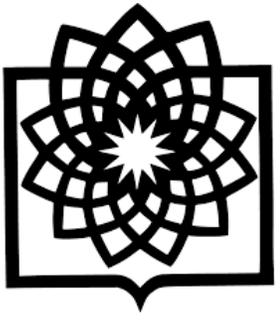




IN THE NAME of GOD



Radiology pathology correlation

GOLNAZ IZADI AMOLI

ASSISTANT PROFESSOR OF SHAHID BEHESHTI UNIVERSITY

Imaging-guided Bx → **standard tool for breast cancer diagnosis**

False negative

Not 100% accurate

**Pathologic
discordancy**

Concordance established by “radiologist/breast specialist” after review of CNB pathology report & imaging findings
This may require discussion/review with pathologist

Rad-path correlation

Histopathologic results

Malignant

Benign

**High risk/
Borderline**

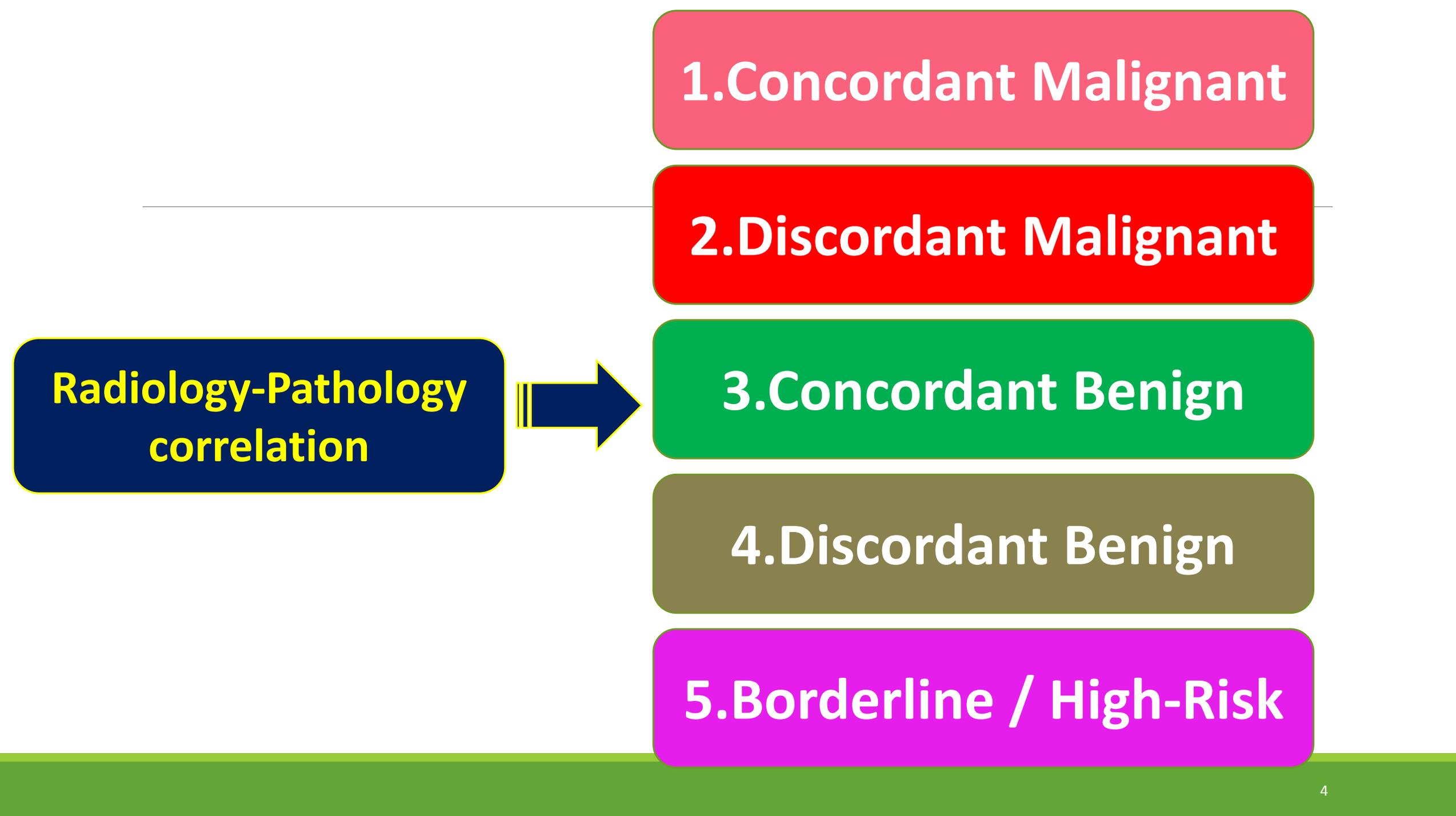
Concordant malignant

Discordant malignant 

Concordant benign

Discordant benign 

**Radiology-Pathology
correlation**



1. Concordant Malignant

2. Discordant Malignant

3. Concordant Benign

4. Discordant Benign

5. Borderline / High-Risk

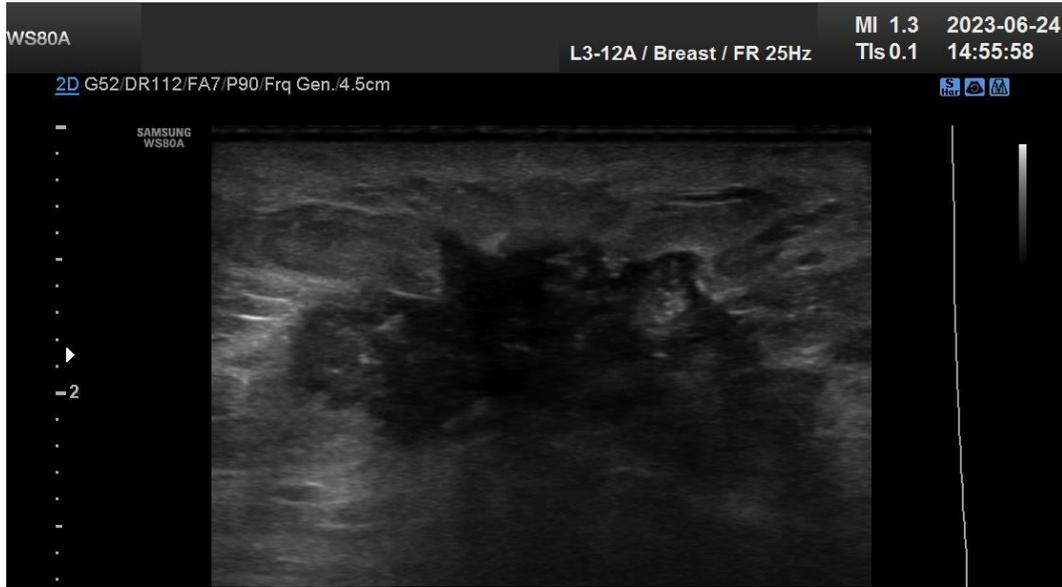
Concordant Malignant

BIRADS 4 or 5



Referred to surgeon / oncologist for treatment

Concordant Malignant



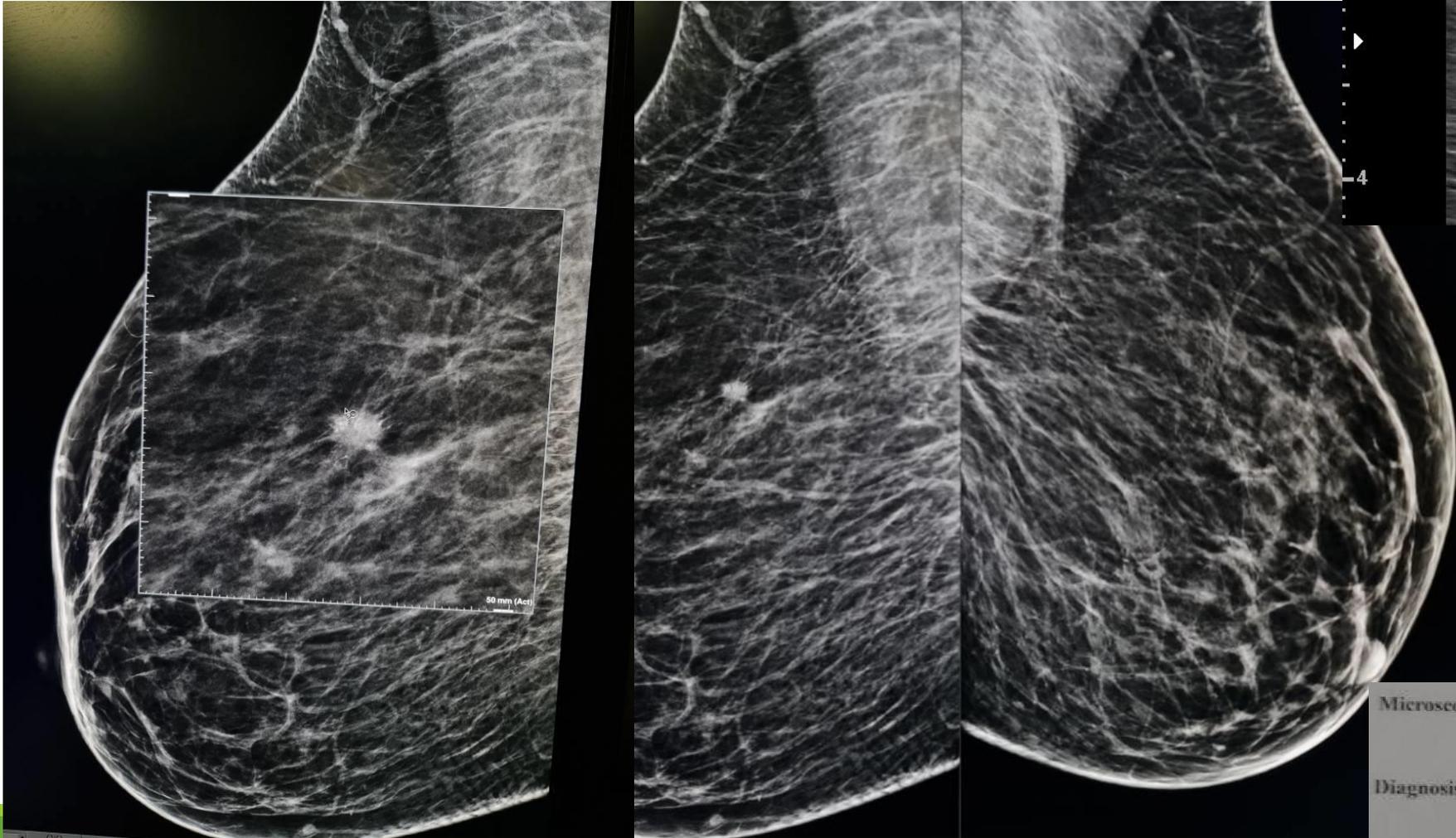
Specimen :
Right breast mass,core needle biopsy

Macroscopic :
Specimen received in formalin consists of multiple cores, tan, yellow in color, totally measuring 5 cm in length and 0.2 cm in diameter.
Totally submitted in 2blocks.

Microscopic :
Histologic findings confirm the following diagnosis.

Diagnosis :
Right breast mass,core needle biopsy speciemn showing:
- Findings are consistent with invasive ductal carcinoma , Nos type
- Nuclear grade II/III

Concordant Malignant



Microscopic :

Histologic findings confirm the following diagnosis.

Diagnosis :

Right breast mass, core needle biopsy specimen showing:
- Findings are consistent with invasive ductal carcinoma,
- Nuclear grade II/III

Discordant Malignant

BIRADS 2 or 3

Well-circumscribed masses

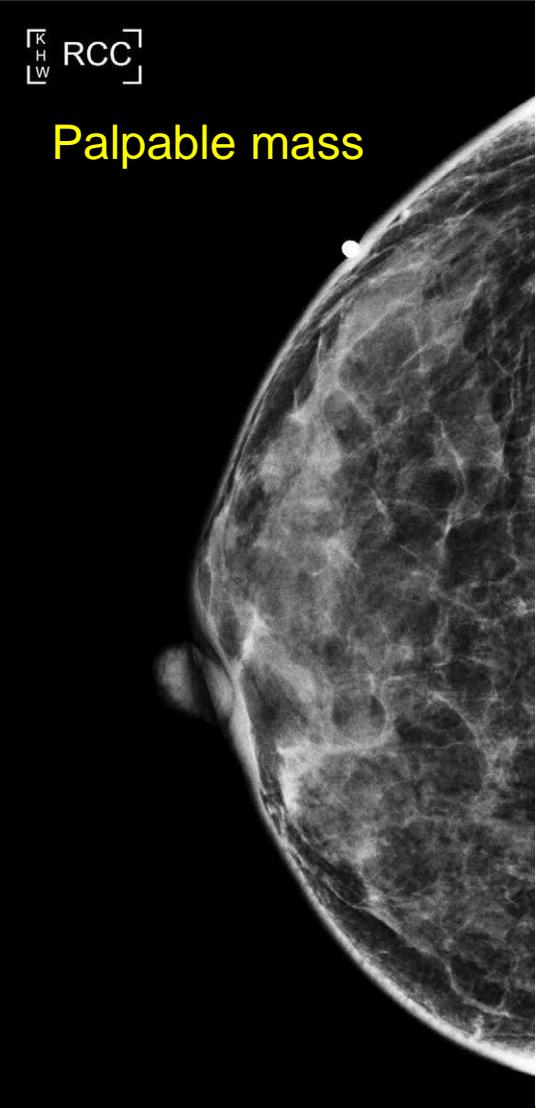
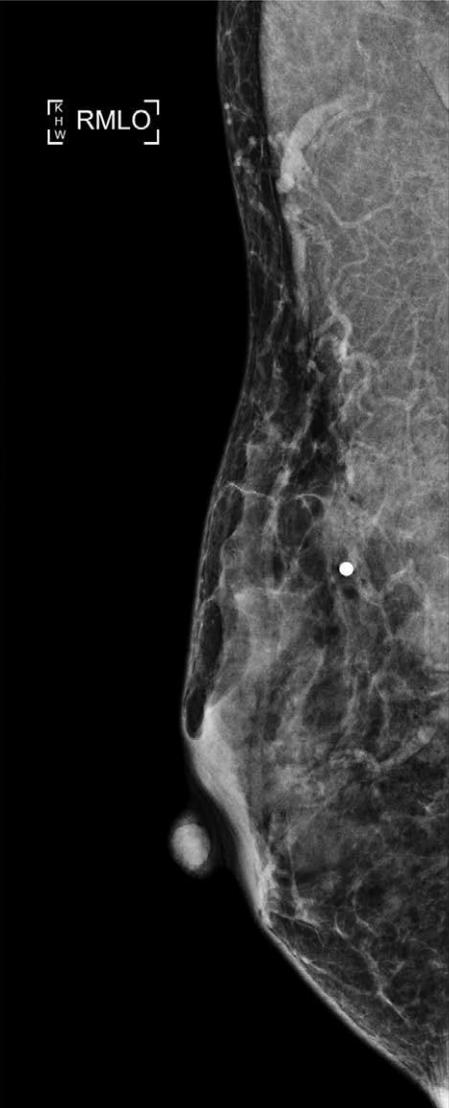
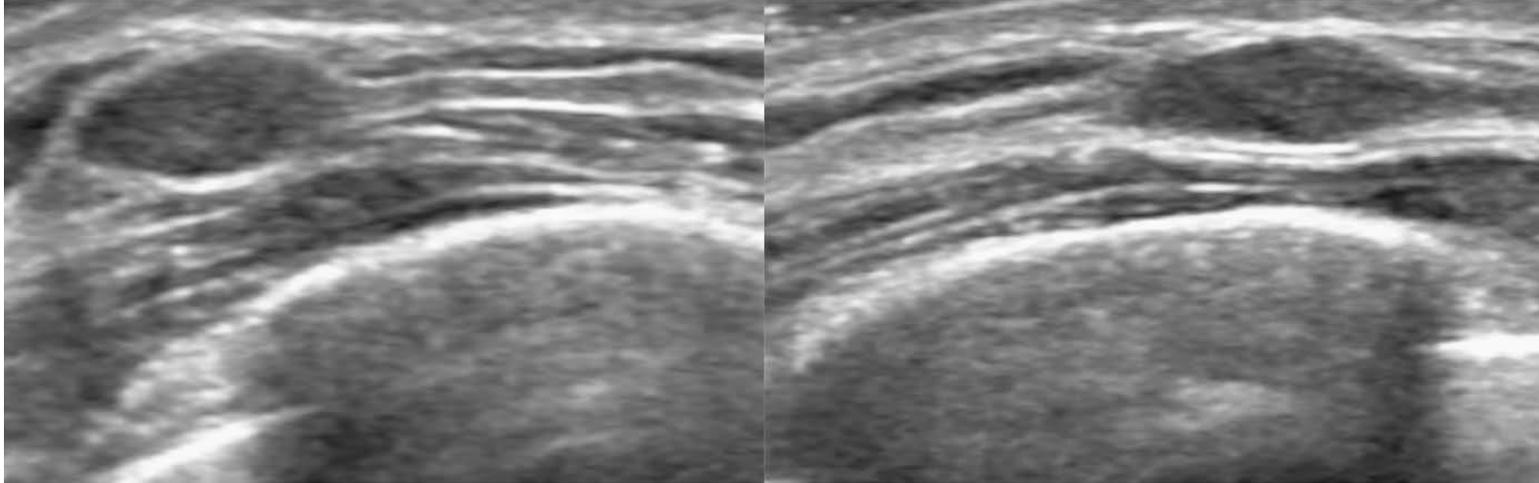
Review histopathologic result & confirm diagnosis

Review imaging (subtle suspicious feature)

Management identical to concordant malignancy, without any delay



Discordant Malignant

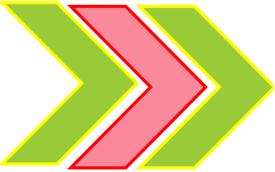


Invasive carcinoma with micropapillary features

Concordant Benign

BIRADS 2, 3, or 4A

F/U interval according to institution



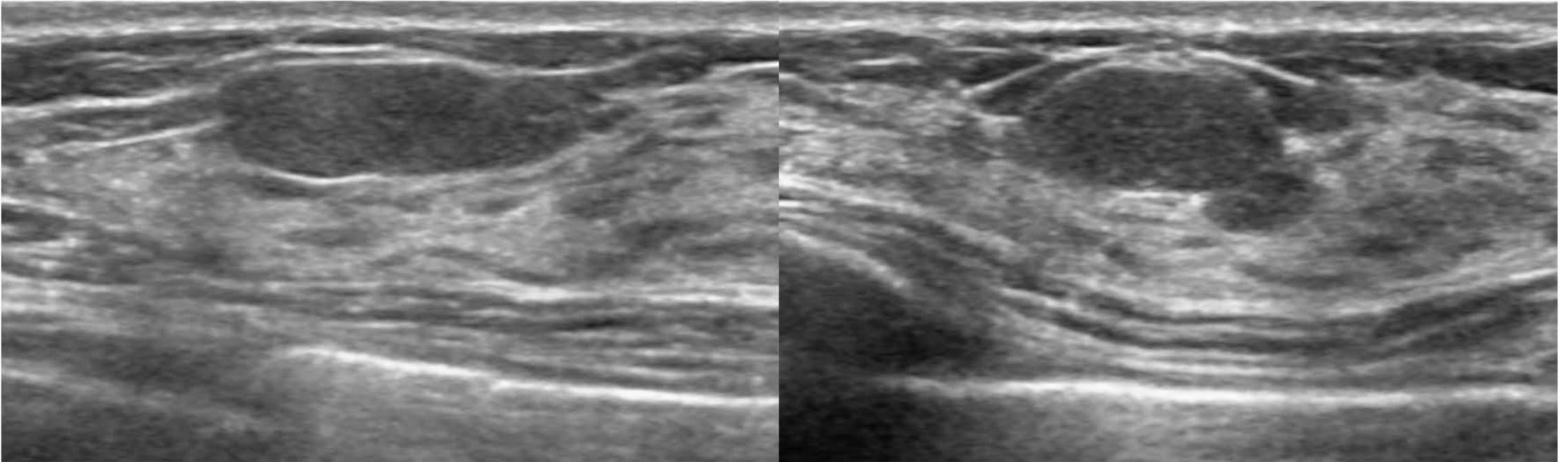
**Benign pathology is
concordant with imaging
findings**

**Screening
or
Physical examination and/or
imaging at 6 or 12 mo for up to
1 y to assess for changes**

NCCN Guidelines Version 1.2023
Breast Cancer Screening and Diagnosis

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Concordant Benign



Bx: fibroadenoma

Discordant Benign

BIRADS 4 or 5

Benign lesions with spiculation :

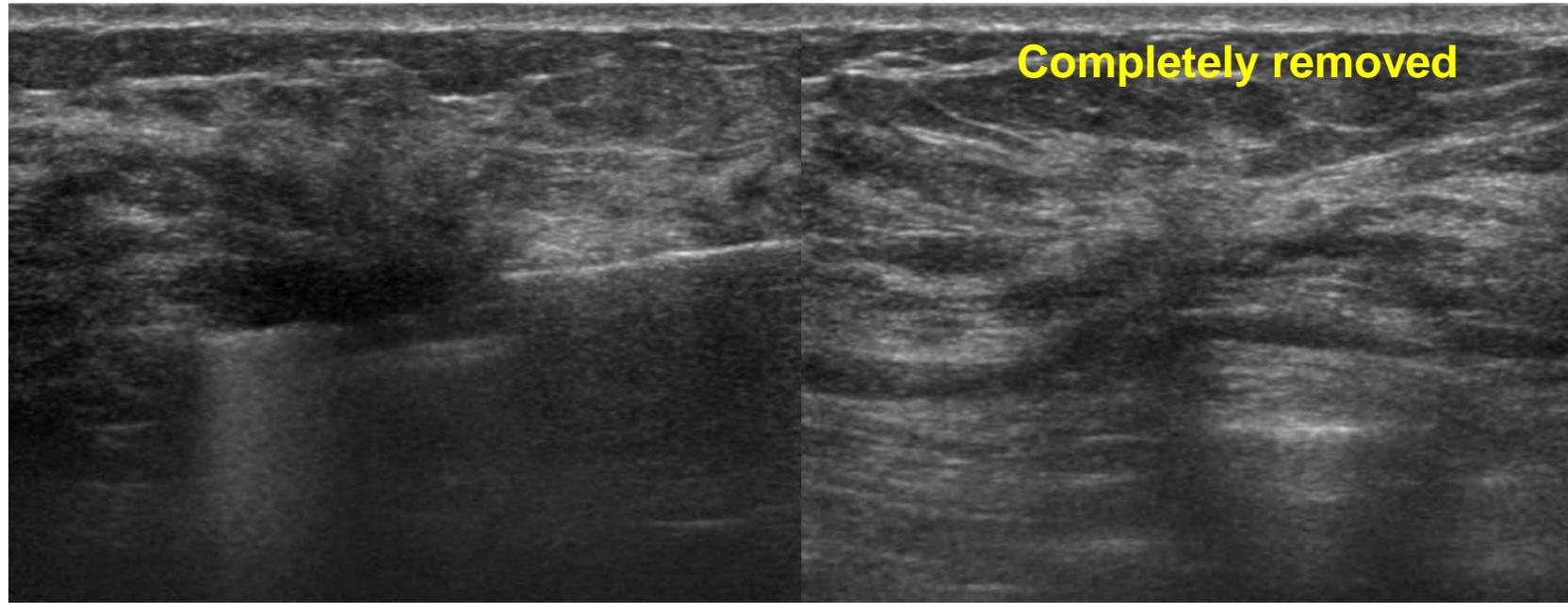
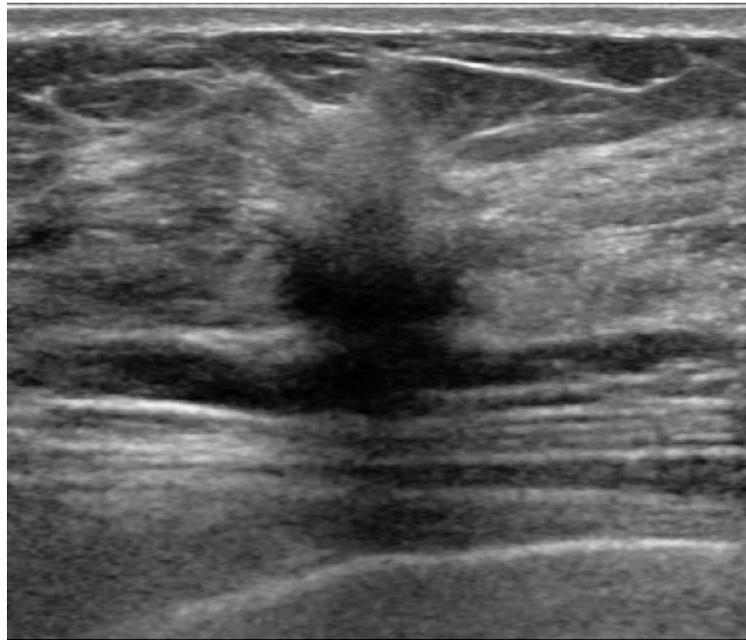
- Granular cell tumor, postsurgical scar, fat necrosis
- Mastitis, diabetic mastopathy, sarcoidosis, , sclerosing adenosis



Best biopsy method chosen through communication between radiologist, pathologist, referring physician & patient

US-guided VABB could be an alternative to surgery

Discordant Benign

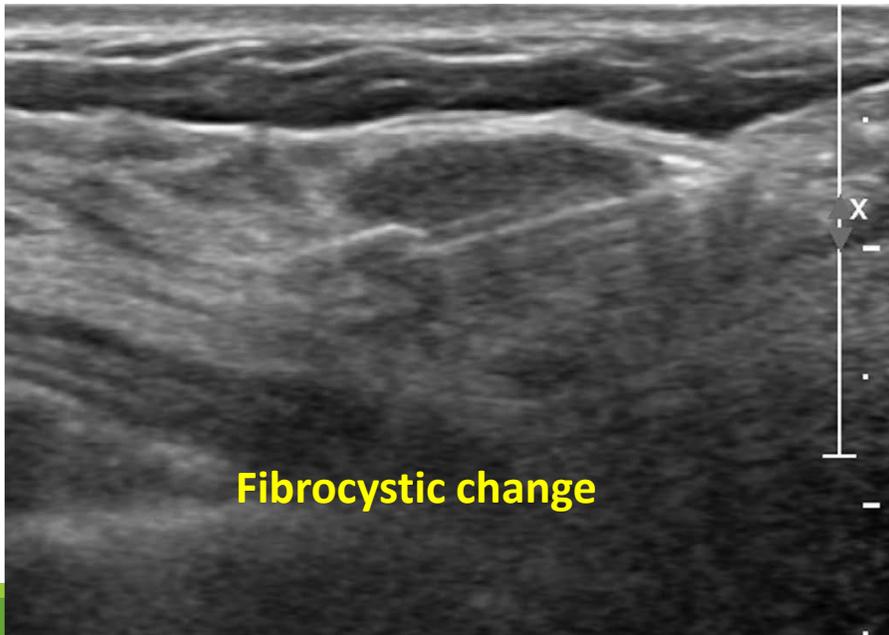
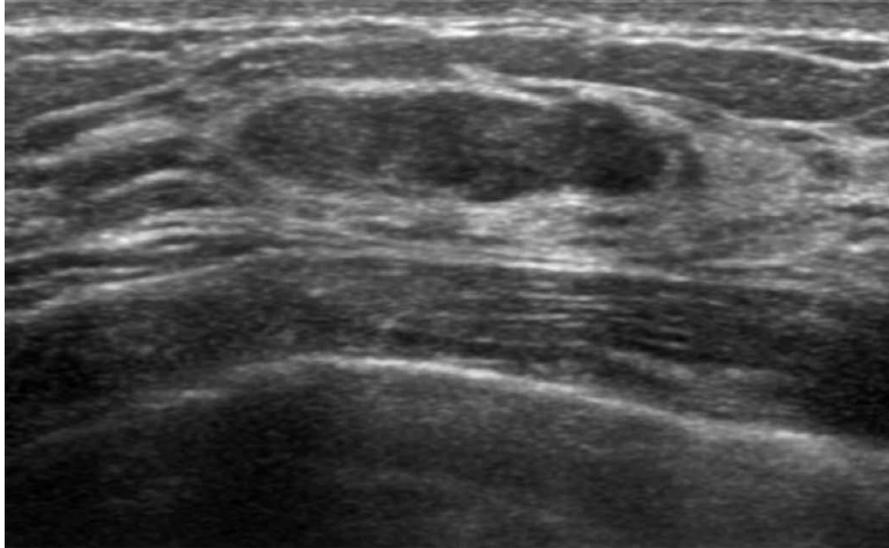


B4C → US CNB fibroadenoma with sclerosing adenosis

In VABB → Sclerosing adenosis, no newly developed lesions over a F/U of more than 2y

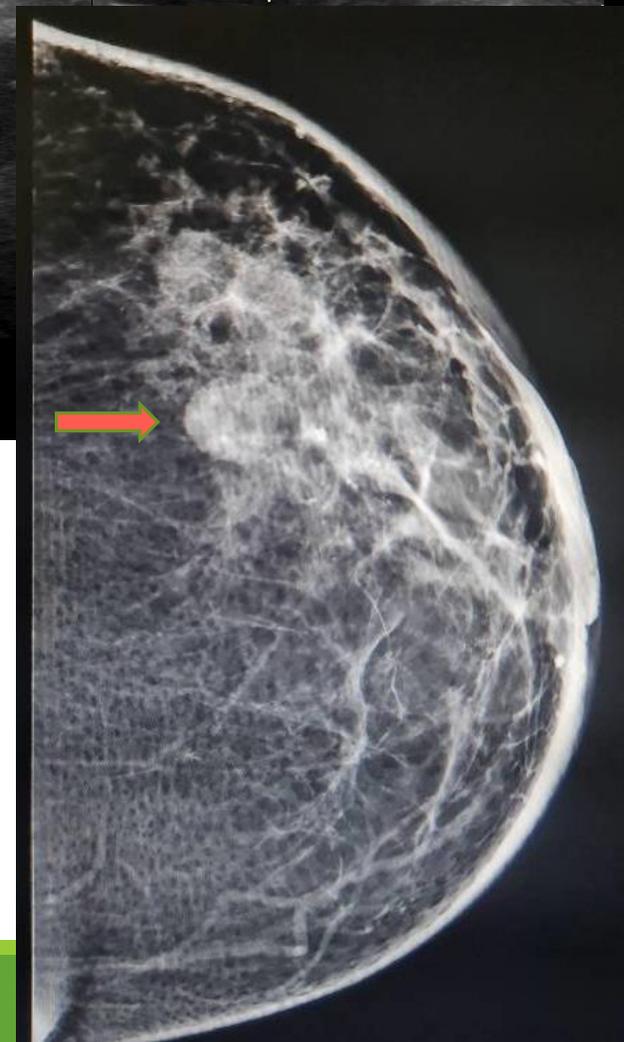
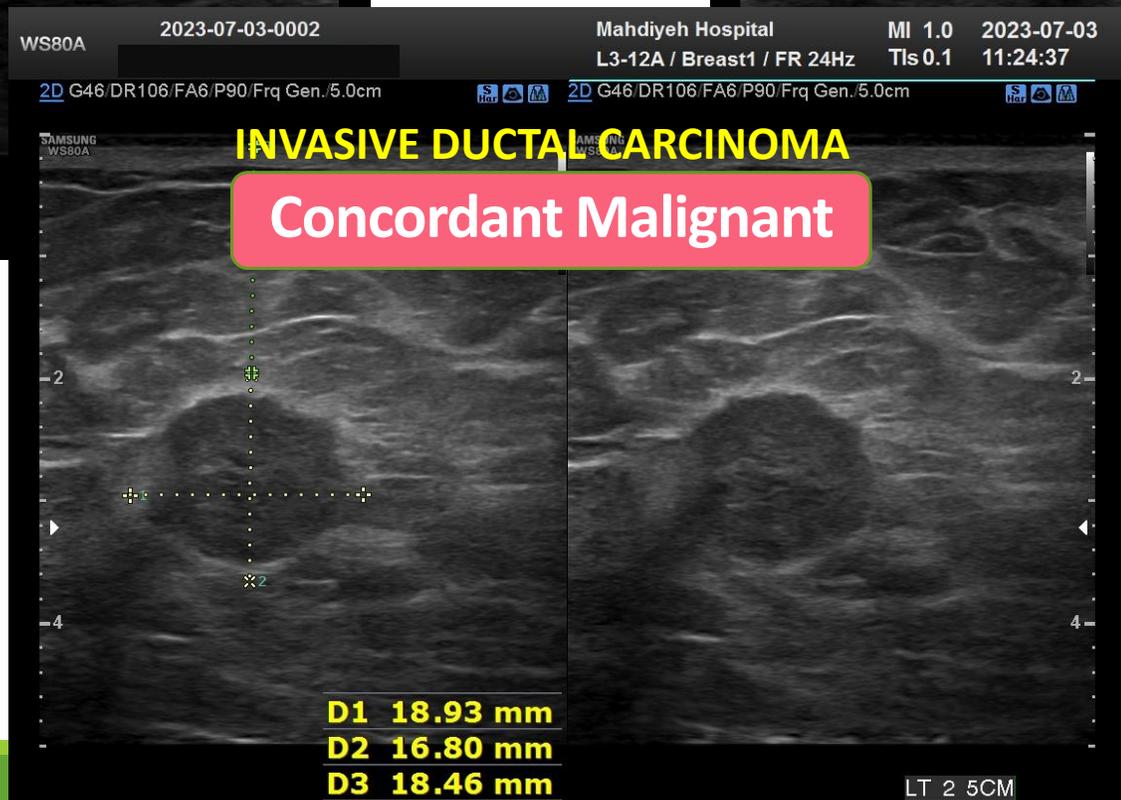
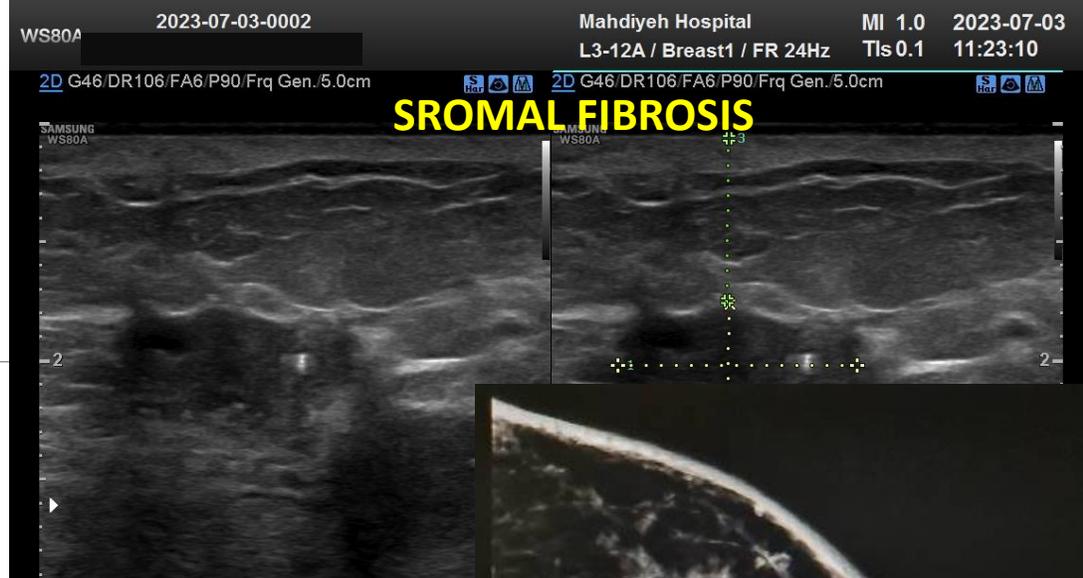
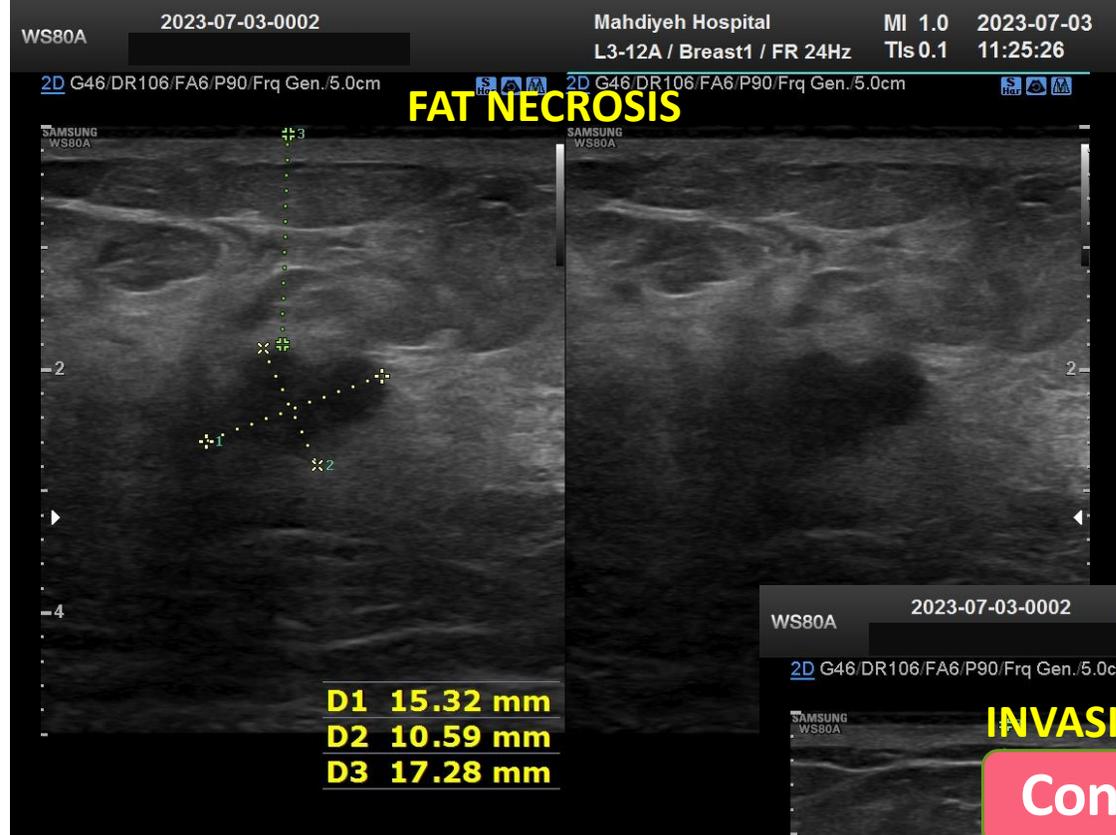
Discordant Benign

Benign nonspecific results may be considered discordant if obtained from a discrete solid mass even if the lesion was initially thought to be benign (BIRADS category 2, 3, or 4a)



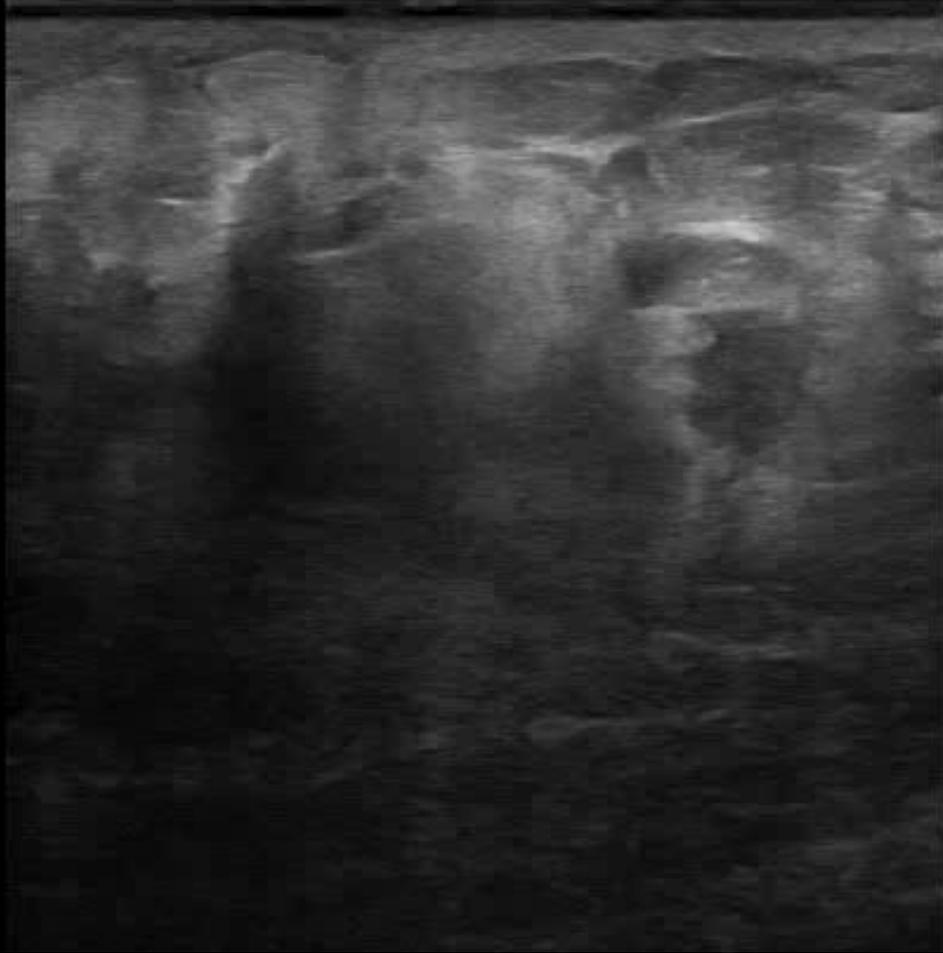
3y later



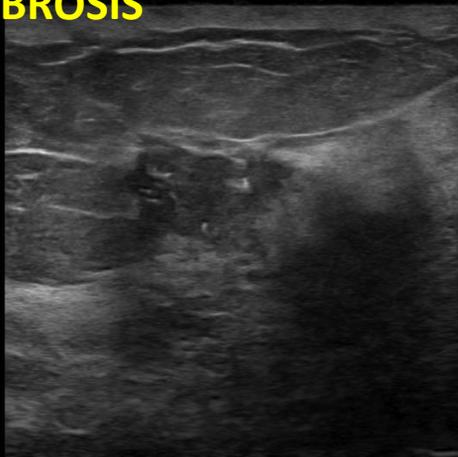




SAMSUNG
WS80A



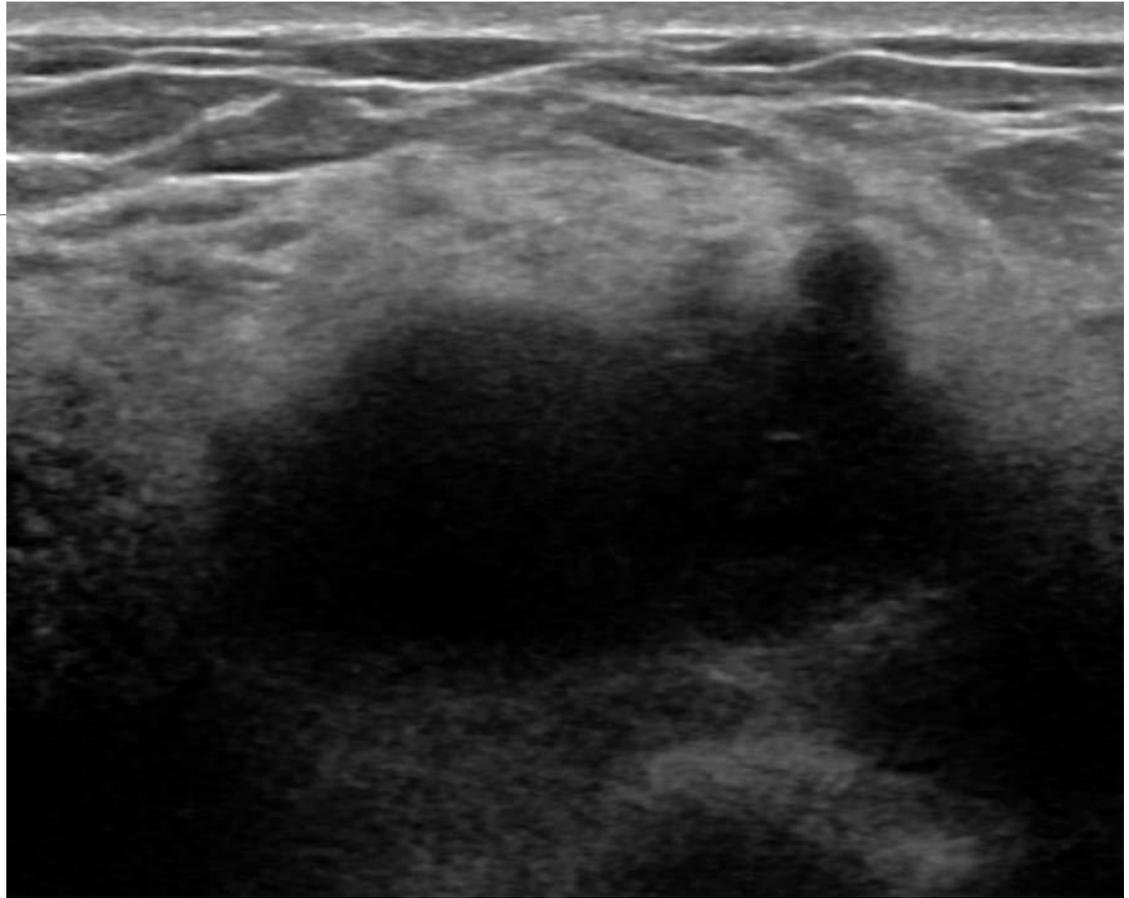
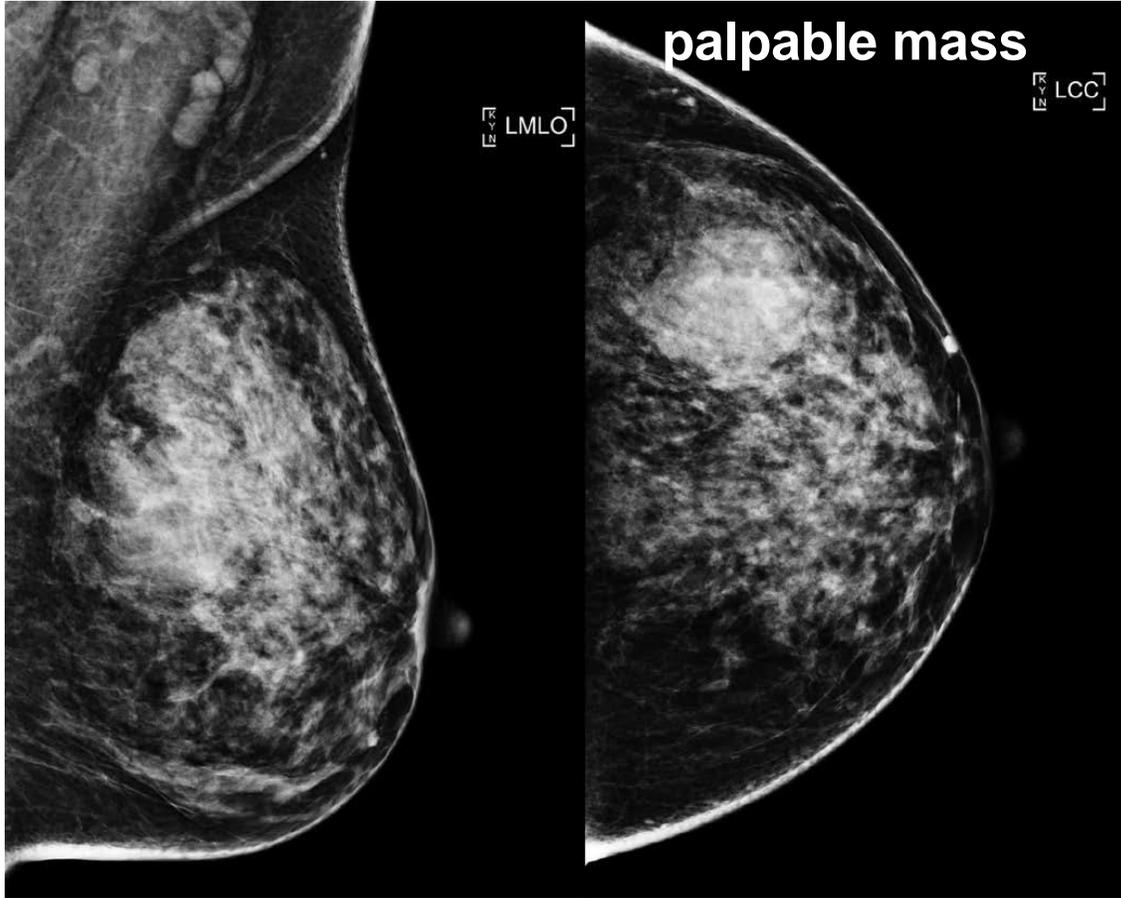
STROMAL FIBROSIS



Diagnosis :

- A)Breast biopsy(Lateral border of suture):**
 - Fat necrosis
 - Chronic and acute inflammation and foamy macrophages infiltration
- B)Designated as breast mass 2 core needle biopsy**
 - Stromal fibrosis
 - Cystic apocrine metaplasia
- C)Breast mass 3 o'clock :**
 - finding are in favor of invasive ductal carcinoma with mucinous feature
 - nuclear grade II/III
- D)Left Axillary lymph node core needle biopsy :**

Discordant Benign



First Bx: fibrocystic change

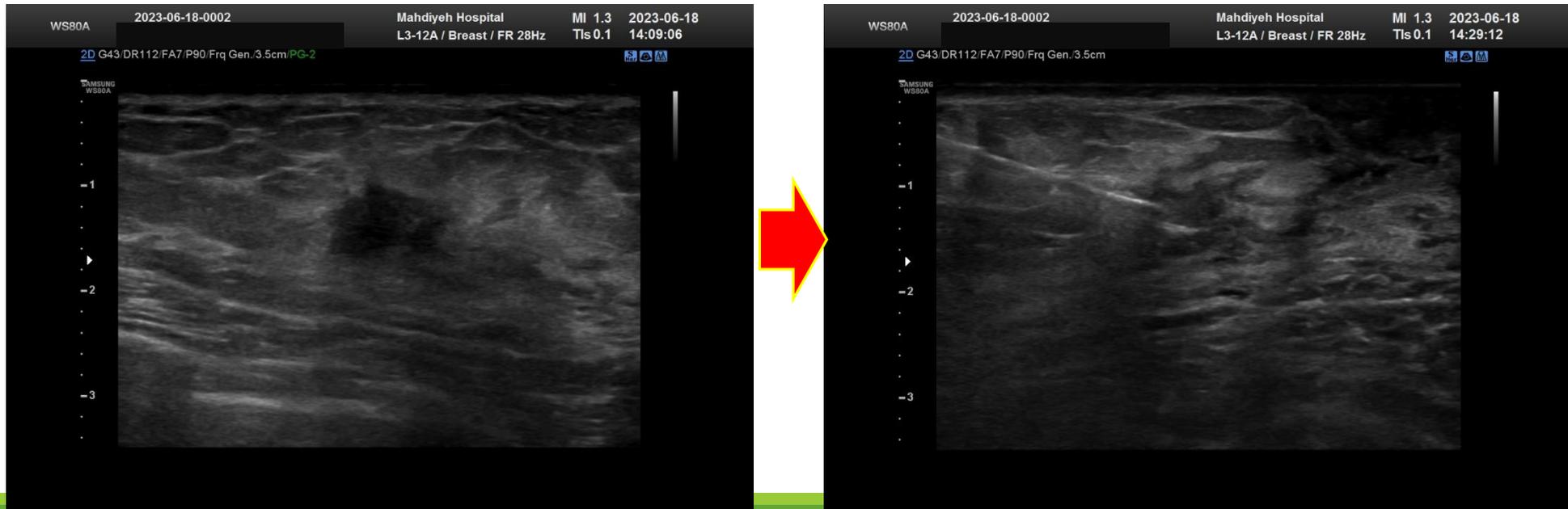


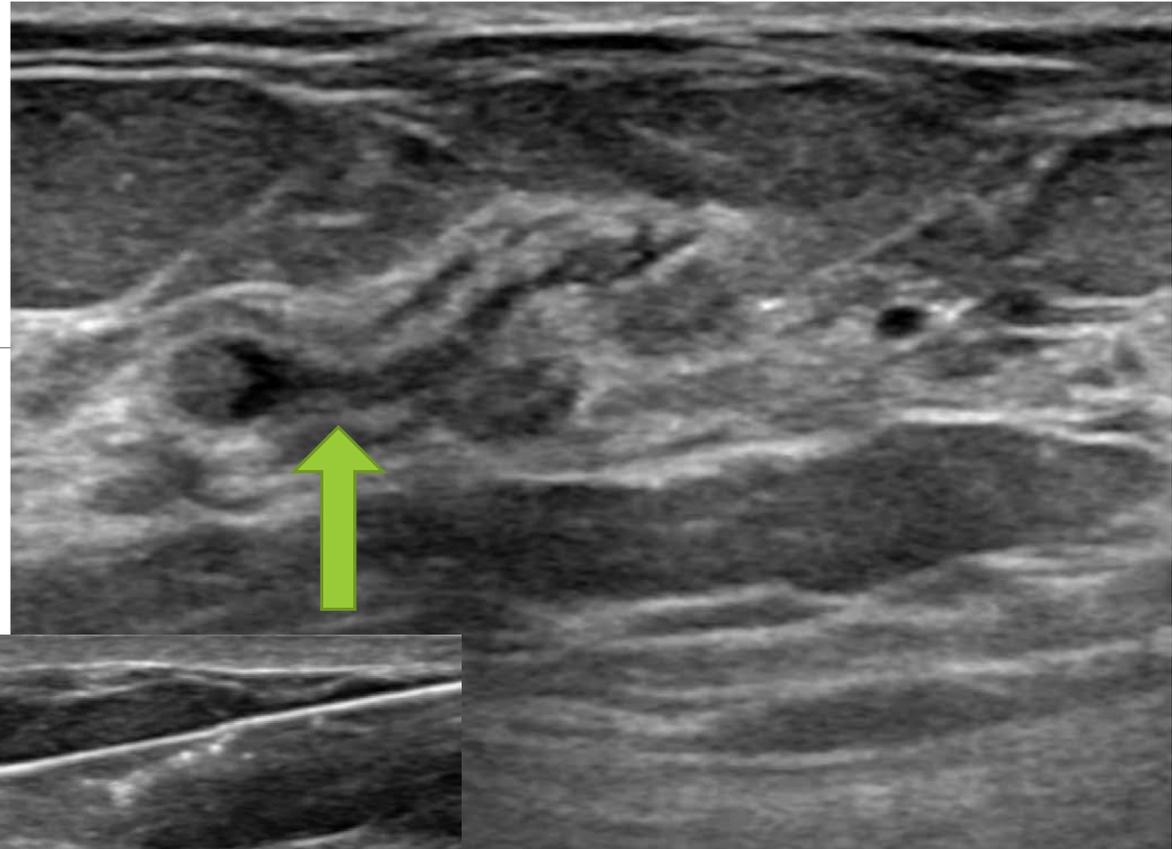
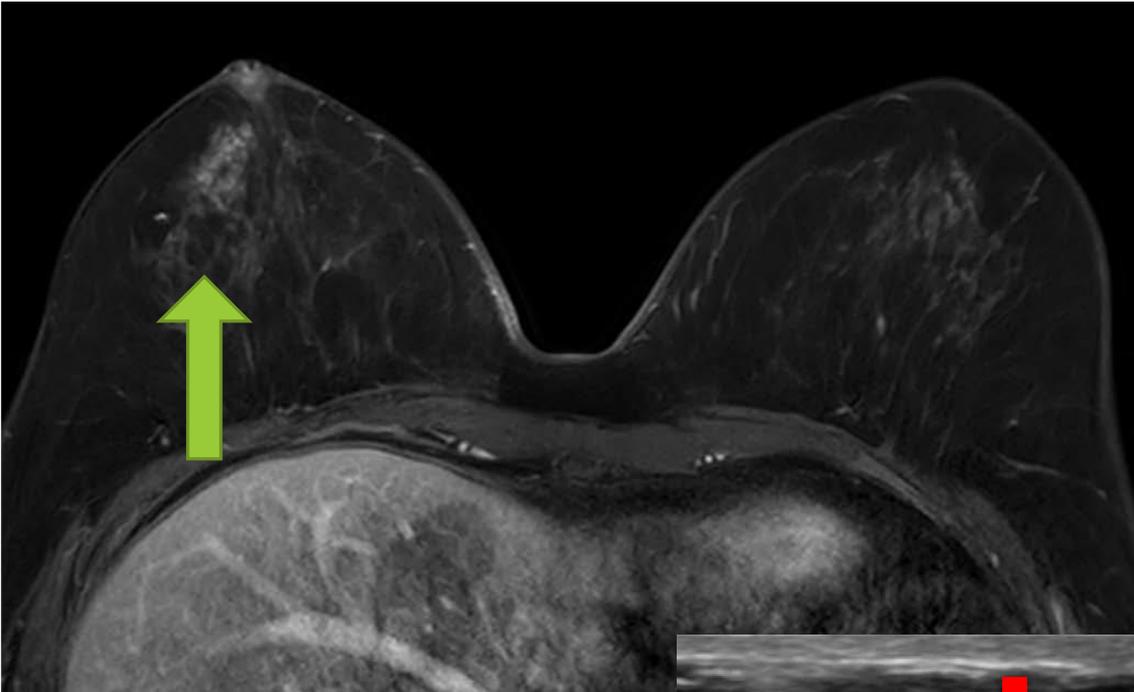
Repeat US CNB: invasive ductal carcinoma

Aspect to consider for better US guided breast Bx

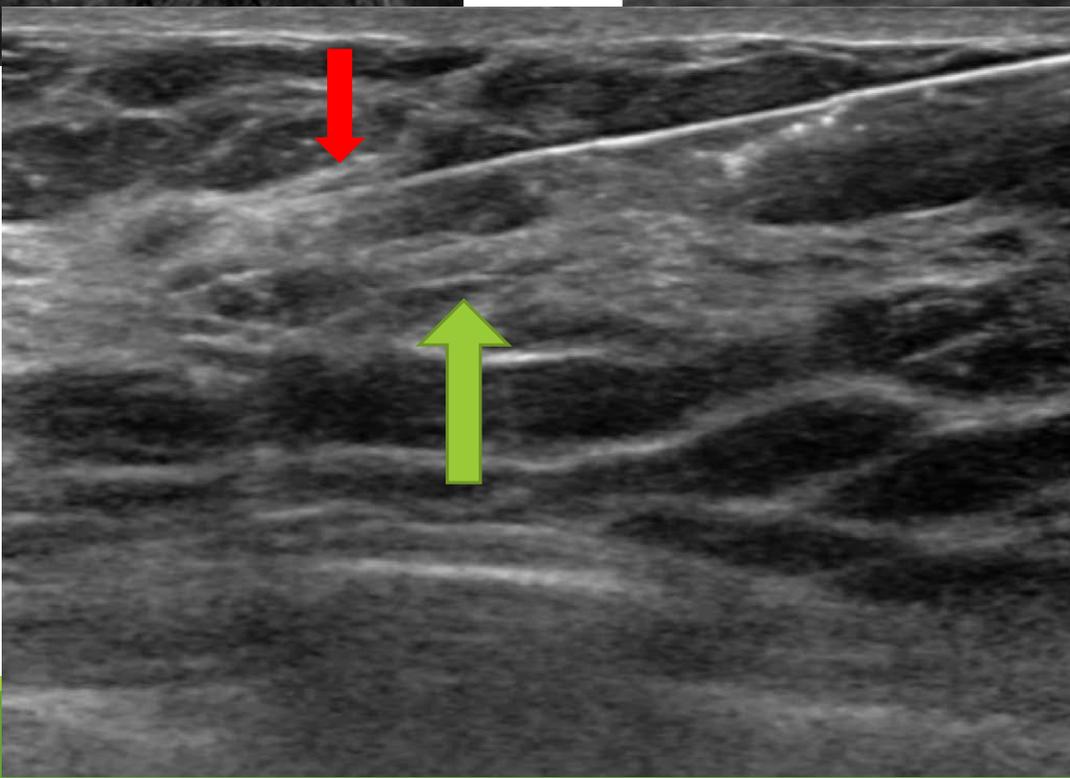
1. Adequate targeting

Entire length of the needle passing through the lesion





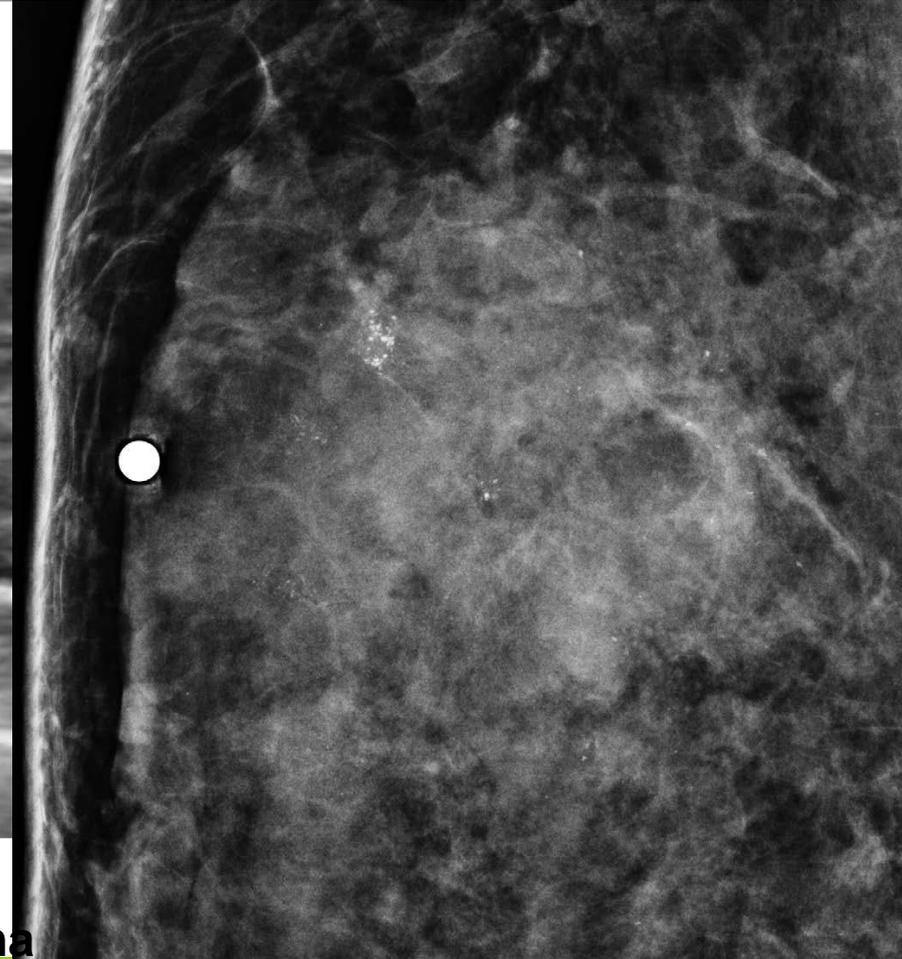
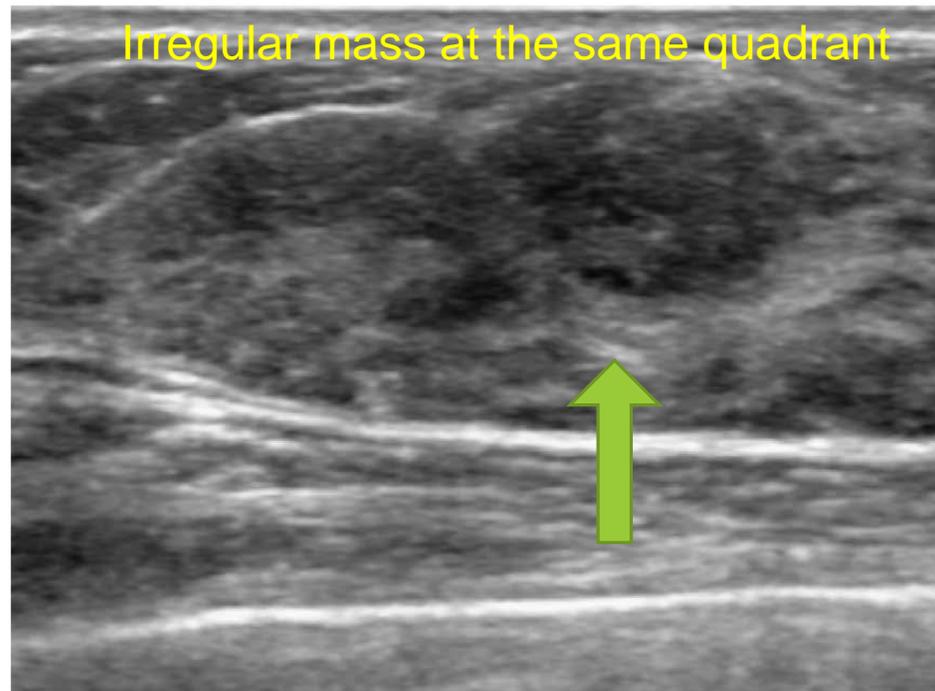
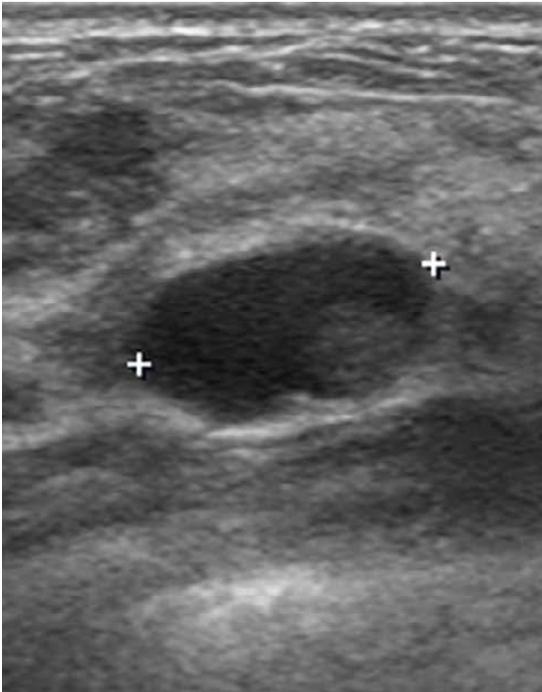
Adequate targeting



**CNB: fibroadipose tissue
Surgery: intraductal papilloma**

Aspect to consider for us guided breast bx

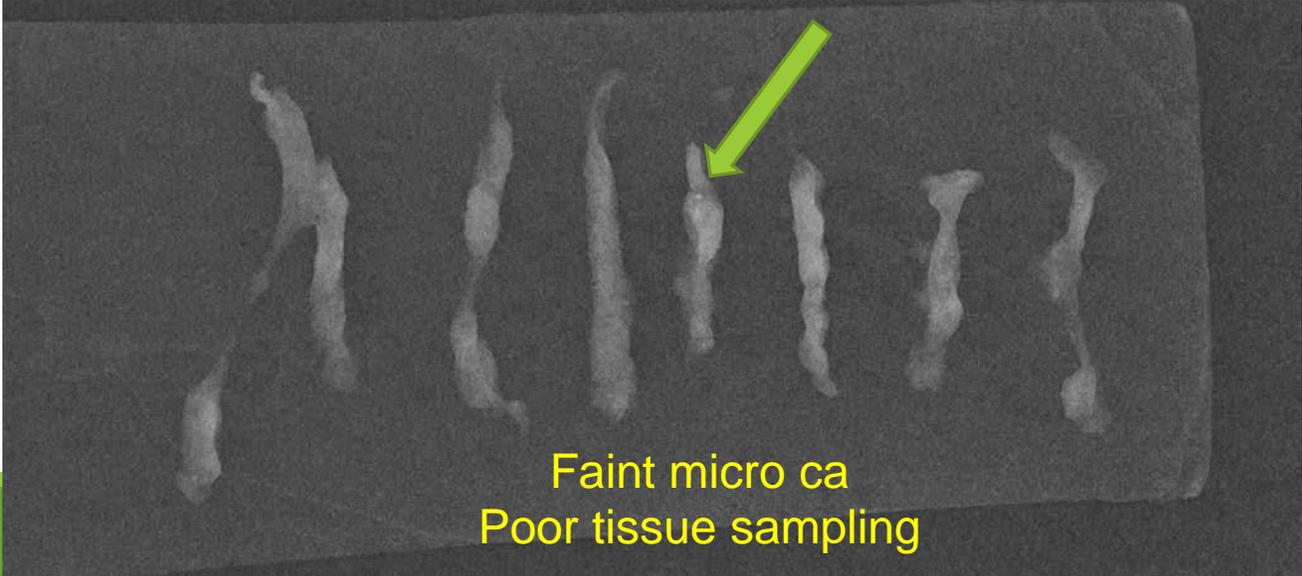
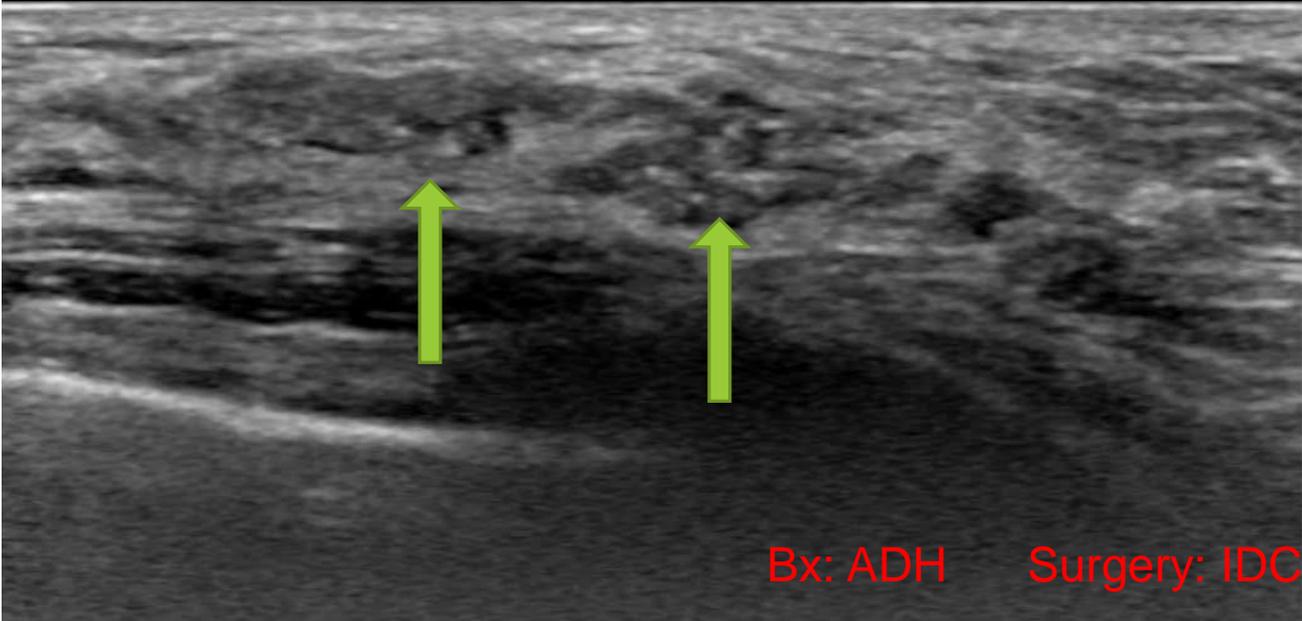
2. Adequate sampling



First Bx: intraductal papilloma

Second Bx: DCIS
Surgery: invasive ductal carcinoma

Adequate sampling



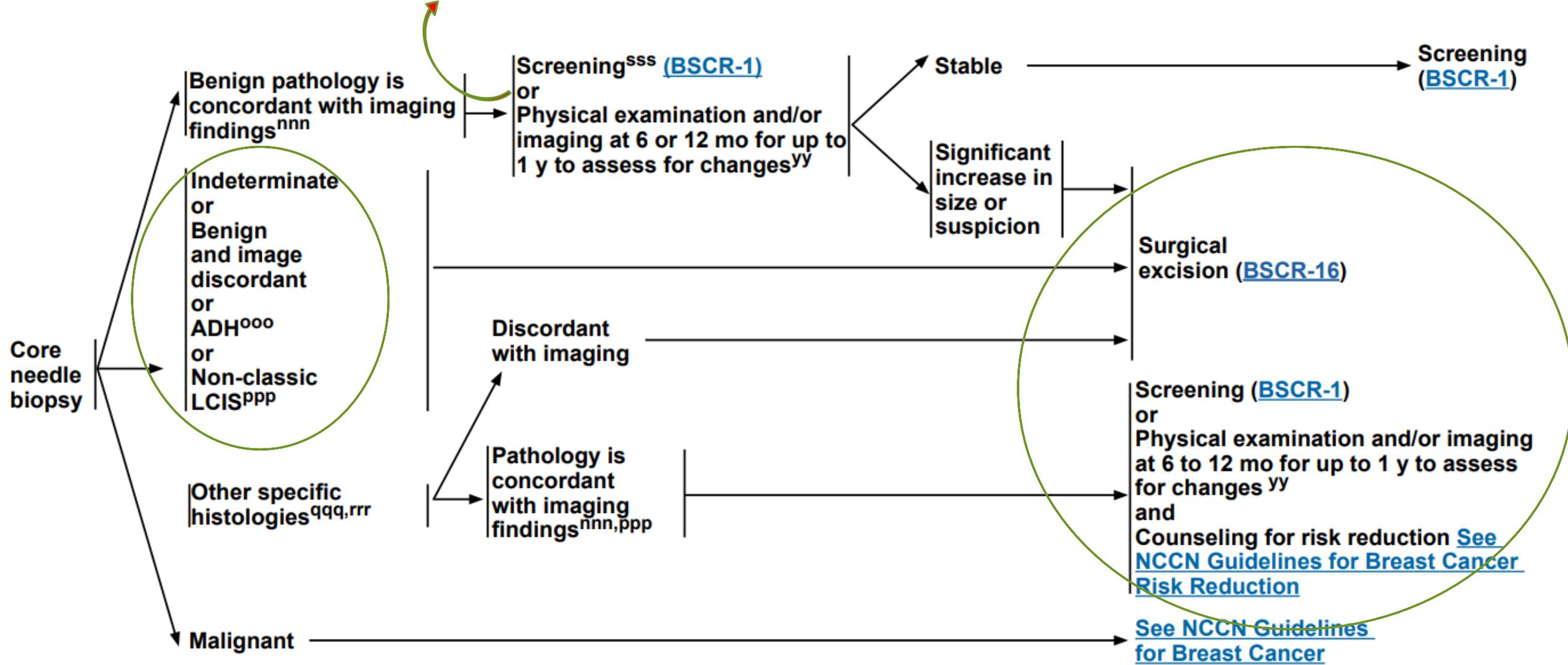
Borderline or High-Risk

ADH, lobular neoplasia(ALH, LCIS), radial scar, papillary lesions, possible phyllodes tumors
Flat epithelial atypia, fibroepithelial lesions, columnar cell lesion, spindle cell lesion.....



Multidisciplinary team
Personalized management recommendations

yy There may be variability on the follow-up interval of physical examination based on the level of suspicion.

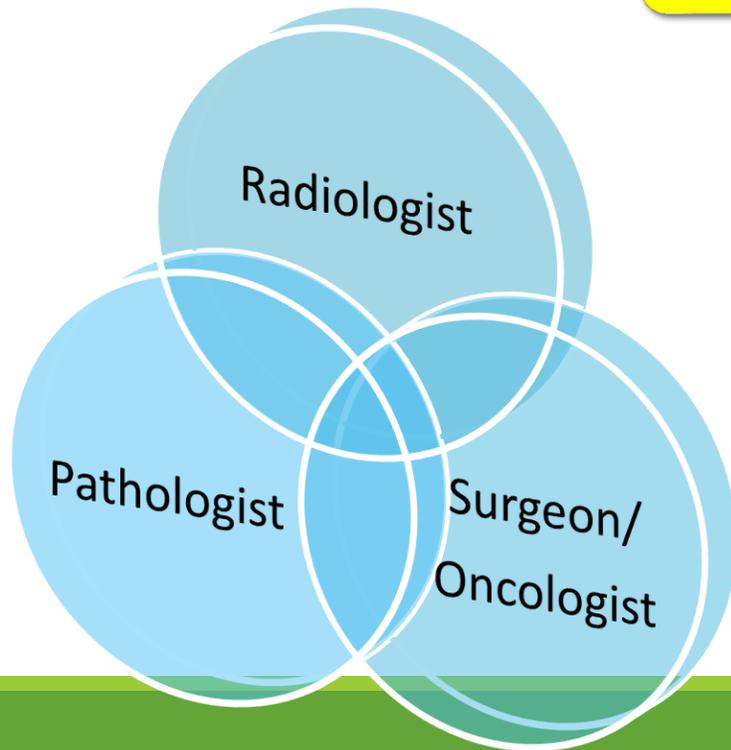


1-Familiar with BIRADS classification

2-Correctly performed procedure

3-Radiologic pathologic correlation

4-Multidisciplinary approach



Histopathology results:

Benign

Malignant

Radiology BIRADS

B3

Concordant

Screening
P/E in <40 y +/-
6 or 12 mo F/U

Discordant

Review imaging
(subtle suspicious feature)

B4A

Concordant

Treatment

B4B

Review imaging features
Close rad-path correlation
If indication repeat Bx

Concordant

Treatment

B4C

Discordant

Repeat Bx/
Surgery

Concordant

Treatment

B5

Evaluating imaging-pathology concordance and discordance after ultrasound-guided breast biopsy

Vivian Youngjean Park, Eun-Kyung Kim, Hee Jung Moon, Jung Hyun Yoon, Min Jung Kim

Department of Radiology and Research Institute of Radiological Science, Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

ULTRA SONO GRAPHY

REVIEW ARTICLE

<https://doi.org/10.14366/usg.17049>
pISSN: 2288-5919 • eISSN: 2288-5943
Ultrasonography 2018;37:107-120

DOI: 10.32768/abc.20229132-39

Avoidable and Unavoidable Repeat Breast Core Needle Biopsies

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ARTICLE INFO

ABSTRACT



Archives Of
Breast
Cancer

DOI: 10.32768/abc.202294465-473

Imaging and Pathological Correlation in Spectrum of Fibrocystic Breast Disease and its Mimics – our Experience

Bhawna Dev^{*a} , Udaya Vakamudi^a , Lasya Thambidurai^a , Leena Dennis Joseph^a , JaiPrakash Srinivasan^a 

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ARTICLE INFO

ABSTRACT

Received:
24 August 2022
Revised:

Background: Fibrocystic change (FCC) of the breast is one of the most common benign breast diseases commonly observed between 20-50 years, with a peak in



NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Breast Cancer Screening and Diagnosis

Version 1.2023 — June 19, 2023

NCCN.org

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Cam and Sakura Med J 2022;2(2):70-74

Ultrasound-guided Breast Biopsy: Evaluation of the Correlation Between Radiologic and Histopathologic Findings

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ORIGINAL ARTICLE – CANCER RESEARCH



Discrepancies between radiological and histological findings in preoperative core needle (CNB) and vacuum-assisted (VAB) breast biopsies

Inna Jörg^{1,5}, Jann Wieler², Constanze Elfgen^{3,4}, Kristina Bolten⁵, Claudia Hutzli⁶, Julia Talimi^{7,8},
Denise Vorburger^{7,8}, Matthias Choschick⁹, Linda Moskovszky⁹, Konstantin Dedes^{7,8}, Zsuzsanna Varga^{8,9} 

Received: 27 July 2020 / Accepted: 22 November 2020 / Published online: 7 December 2020

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THANK YOU