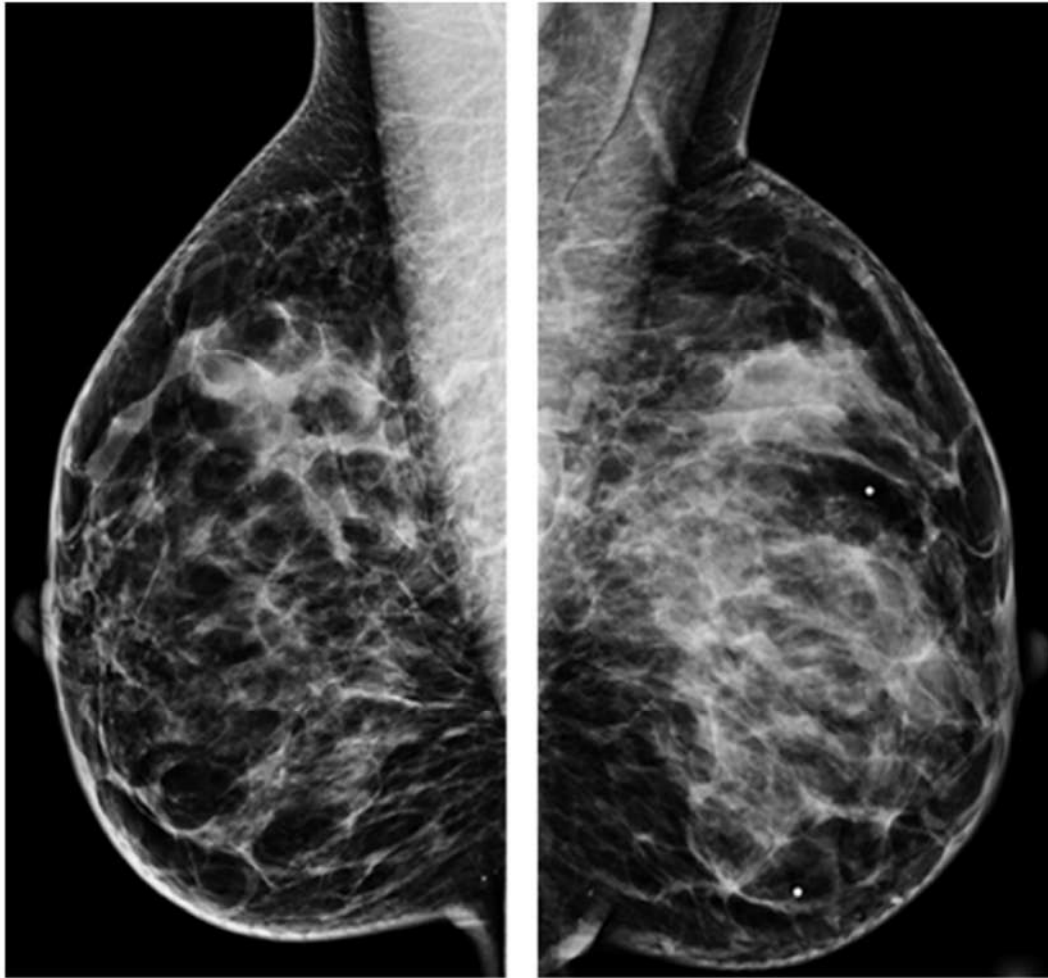


b.



c.

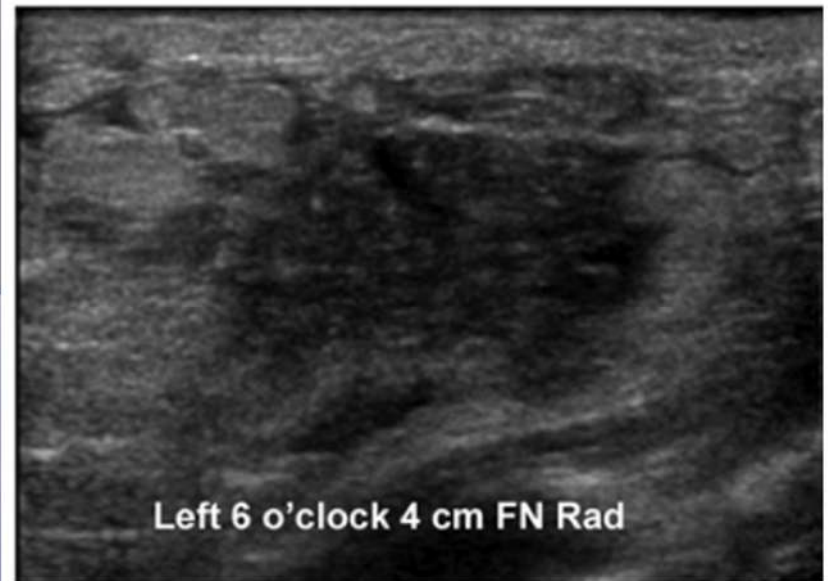
30a, nódulo JQS ME



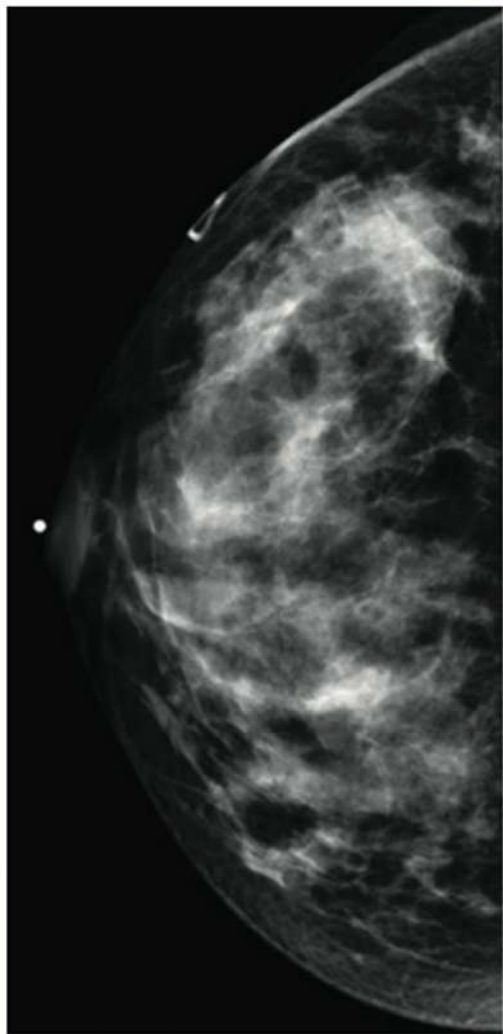
a.

b.

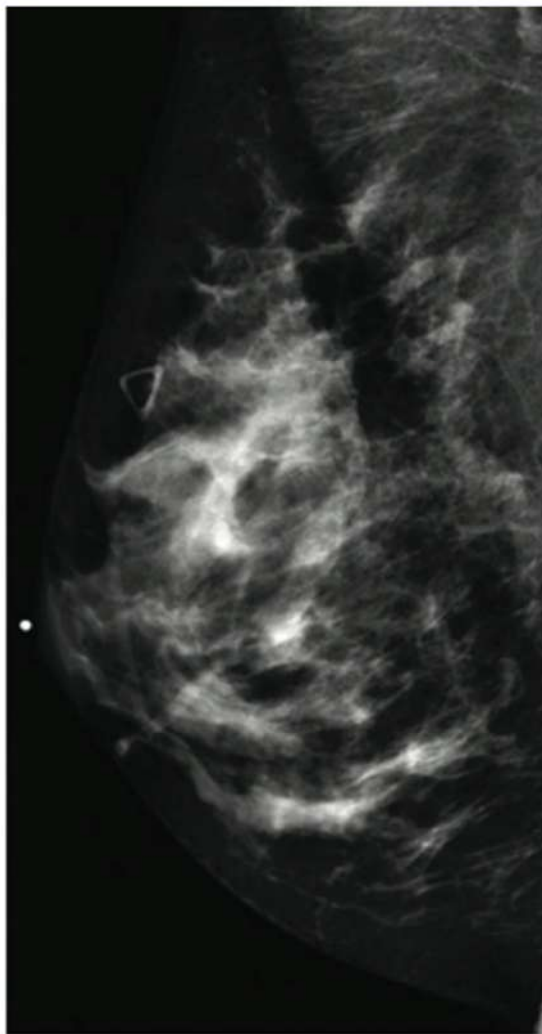
30a, endurecimento, dor e
eritema QQII ME



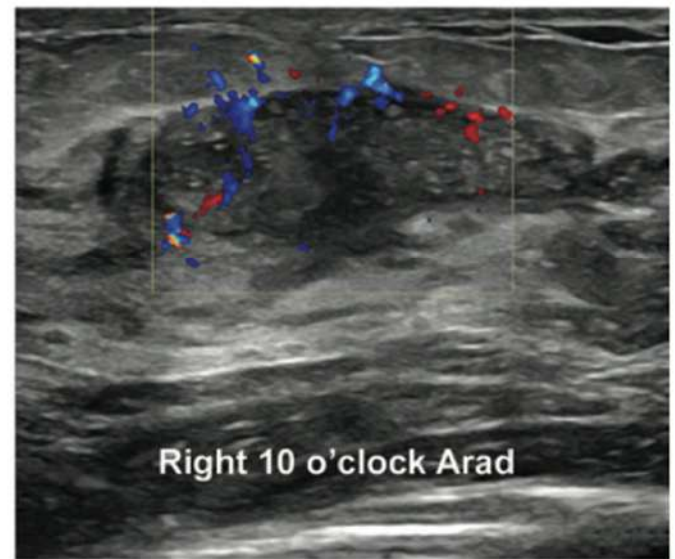
c.



a.

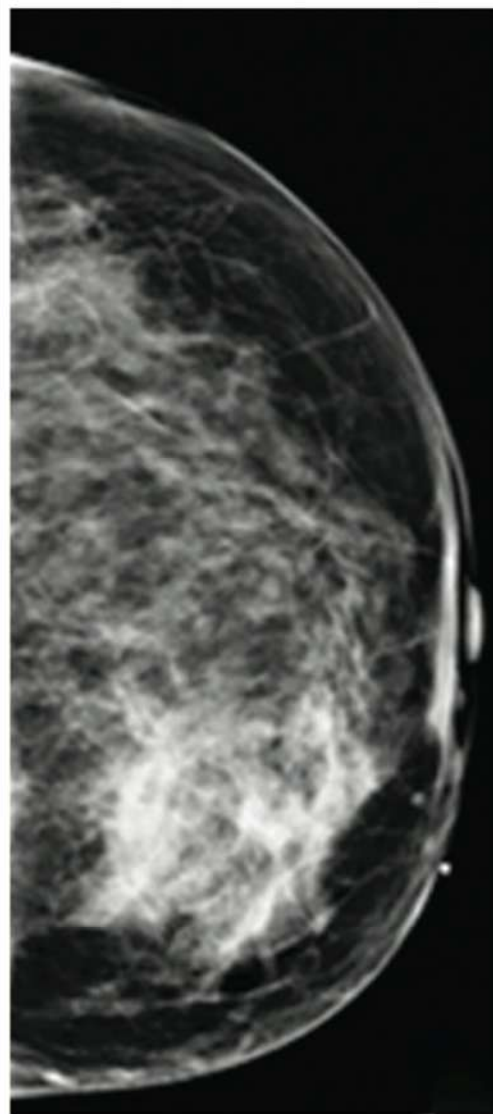


b.

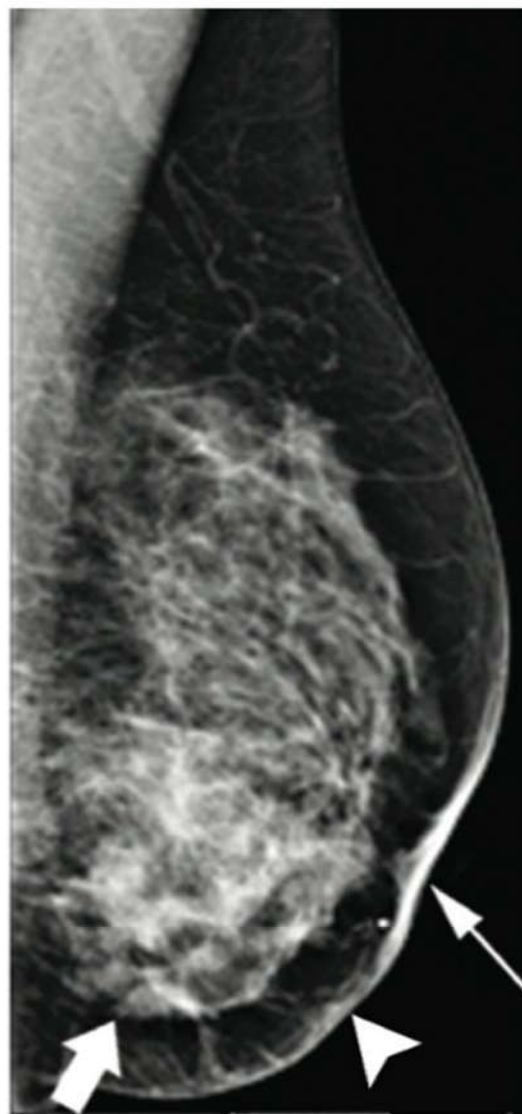


c.

26a, nódulo QSL MD



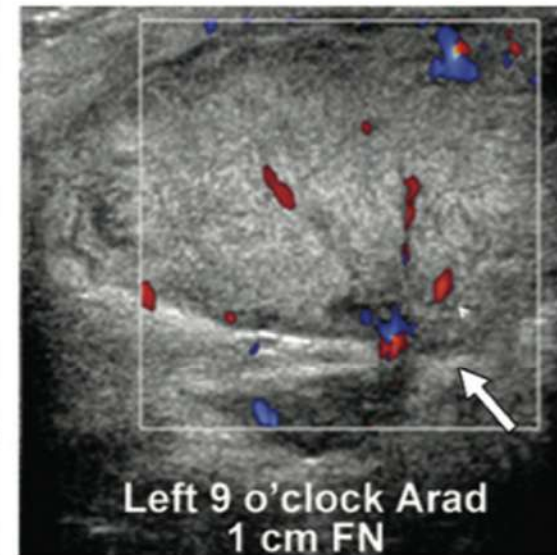
a.



b.

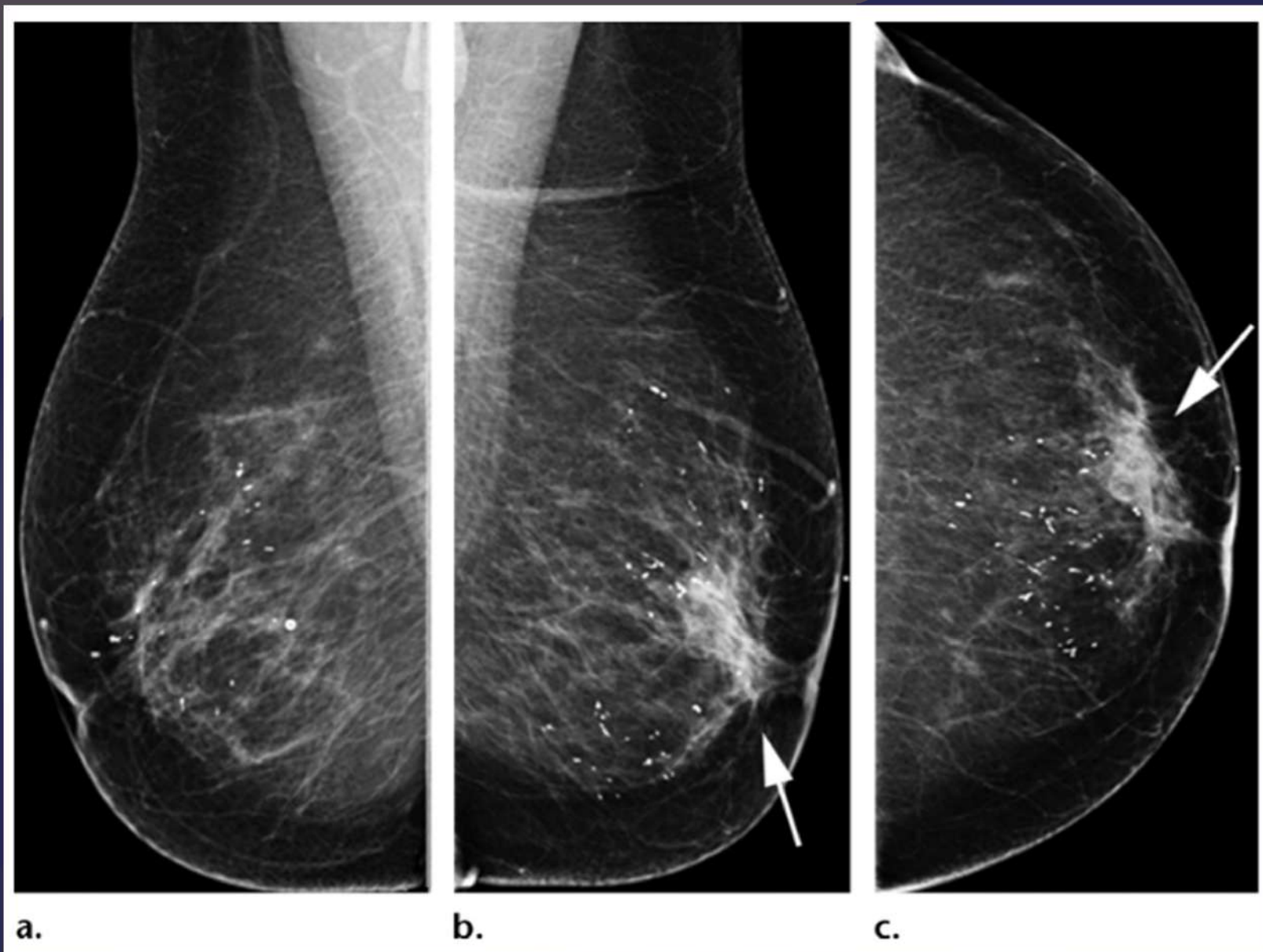


c.

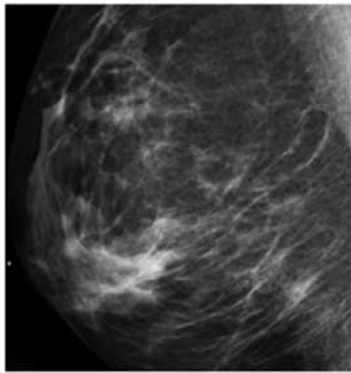


d.

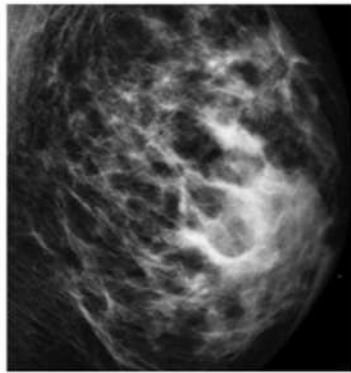
34a, MMG: AF QIM ME com retração mamilar, distorção arquitetural na RRA e espessamento cutaneo



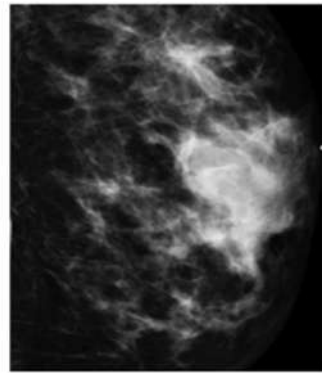
62a, fluxo mamilar amarelado e dor ME
MMG massa irregular RRA E sem correlação ecográfica



a.



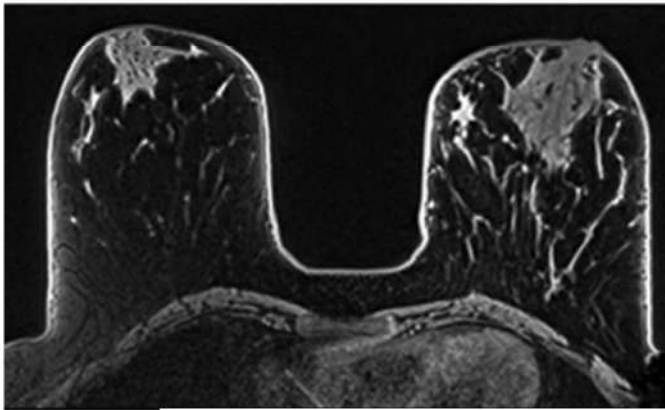
b.



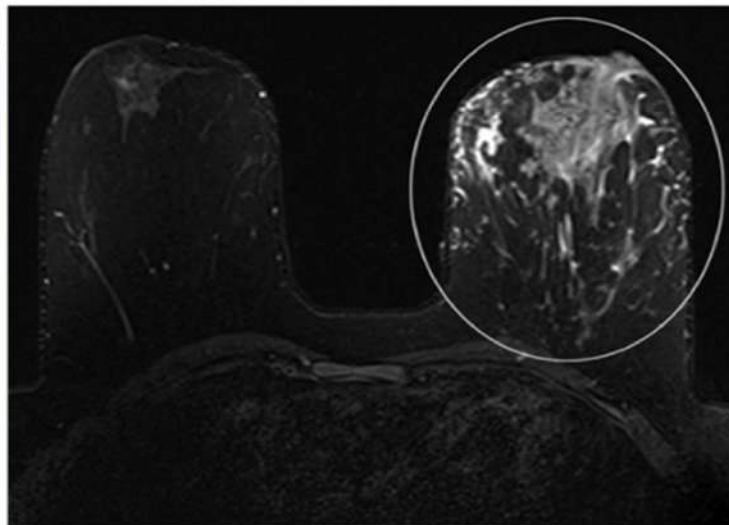
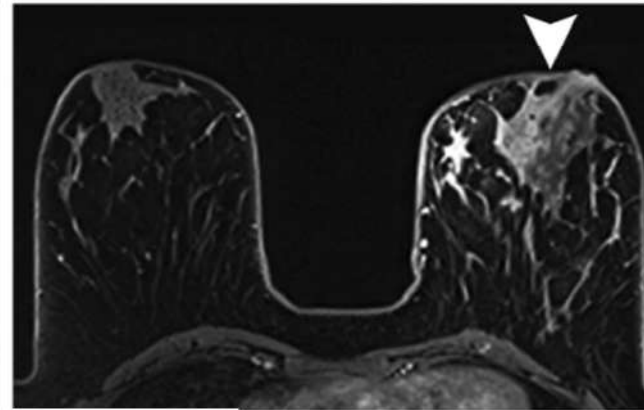
c.



d.

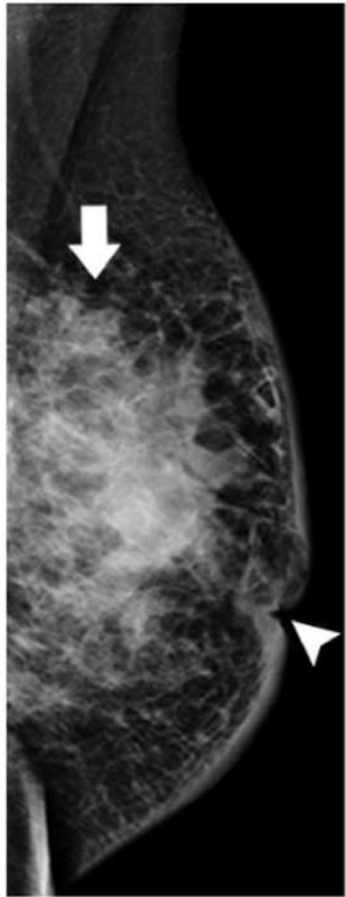


e.

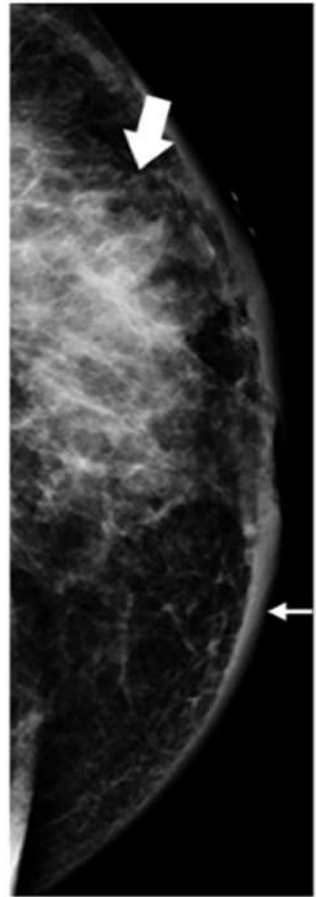


g.

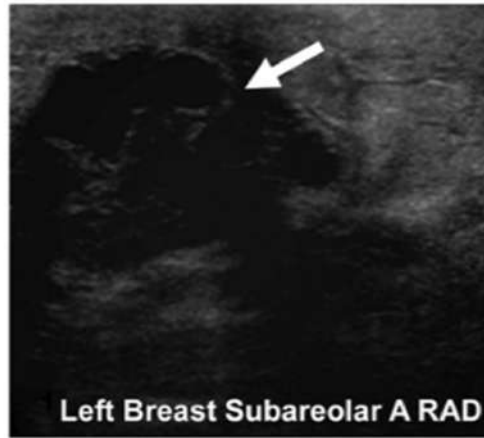
24a, tumor endurecido e doloroso
RM: grande realce segmentar heterogêneo na RRA ME com aumento de sinal em T2, e curva tipo II



a.

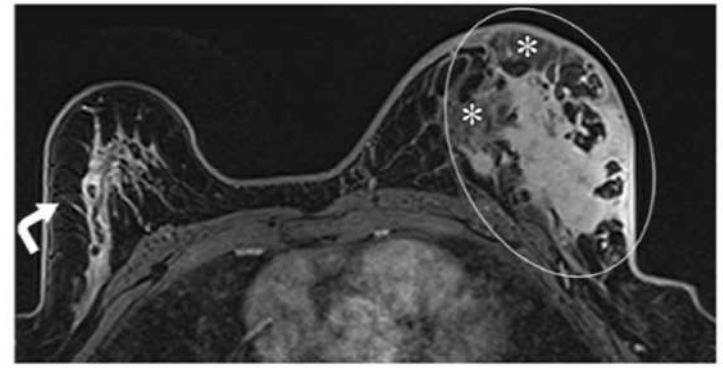


b.

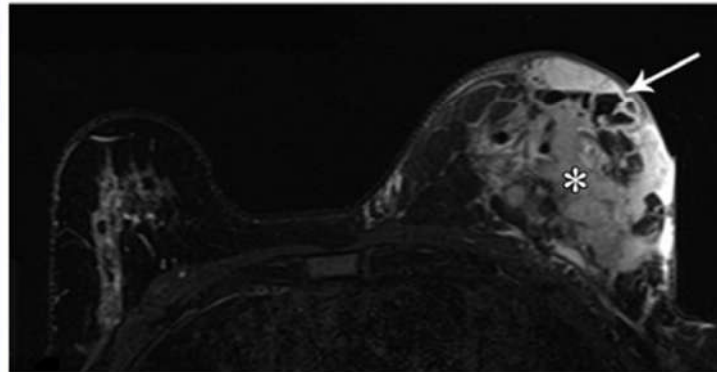


c.

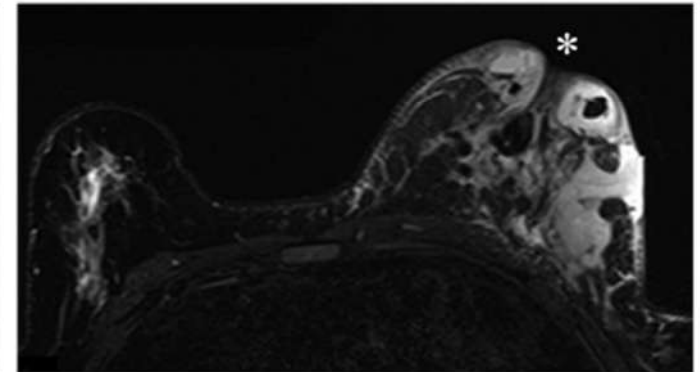
46a, dor, eritema, edema, úlcera, e tumor ME
RM: realce heterogêneo, com aumento de sinal em T2, e curvas tipo I e II, lesões com realce periférico sugestivas de coleção.



e.



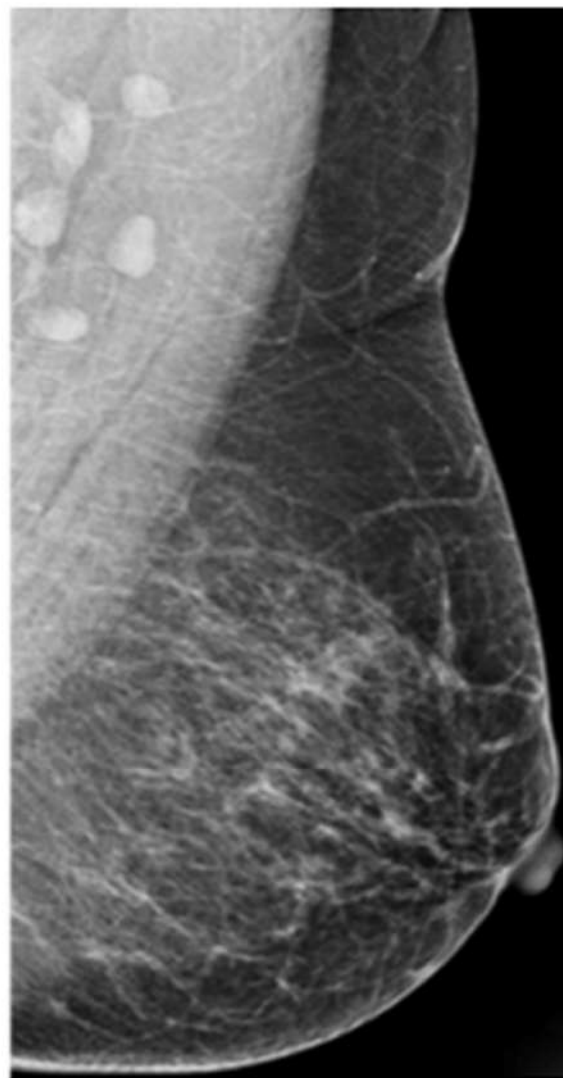
f.



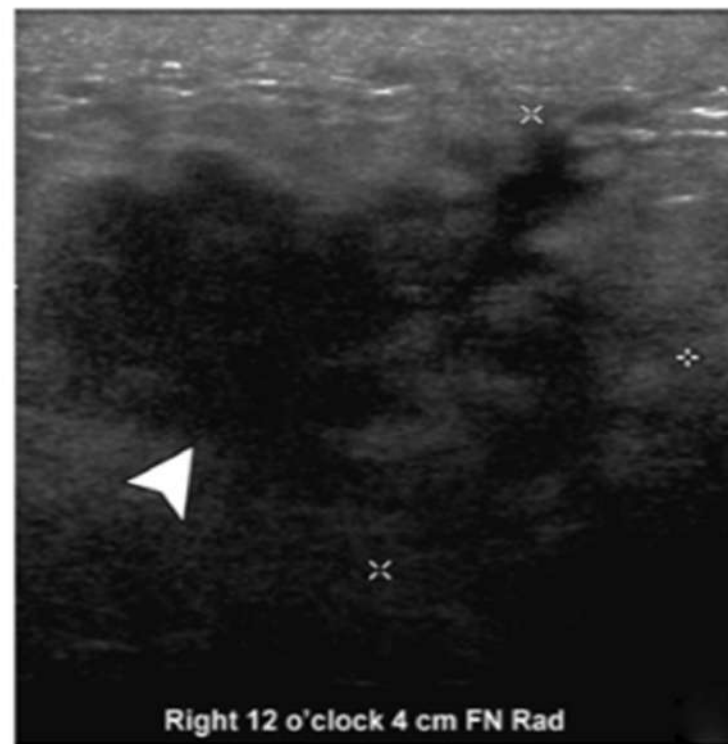
g.



a.



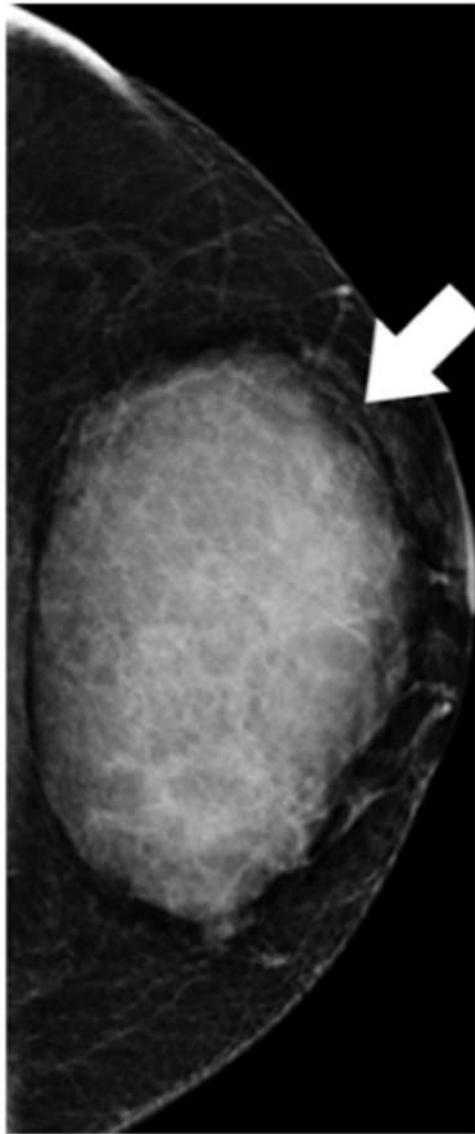
b.



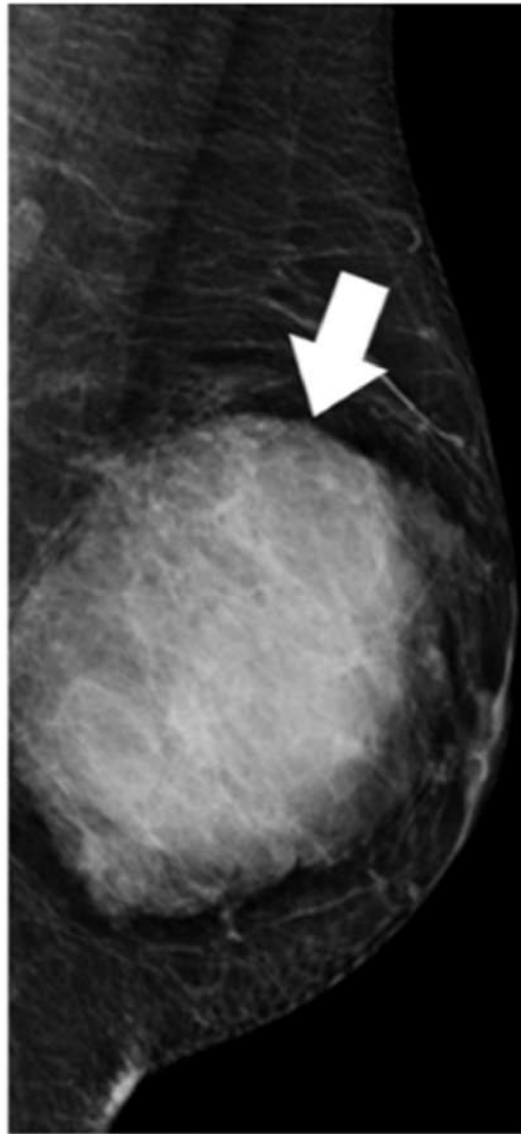
c.

62a, tumor QQSS MD e edema

Carcinoma inflamatório



a.



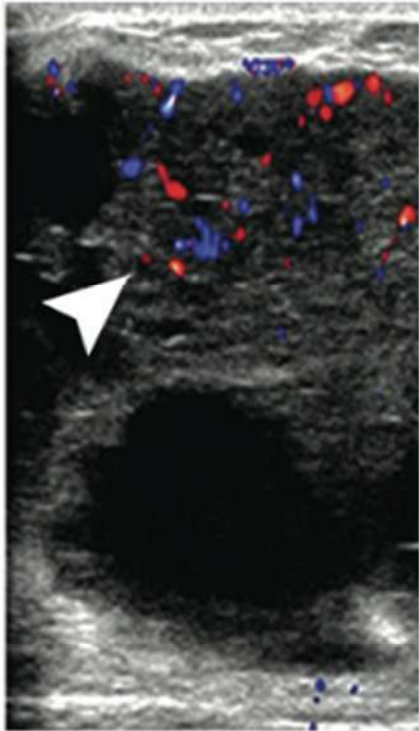
b.



c.

29a, nódulo, dor e febre

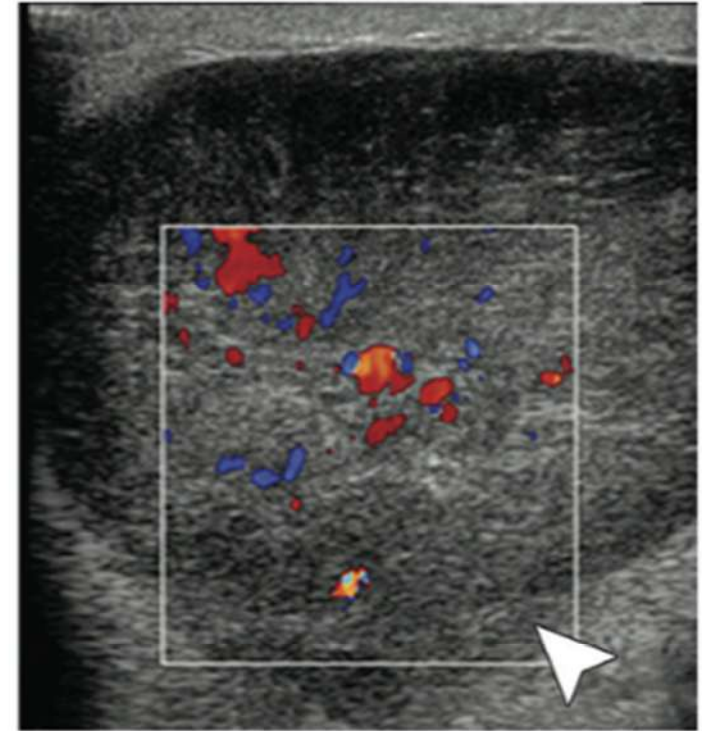
Mastite infecciosa



a.



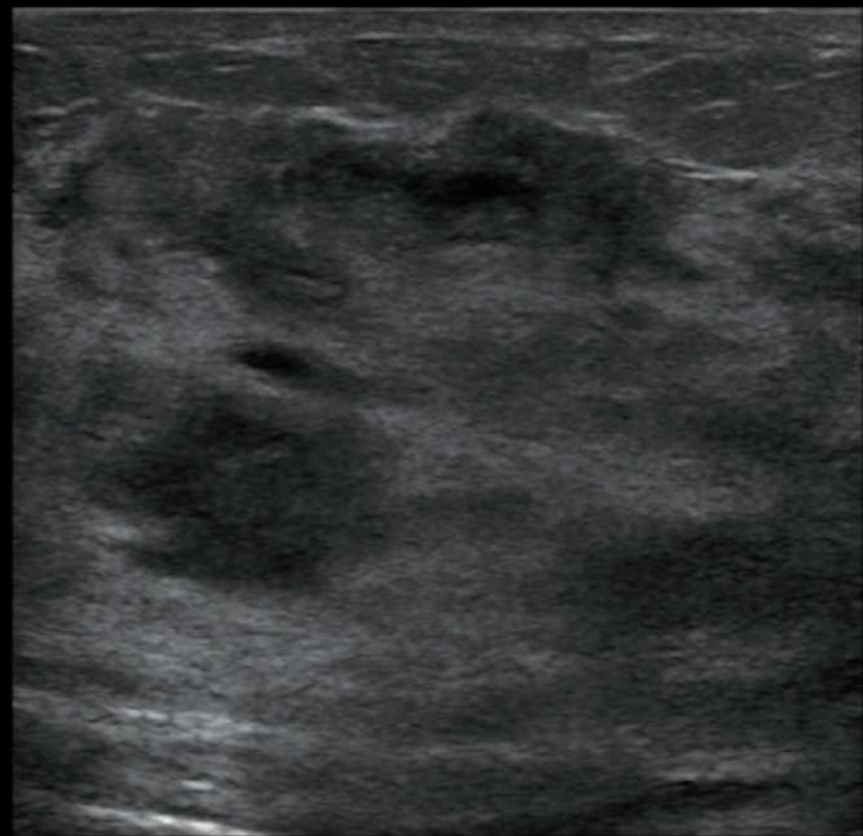
c.



d.

28a, tumor e eritema

Carcinoma
inflamatório

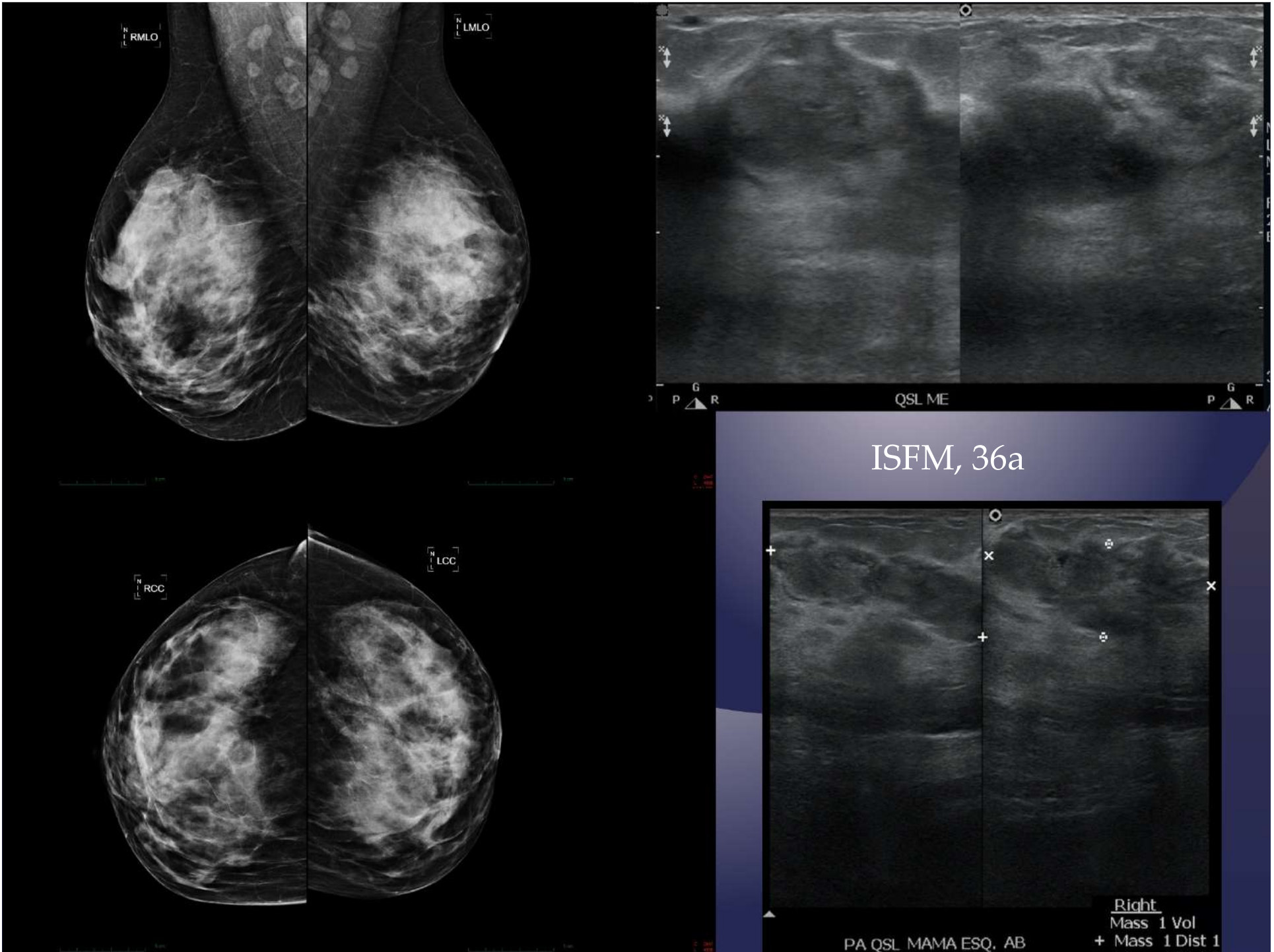


MAMA ESQUERDA QQ LL



MAMA ESQUERDA QQ LL

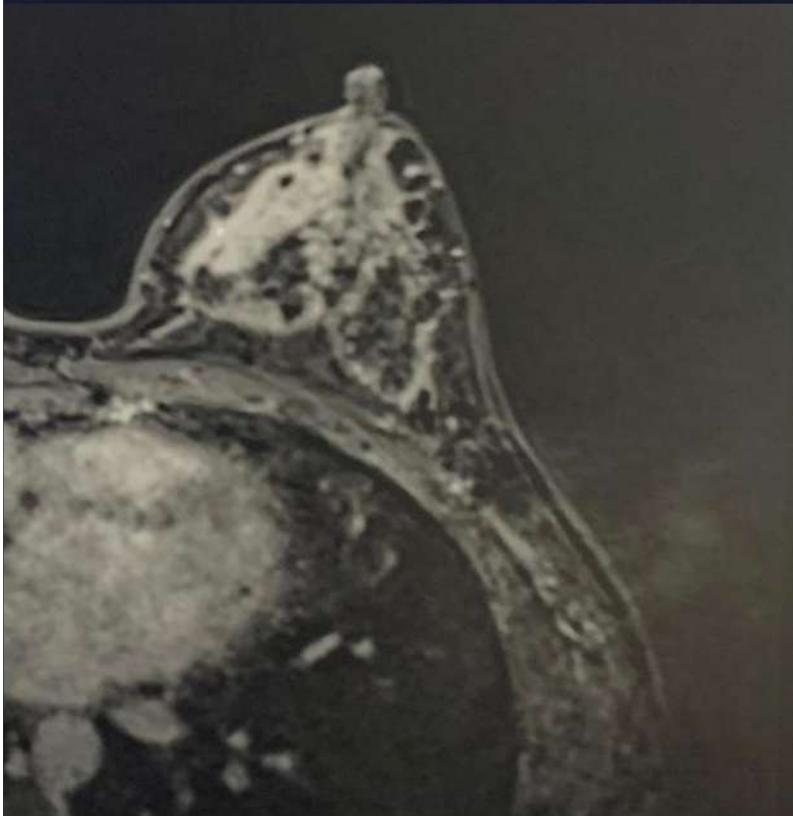
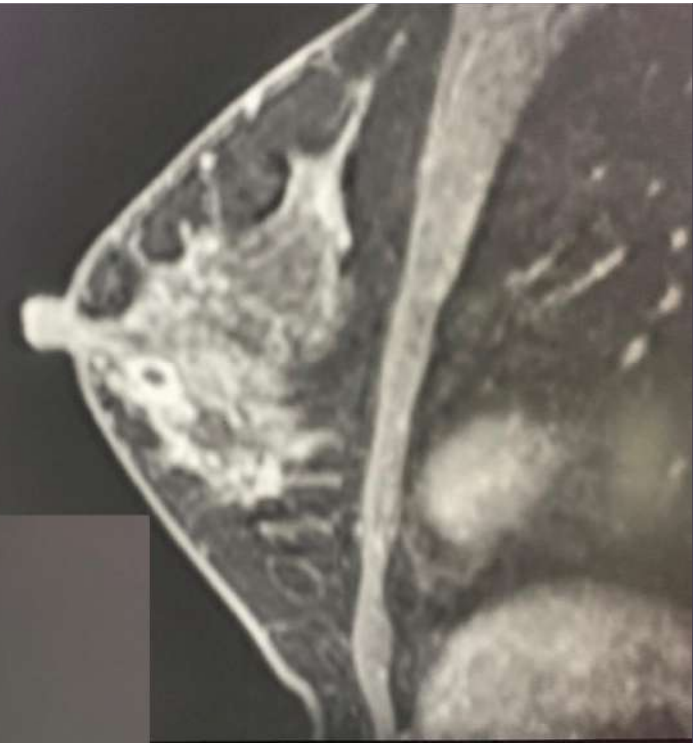
COS, 32a





KCAP, 28a





SCS, 29a

Realce não-nodular,
segmentar
heterogêneo, curva
tipo III, linfonodo
axilar com
hipertrofia cortical

Table 2: Common Clinical and Imaging-based Differential Diagnoses for IGM

Diagnosis	Demographics	Clinical Manifestations	Imaging Findings	Histopathologic Features
IGM	Mainly affects premenopausal and parous women (after nursing period)	Palpable mass Mastalgia with or without mild focal skin erythema or draining sinus History of failed antibiotic treatments	Mammography: focal asymmetric density or irregular mass, trabecular and skin thickening US: irregular hypoechoic mass with hypoechoic tubular extensions MR imaging: heterogeneous enhancing T2-hyperintense mass and/or rim-enhancing lesions with NME	Lobulocentric noncaseating granulomas Negative microbial staining and culture results
IBC	Mainly affects older women (average age, 58 years, as compared with 33 years for IGM group) Higher prevalence in African-American individuals	Skin erythema in at least one-third of the breast Peau d'orange Asymmetric breast engorgement Onset to manifestation of symptoms, less than 3 months Axillary adenopathy in approximately 50%–85% of cases	Mammography: skin and trabecular thickening, asymmetric increased breast density with or without focal asymmetry, irregularly shaped mass, axillary adenopathy US: extensive skin thickening and breast edema, dilated lymphatics, axillary adenopathy, heterogeneous parenchyma with or without suspicious or conglomerate masses MR imaging: breast and chest wall edema, streaky T2 hyperintensity, dilated lymphatics, skin enhancement, contiguous or coalescent irregular breast masses with rapid enhancement and washout kinetics (type III)	Most often invasive ductal carcinoma that is poorly differentiated, with dermal lymphovascular invasion No inflammation
Infective mastitis	Common in females of reproductive age, but seen in persons of all ages	Noncyclical breast pain and/or tenderness Erythema Fever with or without abscess Clinical unresponsiveness to empiric antibiotics in the presence of positive microbial stains and/or cultures suggests an atypical or resistant organism	Mammography (often not performed): trabecular and skin thickening, asymmetric increased breast density US: diffuse or focal skin thickening, inhomogeneous breast tissue with or without irregular hypoechoic mass (with or without fluid collection) (particularly lactation mastitis)	Abundant leukocytes Positive microbial staining and culture results, with <i>Staphylococcus</i> and <i>Streptococcus</i> bacteria often seen Inspissated secretions Atypical organisms for which additional staining is required for identification may be seen
Tuberculous mastitis	Seen in endemic areas, high-risk populations, and persons with a history of pulmonary tuberculosis (50% of cases)	Palpable breast mass Axillary lymphadenopathy Unilateral involvement Less mastalgia compared with the mastalgia occurring with IGM	Mammography: findings similar to those of infectious mastitis US: heterogeneous hypoechoic irregular mass, axillary lymphadenopathy with or without fluid collections	Caseating granulomas Positive acid-fast or Fite staining results

(continues)

Table 2: Common Clinical and Imaging-based Differential Diagnoses for IGM (continued)

Diagnosis	Demographics	Clinical Manifestations	Imaging Findings	Histopathologic Features
Mammary duct ectasia	Mainly affects perimenopausal and postmenopausal women	Often incidental Subareolar breast mass with or without noncyclical breast pain Unilateral or bilateral Nipple involvement and nonbloody nipple discharge are common	Mammography: tubular or branching retroareolar structures with thick rodlike (secretory) calcifications US: dilated subareolar ducts, thick walls, anechoic fluid collections with debris (with or without intraductal mass or filling defects) MR imaging: retroareolar T2-bright tubular structures	Dilated ducts with luminal, periductal, and stromal lipid-laden histiocytes Periductal fibrosis Calcifications in duct lumen or wall
Diabetic mastopathy	Affects longtime insulin-dependent females, persons with a history of autoimmune or endocrine disease (thyroid), and premenopausal women	Hard palpable mass(es) Nontender Usually multiple and bilateral	Mammography: ill-defined, dense, noncalcified mass(es) or asymmetric densities US: irregular hypoechoic mass, strong posterior acoustic shadowing, absent Doppler color flow MR imaging: T2-hypointense tissue when breast is densely fibrotic, nonspecific stromal enhancement	No well-defined mass Lymphocytic infiltrates around ducts Lobules and vessels Dense stromal fibrosis with keloidal features and myofibroblasts
Wegener granulomatosis	Affects persons known to have systemic disease of upper and lower respiratory tracts and sometimes the kidneys Breast involvement is rare	Unilateral or bilateral breast masses Breast abscesses Necrotic lesions and skin ulcerations	Very nonspecific Mammography: ill-defined irregular masses US: irregular hypoechoic masses	Vascular destructive leukocyte infiltration (angiitis) Granuloma formation and aseptic tissue necrosis
Breast sarcoidosis	Affects persons known to have systemic disease and women in the 3rd or 4th decade of life	Palpable mass Usually less inflammation Abscess formation is uncommon	Mammography: irregular, ill-defined, spiculated, or well-circumscribed round masses US: irregular hypoechoic masses	Noncaseating granulomas with or without giant cells
Foreign body granulomas caused by silicone, paraffin, or PAAG injections*	Affects persons with a history of direct breast cosmetic enhancement and transexual males	Focal or diffuse lumps Induration Breast deformity Pain and tenderness Skin ulceration Draining sinuses Axillary lymphadenopathy if material migrates	Silicone: round or oval dense masses with rim calcifications on mammograms, "snowstorm" appearance on US images Paraffin: irregular or round hypoechoic masses, parenchymal distortion, dystrophic or ringlike calcifications on mammograms; posterior shadowing mass on US images PAAG: discrete fluid collections that are denser than adjacent tissue on mammograms; circumscribed fluid, anechoic to hyperechoic collections with a thick capsule, and/or patchy areas of mixed or granular echoes on US images	Foreign material is usually obvious, with granulomatous reaction and variable fibrosis

*PAAG = polyacrylamide hydrogel.

Exame histopatológico ainda é essencial para estabelecer o diagnóstico

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