



Surgery Guideline Review:

Clinical manifestations and diagnosis of a palpable breast mass

- Source: uptodate
- Established: Feb 2018
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Topics:

- Definition
- Clinical Features
 - Clinical manifestation
 - Clinical presentation
 - Physical examination
 - Imaging study
 - Histopathology/cytology
- Evaluation
 - Presenting symptoms
 - Risk factor for breast cancer
 - Physical examination
 - Diagnostic imaging
 - Diagnosis
 - Differential diagnosis



Definition:

Breast mass: is a nodule or growth of tissue

Types:

1. Benign


- Solid
- Cystic

2. Malignant

- Solid
- complex cyst = A cystic mass with solid components



Clinical feature/ clinical presentation

- ▶ patient's self-breast examination
 - ▶ routine clinical breast examination
 - ▶ pain and/or nipple discharge
 - ▶ Trauma to the breast
- 

Clinical feature / Physical examination:

Goals of Ph/E to detect:

- dominant mass
- thickening
- asymmetry

palpable breast mass can be:

- obvious or subtle
- soft, firm, or hard
- mobile or fixed to the chest wall or skin
- tender or nontender
- well-defined or nondiscrete margins



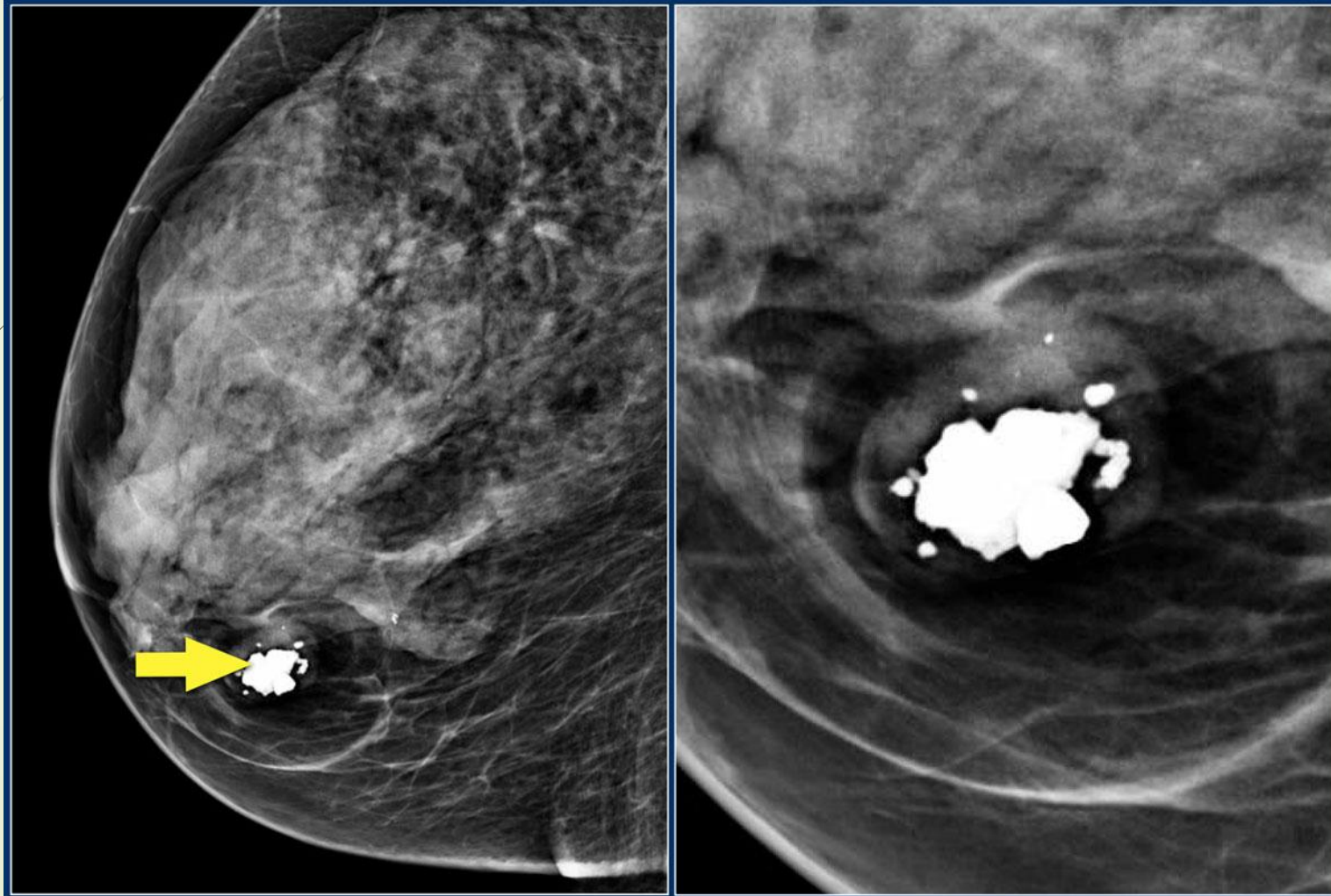
Associate clinical findings:

- including ecchymosis
- erythema
- peau d'orange
- ulceration of the skin
- nipple discharge
- nipple retraction

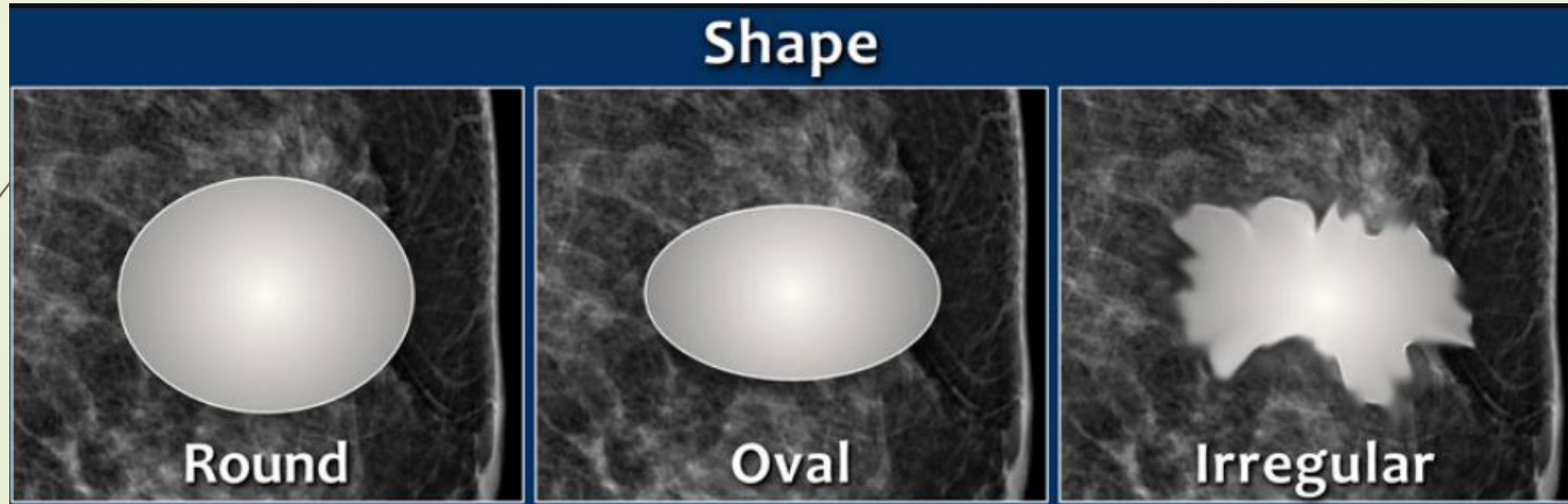
Clinical feature / Imaging studies

- **mammogram**
 - discrete or irregular
 - architectural distortion
 - gross or microscopic calcifications
- **Ultrasound**
 - solid or cystic, or a combination of both
 - margins (sharp or ill defined)
 - presence or absence of a prominent vascular supply
- **Magnetic resonance imaging (MRI)**
 - enhancing or nonenhancing mass
 - Contrast

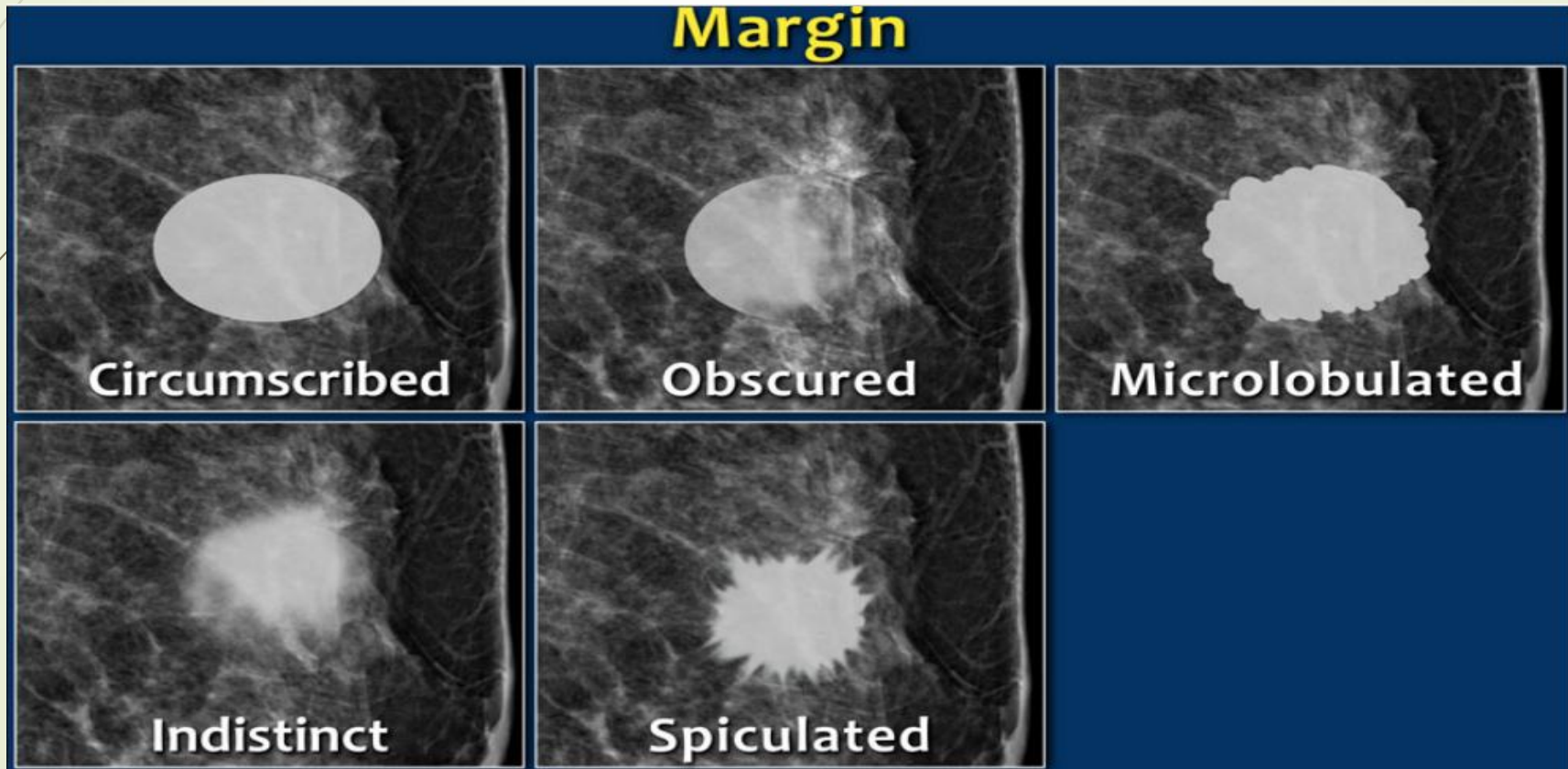
Mammography/ Mass



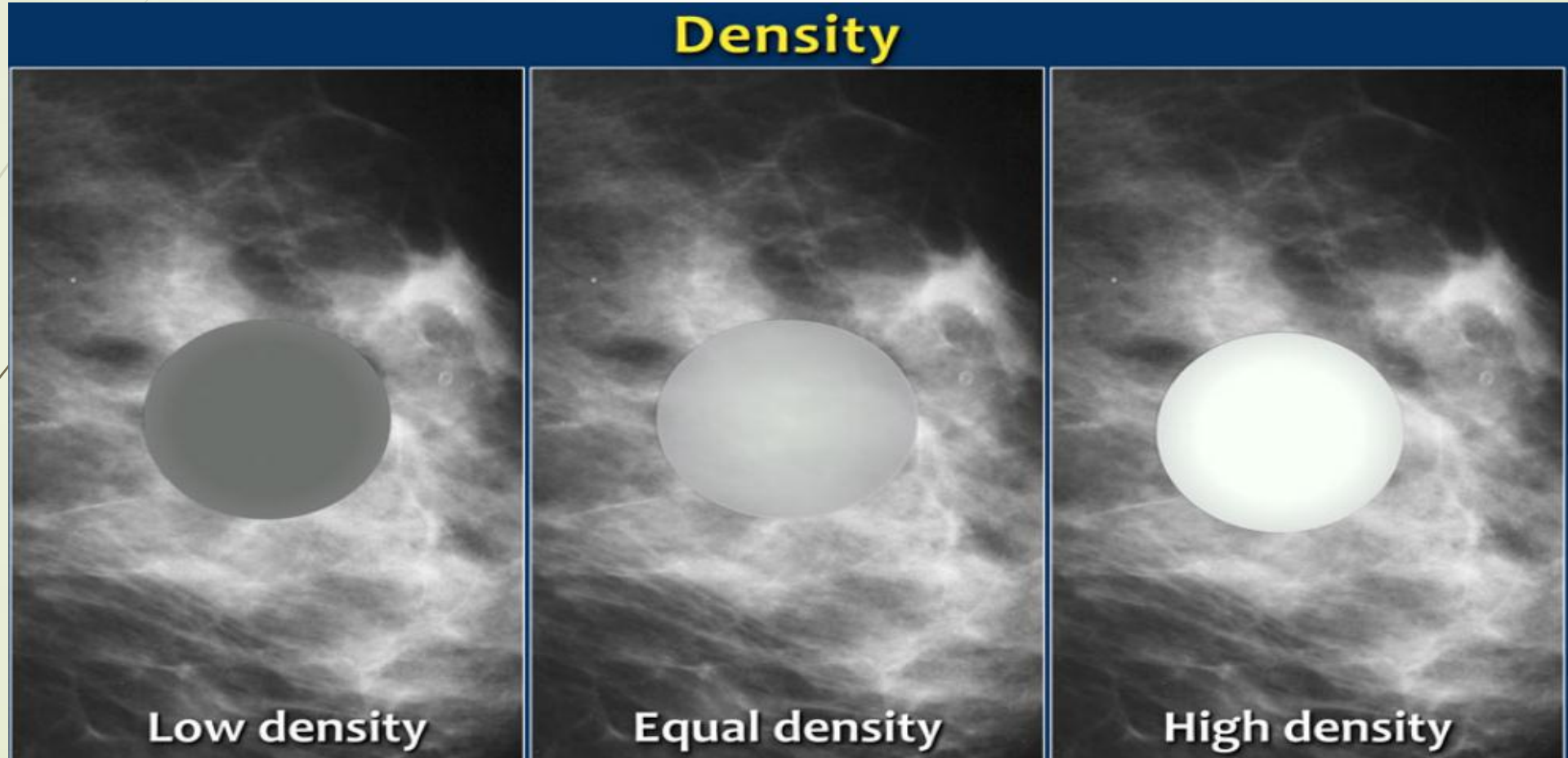
Mammography/ margin



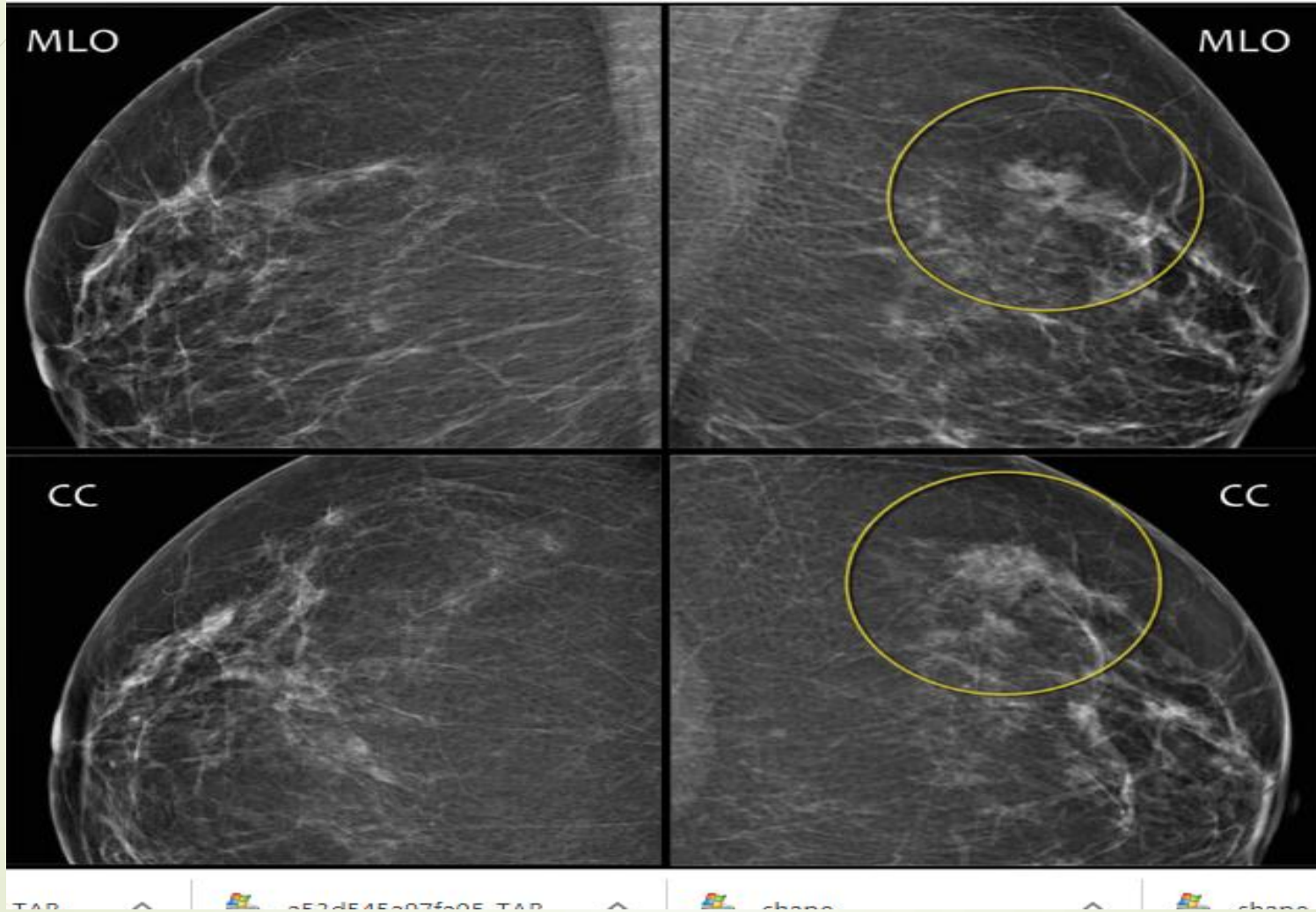
Mammography / margin



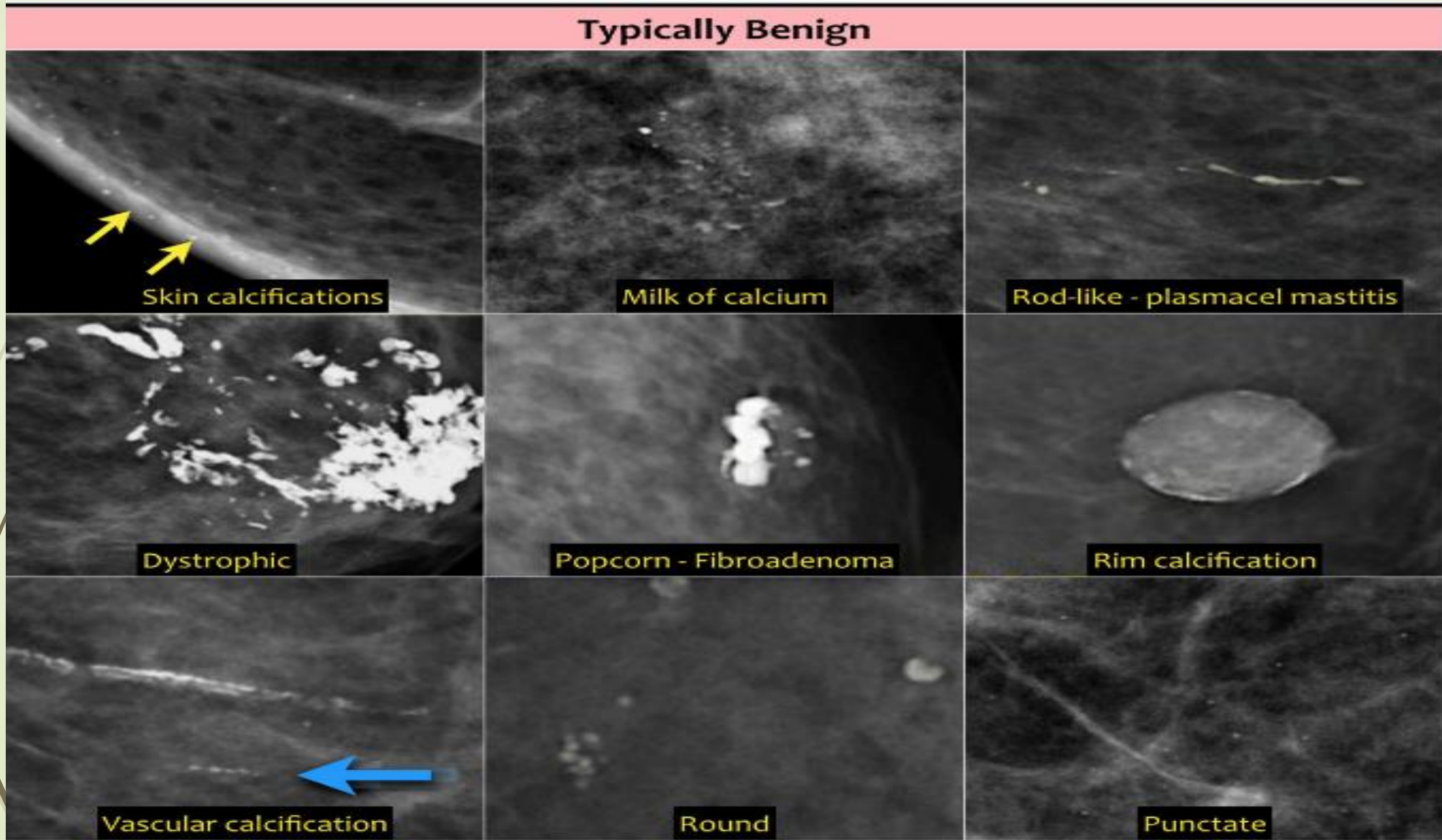
Mammography/ density



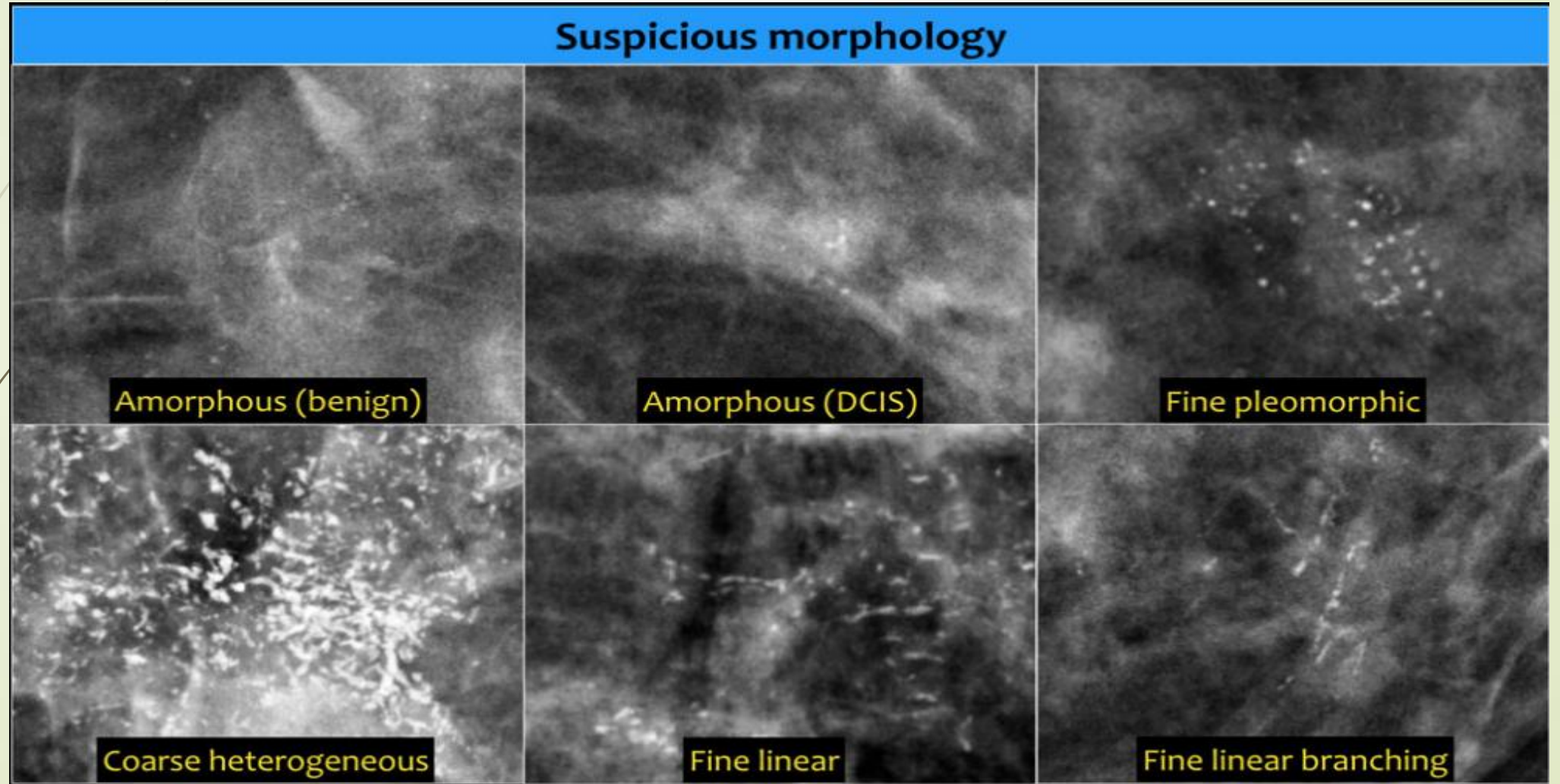
Mammography / asymmetry



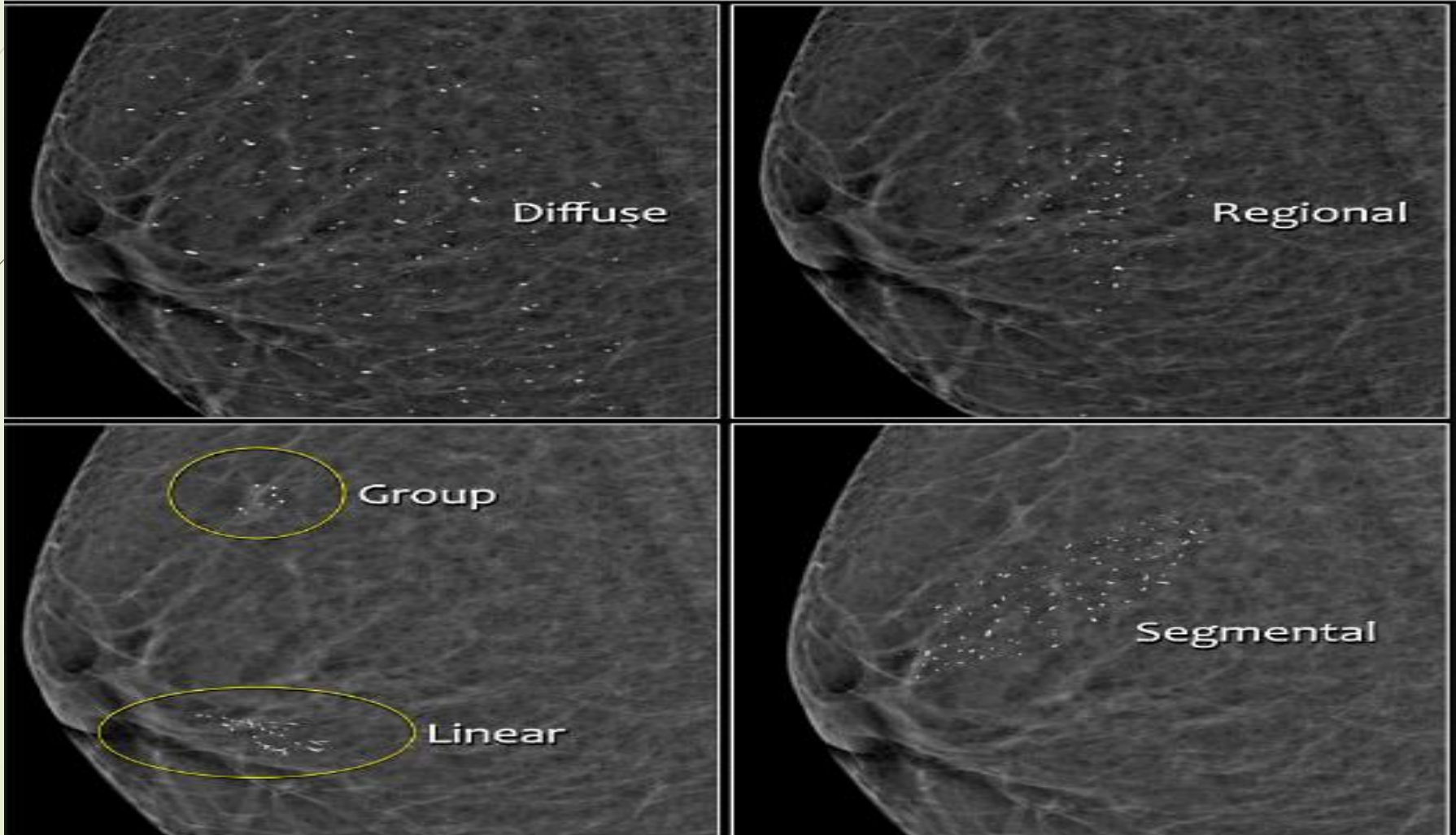
Mammography / benign



Mammography /suspicious



Mammography / distribution of calcification






Clinical feature /Histopathology- cytology

- ▶ core, incisional, or excisional tissue biopsy, or a fine needle aspiration
- 



EVALUATION

1. complete history
 2. physical examination
- 



EVALUATION /1.History

- **subjective information**
 - how and when mass noted
 - if painful → change over time

- **full review of**
 - medical and surgical illnesses
 - Medications
 - Allergies
 - assessment of risk factors

Risk factors for breast cancer

Risk and protective factors for developing breast cancer

	Risk group		
	Low risk	High risk	Relative risk
Risk factors			
Deleterious <i>BRCA1/BRCA2</i> genes	Negative	Positive	3.0 to 7.0
Mother or sister with breast cancer	No	Yes	2.6
Age	30 to 34	70 to 74	18.0
Age at menarche	>14	<12	1.5
Age at first birth	<20	>30	1.9 to 3.5
Age at menopause	<45	>55	2.0
Use of contraceptive pills	Never	Past/current use	1.07 to 1.2
Hormone replacement therapy (estrogen + progestin)	Never	Current	1.2
Alcohol	None	Two to five drinks/day	1.4
Breast density on mammography (percents)	0	≥75	1.8 to 6.0
Bone density	Lowest quartile	Highest quartile	2.7 to 3.5
History of a benign breast biopsy	No	Yes	1.7
History of atypical hyperplasia on biopsy	No	Yes	3.7
Protective factors			
Breast feeding (months)	≥16	0	0.73
Parity	≥5	0	0.71
Recreational exercise	Yes	No	0.70
Postmenopause body mass index (kg/m ²)	<22.9	>30.7	0.63
Oophorectomy before age 35 years	Yes	No	0.3
Aspirin	≥Once/week for ≥6 months	Nonusers	0.79

Adapted from: Clemons M, Goss P. Estrogen and the risk of breast cancer. *N Engl J Med* 2001; 344:276.



EVALUATION /Presenting symptoms:

- GA of the breast
 - Change in size, symmetry
- skin changes(new or persistent)
- nipple inversion(new)
- nipple discharge
- breast pain
- breast mass
- precise location

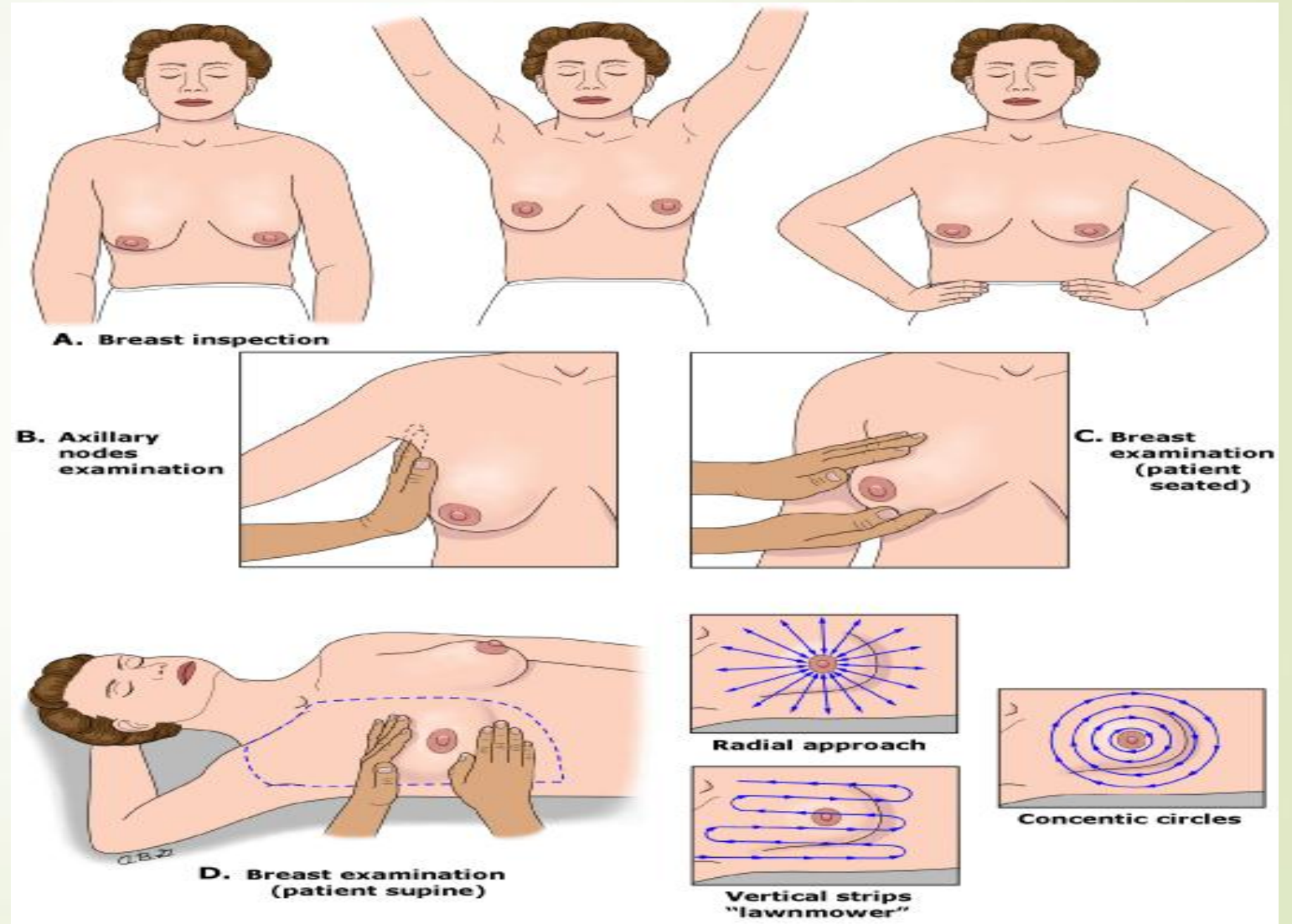
EVALUATION /Physical examination

► Inspection

- Asymmetry
- Skin changes
- Nipples

► Palpation

- Regional lymph node
- Breast






EVALUATION /Documentation

- Location
 - Position on the breast and distance from areola
 - Clock system
- Size
- Mobility
- Consistency



EVALUATION /Diagnostic imaging

- Mammography
 - Ultrasonography
 - MRI
- 



EVALUATION /DIAGNOSIS

The diagnosis of a benign or malignant breast mass is confirmed by a breast biopsy.

The triple test or assessment:

- physical examination
- mammography
- needle biopsy
 - fine needle aspiration (FNA)
 - core needle biopsy (CNB)

EVALUATION /DIFFERENTIAL DIAGNOSIS

- ▶ **Benign:** 90 % or more of palpable breast masses in women in their 20s to early 50s are benign.
 - ▶ Fibroadenoma
 - ▶ Cyst
 - ▶ Fibrocystic changes
 - ▶ Galactocele
 - ▶ Fat necrosis
- ▶ **Malignant**
 - ▶ infiltrating ductal breast carcinoma: most common breast cancer
 - ▶ infiltrating lobular carcinoma(prominent diffuse thickening)
 - ▶ mixed ductal/lobular carcinoma
 - ▶ invasive ductal carcinomas

Approach

