



Imaging findings in LCIS

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Introduction

- An uncommon condition in which abnormal cells form in the milk glands (lobules) in the breast
- LCIS isn't cancer
- An increased relative risk for developing subsequent invasive breast carcinoma
- Pure LCIS has varied imaging patterns on mammography, ultrasound, and MR
- Pure LCIS is usually an incidental finding on histopathological examination (HPE) of tissue samples

Introduction

- LCIS is not usually associated with any clinical abnormality or imaging findings
- there has been an increasing trend seen in the diagnosis of LCIS
 - due to the increased screening for breast cancer with better imaging techniques
- Studies have shown an underestimation rate of LCIS ranging from 0 to 35%

Pathology and imaging

- breast imaging are varying and depend on the histologic type
- Pure LCIS can be cLCIS or nonclassic LCIS types
 - cLCIS usually doesn't cause a lump or changes that can be seen on a mammogram It is diagnosed on pathology as an incidental finding in core biopsy or surgical excision
 - In contrast to classic LCIS, P-LCIS is often detected mammographically as an area of calcifications, architectural distortion, and less frequently, as a mass lesion with or without associated calcifications

Imaging

- Mammography
- Sonography
- MRI

mammograms

- LCIS is frequently occult
- Incidental finding on routine screening mammograms
- Technical advances result in higher sensitivity , increased probability of detection
- Calcifications were the most common mammographic finding
 - grouped amorphous
 - LCIS variants, such as pleomorphic LCIS and LCIS with central necrosis, are usually detected mammographically due to associated pleomorphic calcifications, or can present as a mass lesion with or without associated calcifications

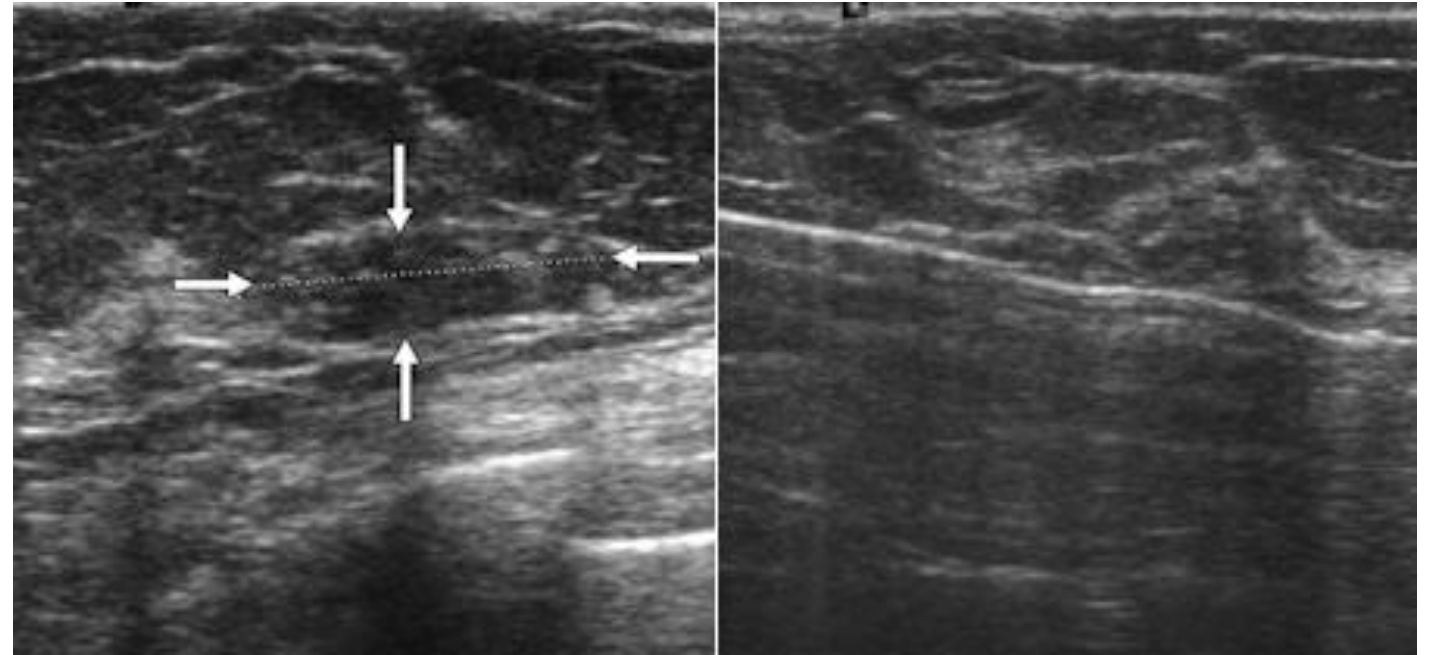
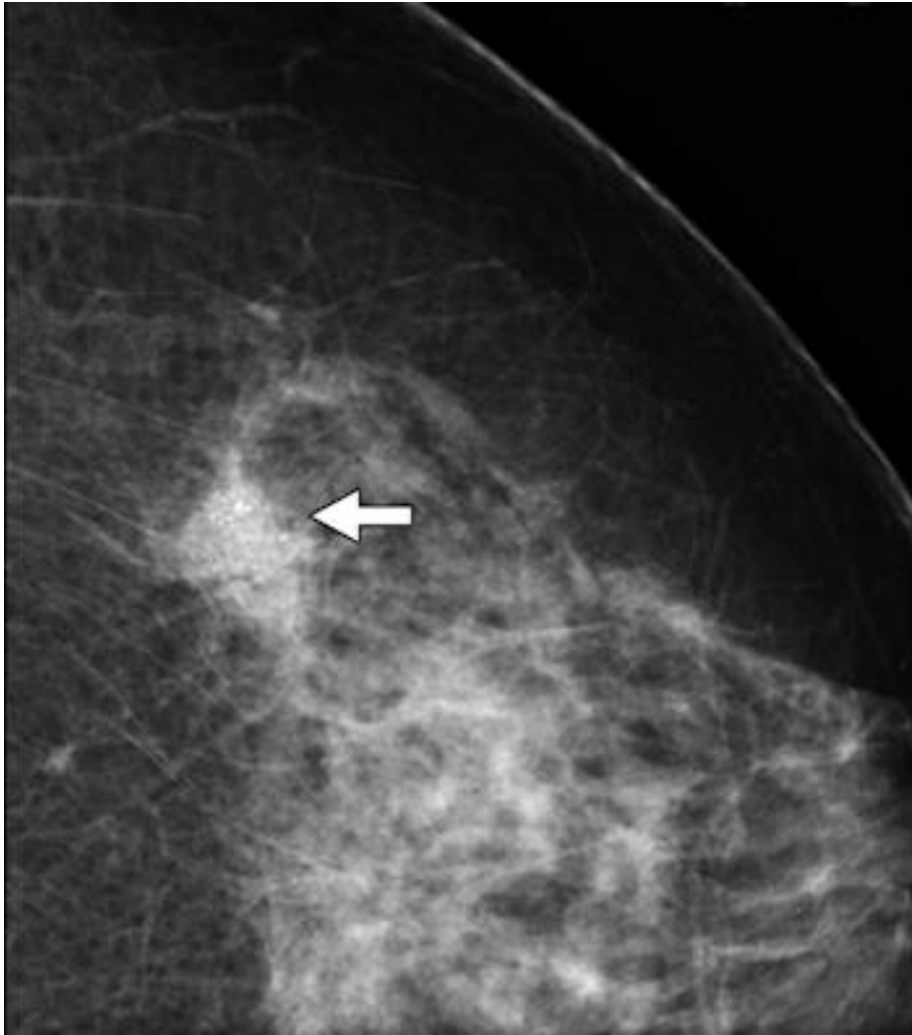
mammograms

- Negative findings
- Microcalcification
- Architectural distortion
- Asymmetry
- Mass
- Abnormal ducts

sonography

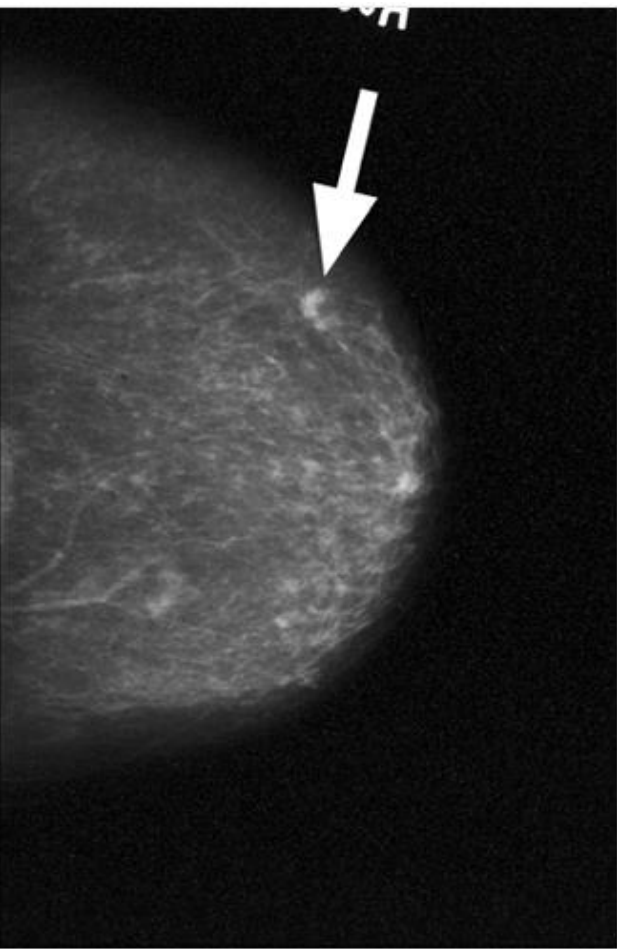
- LCIS can sometimes mimic invasive carcinoma on USG with a suspicious mass lesion with irregular margins

- Findings:
 - Negative findings
 - Mass
 - Non mass lesion
 - Axillary lymphadenopathy associated

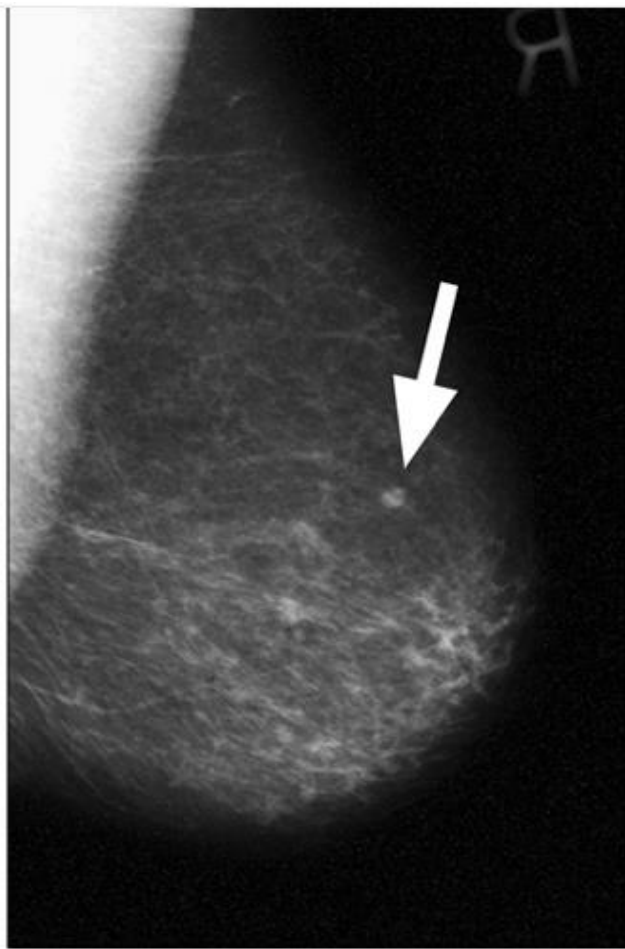


Magnification view shows mass (arrow) with irregular microcalcifications

Ultrasound image (left) reveals subtle, hypoechoic, ovoid-shaped, 2-cm mass (arrow) containing numerous echogenic foci. Ultrasound-guided needle core biopsy image (right) reveals LCIS. At open surgical biopsy, diagnosis of infiltrating lobular carcinoma was made



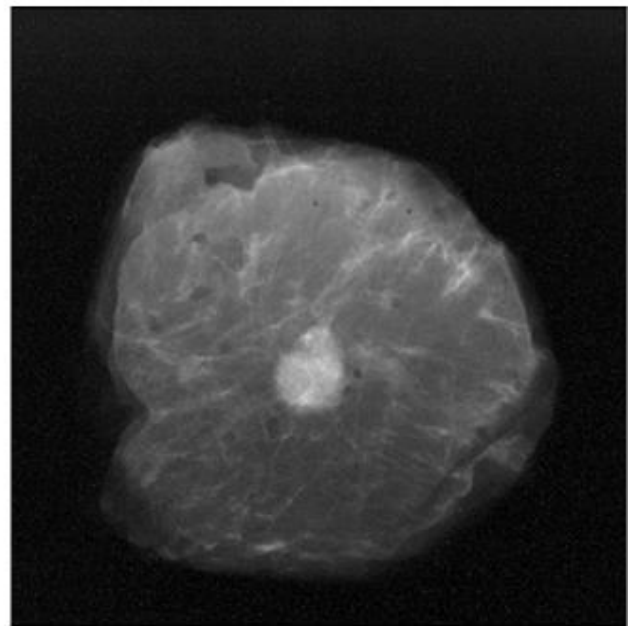
A



B



C



D

Fig. 1.—50-year-old woman with new mammographically detected mass.

A, Right craniocaudal view shows dominant mass (*arrow*) in upper outer portion of right breast.

B, Mediolateral oblique view shows dominant mass (*arrow*) in upper outer portion of right breast.

C, High-resolution, real-time sonogram of right breast at 9-o'clock position shows indeterminate, hypoechoic, and microlobulated 6.5 × 6.6-mm nodule.

D, Radiograph of surgical specimen shows well-defined mass.

(Fig. 1 continues on next page)

MRI

- Non-mass enhancement is most common finding
- Kinetic curve , Type 2 enhancement(early fast , plateau)
- **finding**
 - Non mass enhancement
 - more moderate-to-marked BPE
 - Focus/foci with enhancement
 - Enhancing mass
 - Dilated ducts, focal enhancement within lumen
 - Associated abnormal axillary lymph nodes

risk of upgrade of preoperative LCIS

- A relatively significant proportion of the patients with preoperative LCIS had hidden invasive cancer that might be missed if only core needle biopsy is used as a definitive diagnostic tool
- careful radio-pathological correlation during initial biopsy is critical
- microcalcification on mammography and PR positivity were significantly associated with the risk of upgrade of preoperative LCIS (Odds ratio [OR]=14.155; $p=0.023$ and OR=10.621; $p=0.044$)
- A multidisciplinary approach for evaluation of upgrading LCIS would be valuable for patients with LCIS in preoperative diagnosis

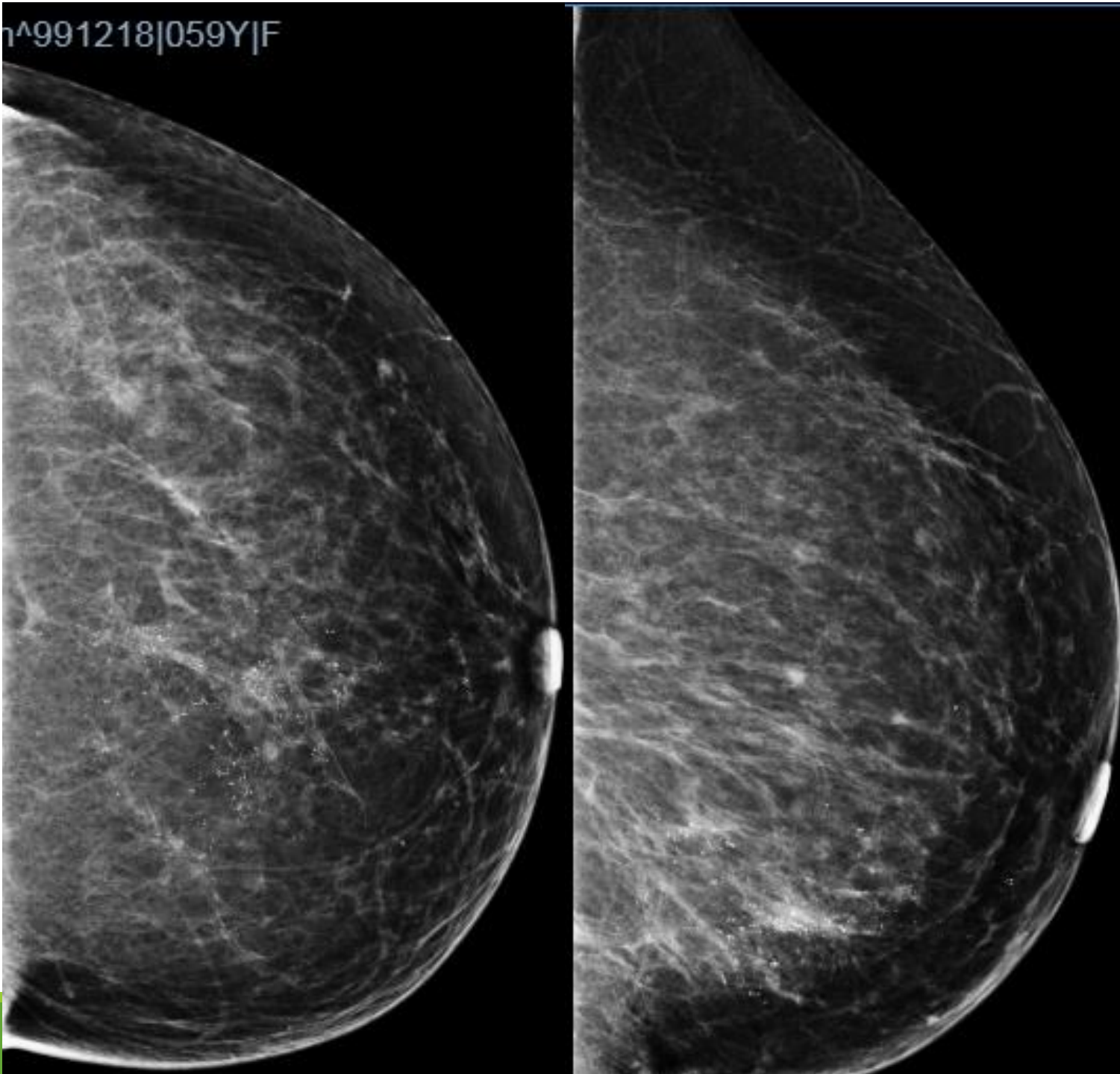
Follow up

- Follow-up and close surveillance with routine annual breast screening with mammography, USG, and if required MRI as an adjunct modality especially in dense breasts
- MR imaging is a useful adjunct modality
- MRI resulting in a 4.5% incremental cancer detection rate
- combination of MR imaging and mammography was higher than sensitivity of either modality alone

شرح حال

➤ خانم 59 ساله با سابقه سرطان پستان در خواهر

h^991218|059Y|F



خانم م. ز. 59 ساله

۲۲۲۷۰۹۱۸

BILATERAL MAMMOGRAPHY

A 59 years old female with positive familial history of breast cancer in her sister.

This is baseline screening.

Scattered areas of fibroglandular tissue is noted (breast composition :B)

There are multiple small oval isodense masses bilaterally specially right side suggestive for probably benign lesions.

There are multiple pleomorphic microcalcifications in lower central of left breast containing some linear type that seem suspicious and needs biopsy.

There is a mass like density beneath some of them , so sonography is recommended for R/O of mass lesion.

If there is mass lesion CNB guided by sonography , other wise stereotactic biopsy should be done .

RIGHT BREAST , BIRADS II:

Benign finding

LEFT BREAST , BIRADS IV:

Suspicious for malignancy

مرکز آ.د. تخصصی و فوق تخصصی طب.د. اعصاب (ع)

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خانم 59 ساله با سابقه مثبت فامیلی breast cancer (در خواهر بیمار) جهت screening مراجعه نموده است.

Breast composition is homogeneous – fibro glandular (b).

یافت فیبروگلدولار پستانها با اکوی نرمال مشاهده شد و شواهدی به نفع به هم ریختگی و نامنظمی در صفحات بافتی دیده نمی شود .

علائمی از ضایعات Solid با نمای پاتولوژیک در پستان چپ رویت نمی شود .
پستان راست:

- تصویر چند ضایعه کیستیک به دیامترهای 4.5mm و 2mm در ساعت 7 پستان راست در near zone رویت شدند.

پستان چپ:

- تصویر کیست به دیامتر 5mm در ساعت 11 پستان چپ در near zone رویت شد.

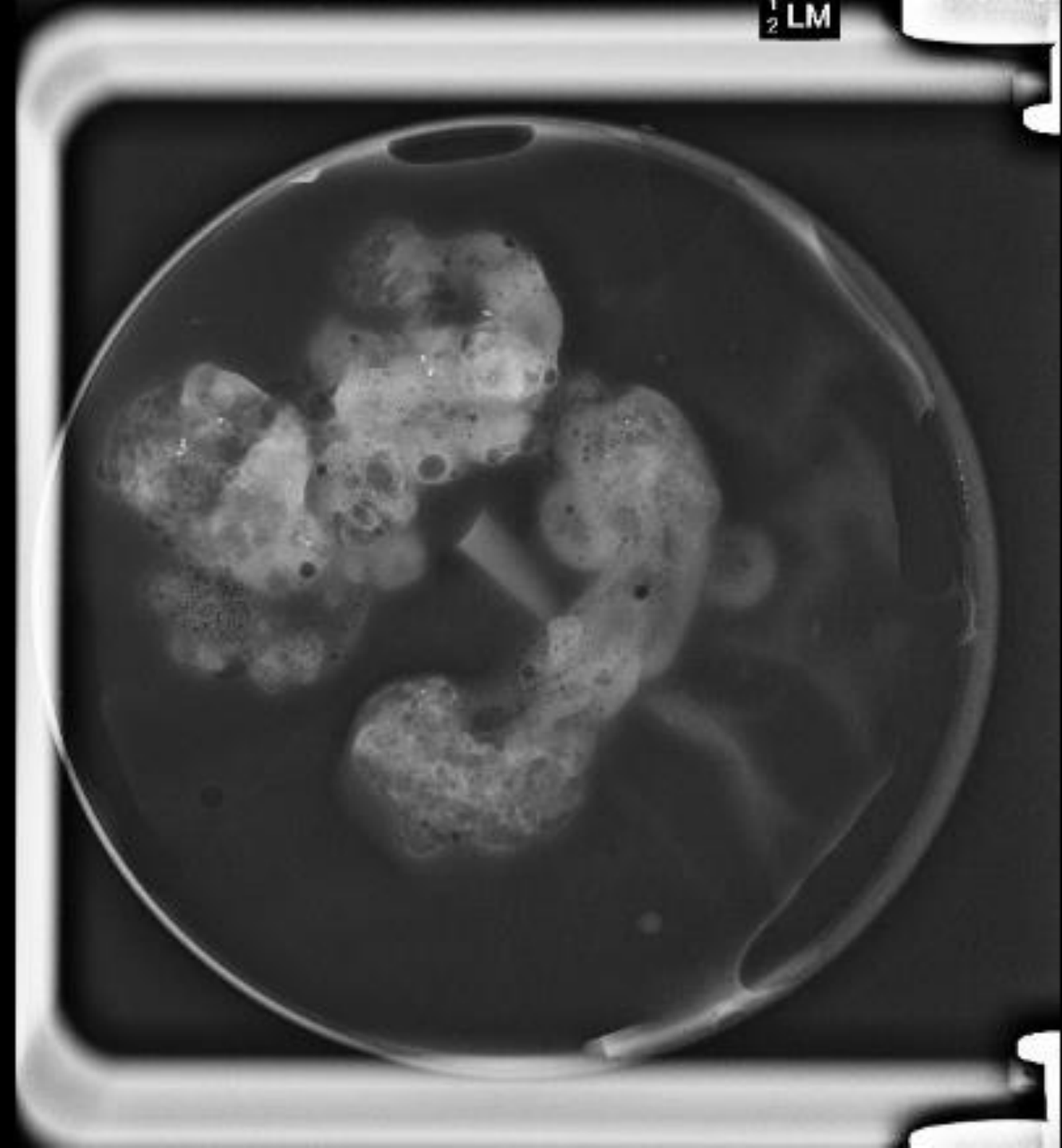
تا حد قابل بررسی افزایش ضخامت پوست، رتراکسیون nipple و شواهد قطعی بنفع بدخیمی مشاهده نمیشود .
در یافت چربی بینابینی پستانها نیز ضایعه فضاگیر غیر طبیعی دیده نشد .
لنفادنوپاتی با نمای پاتولوژیک در نواحی آگزیلاری راست مشهود نمی باشد.

• تصویر چند لنف نود آگزیلاری بدون هیل چربی با نمای پاتولوژیک حاوی میکروکلسیفیکاسیون به حداکثر ابعاد 9x6.5mm و 10x5mm در آگزیلاری سمت چپ رویت شد. (B4)

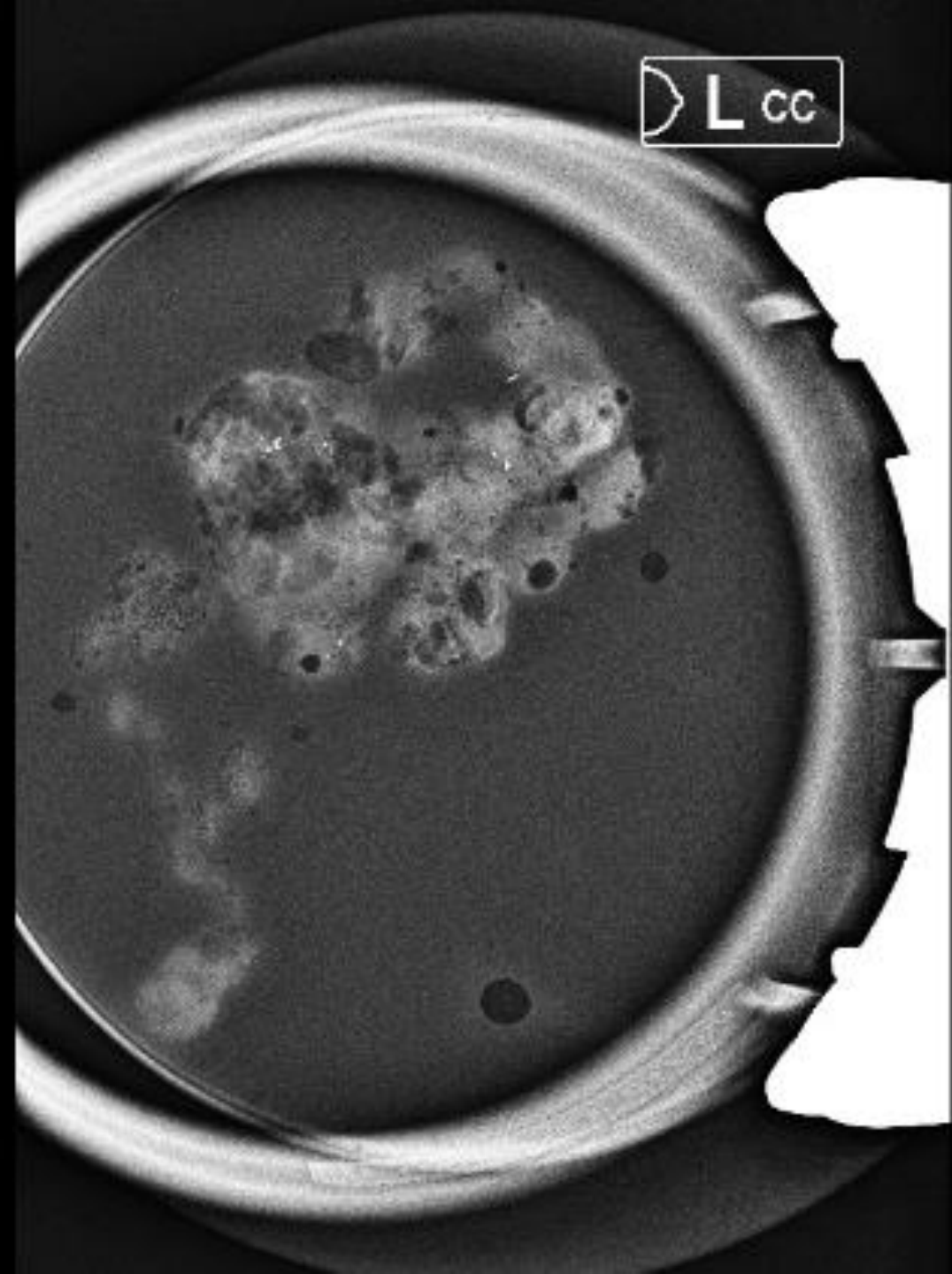
• بیوپسی از لنف نود فوق توصیه میشود.

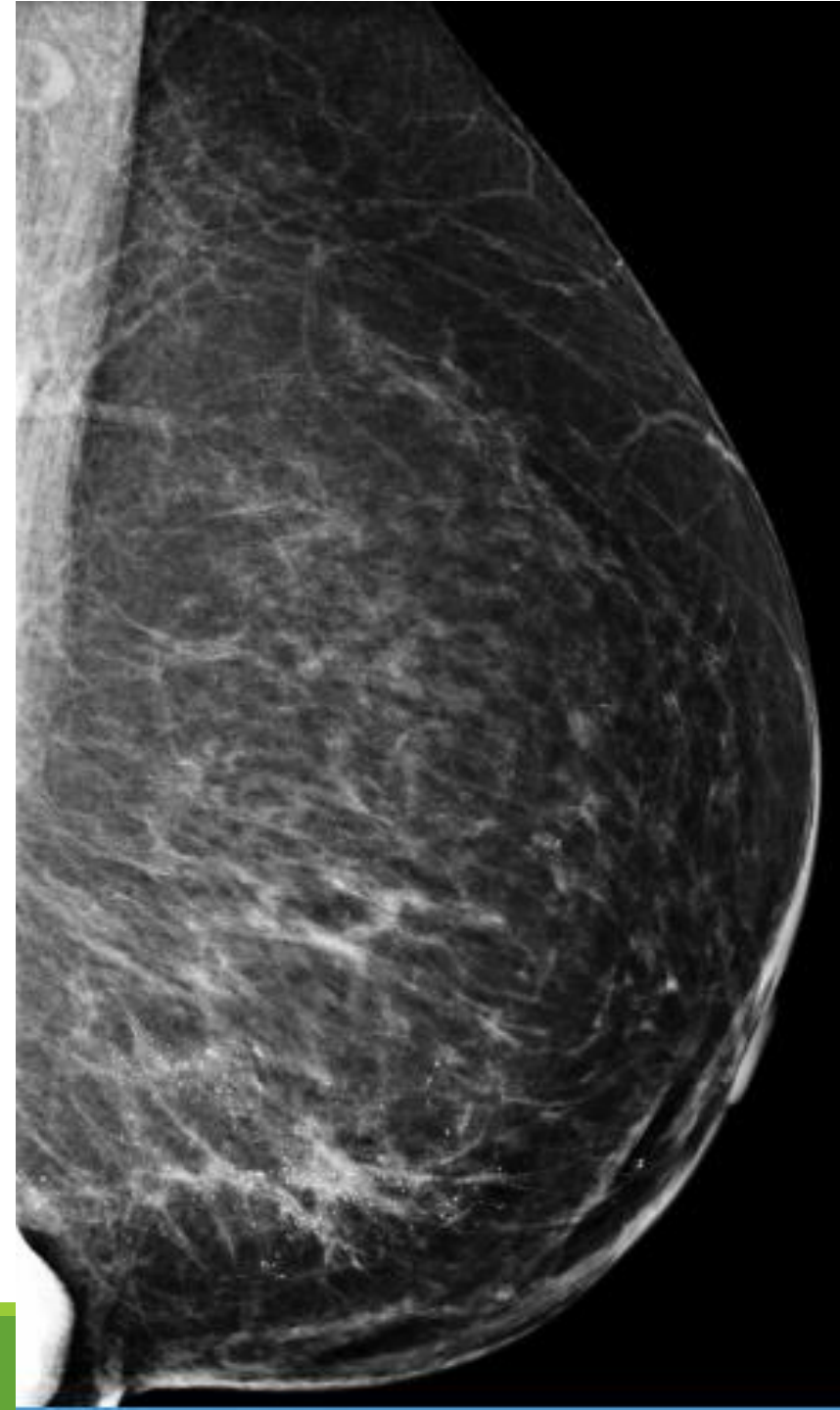
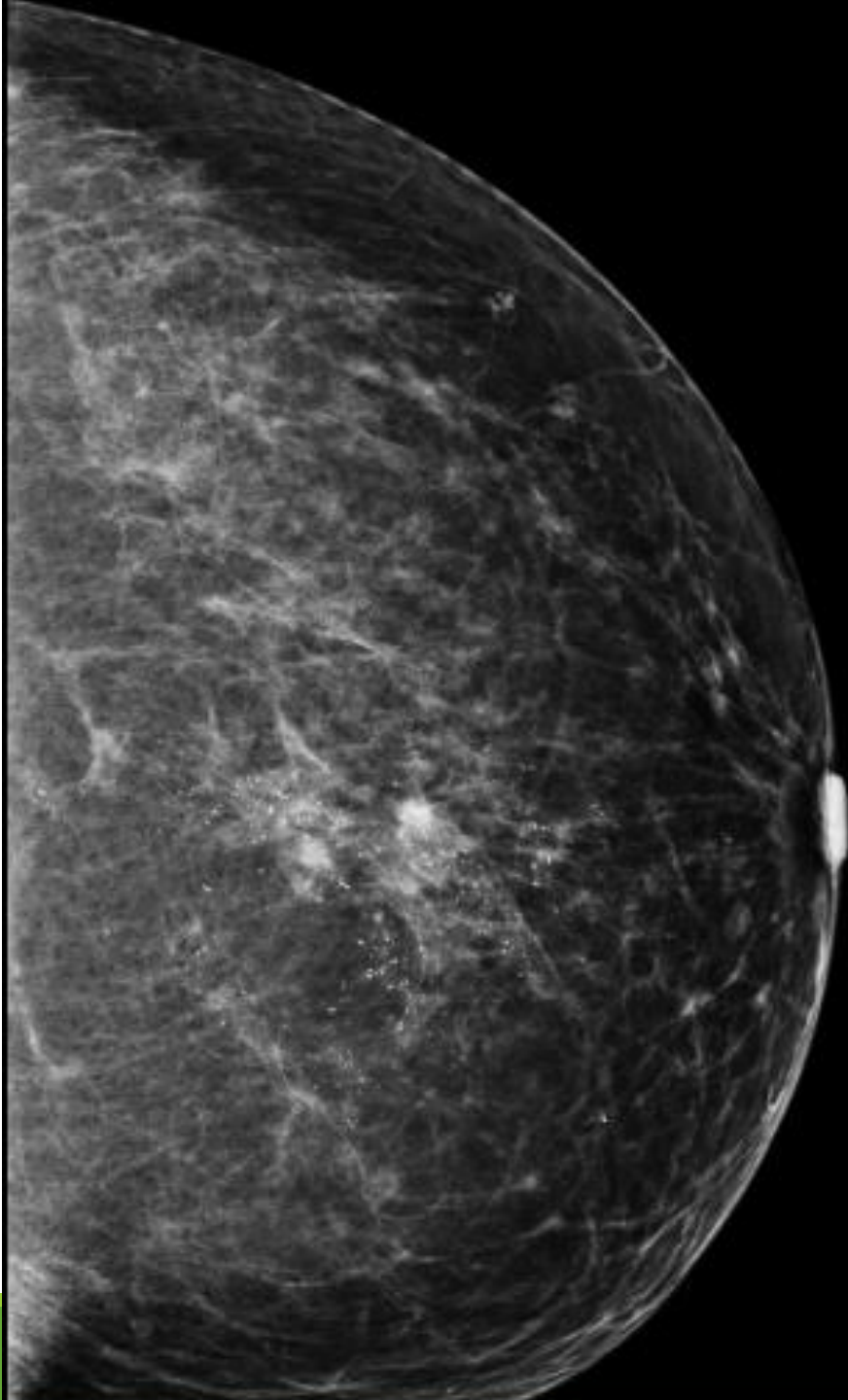
BIRADS Right Breast II
BIRADS Left Breast 4

1
2 LM



L cc





L CC

