

Benign Breast Disease

East Kootenay CME Day

Disclosures

- No financial disclosures or conflicts of interest

Objectives

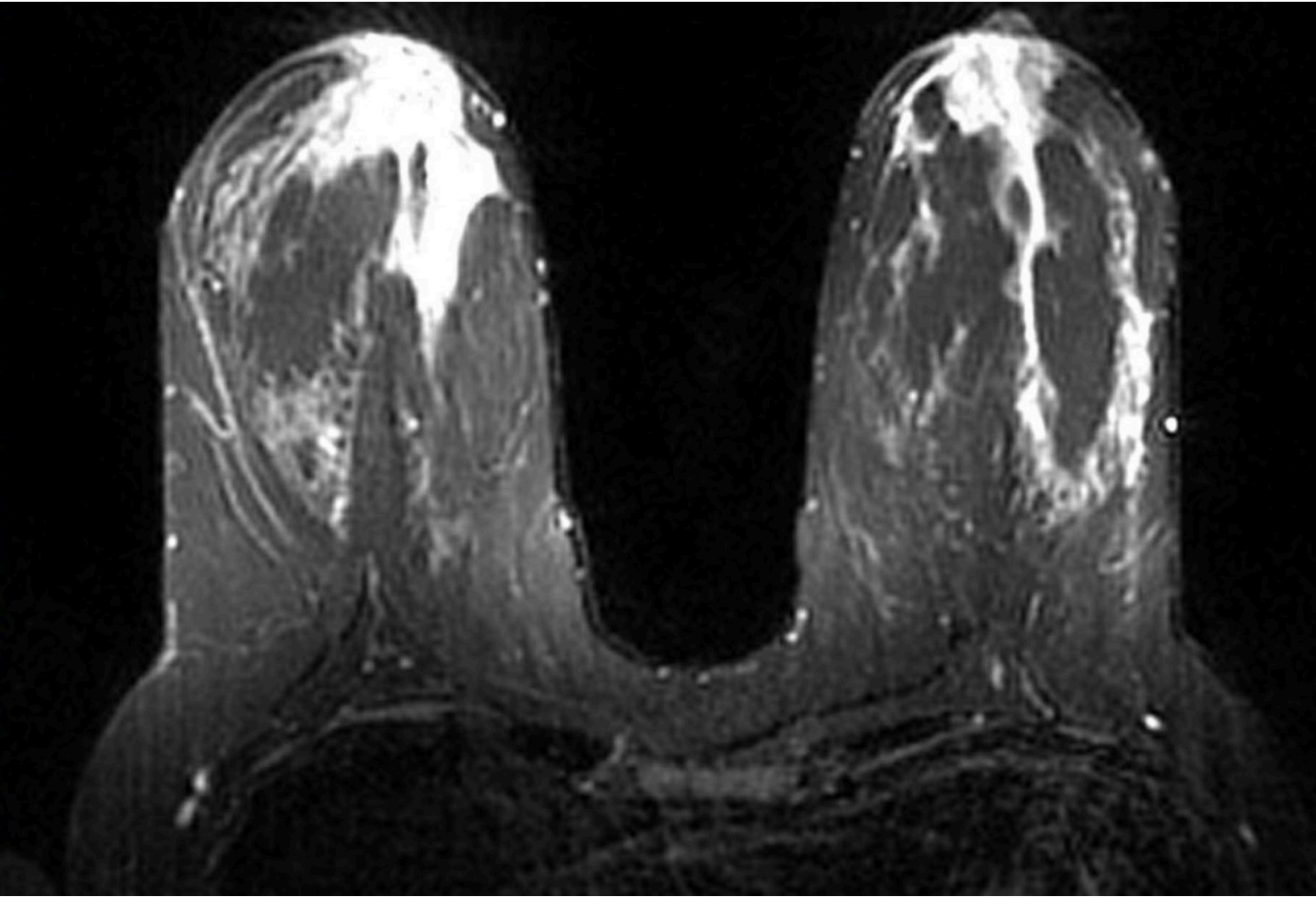
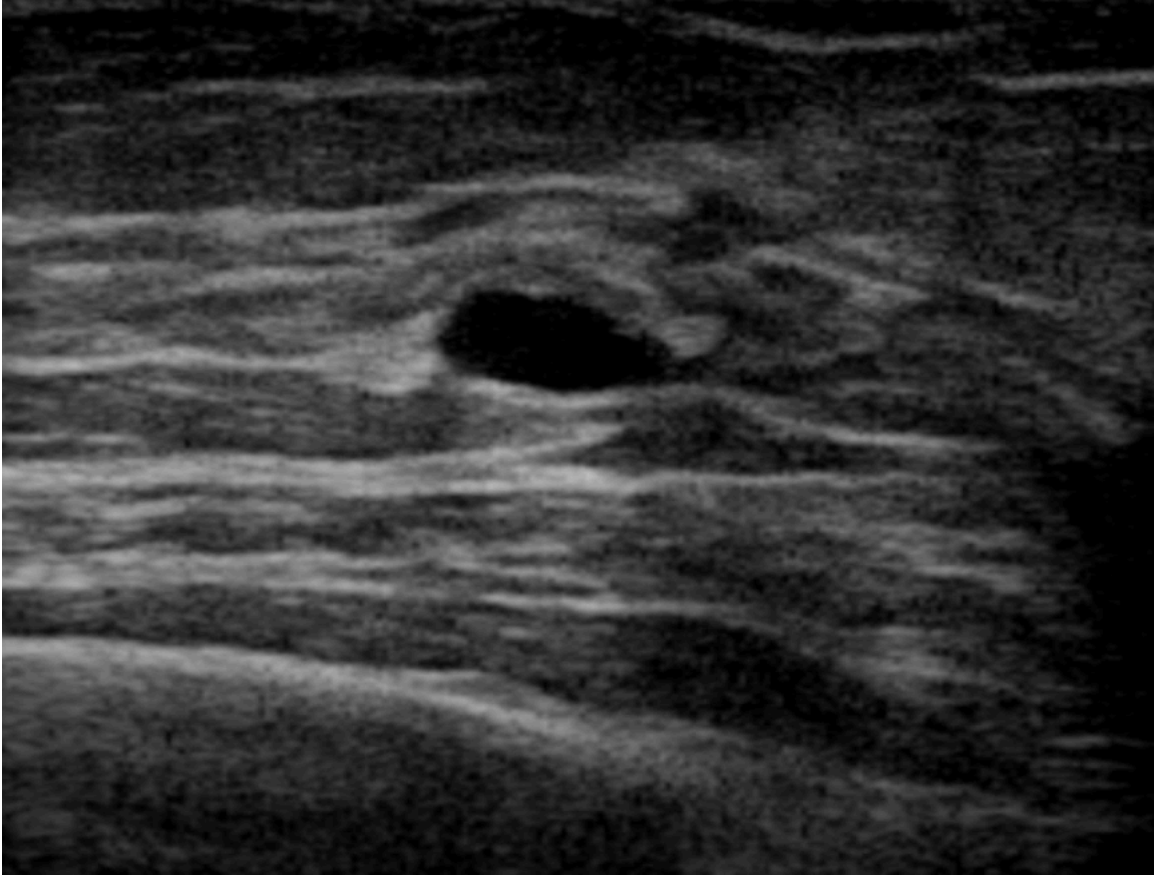
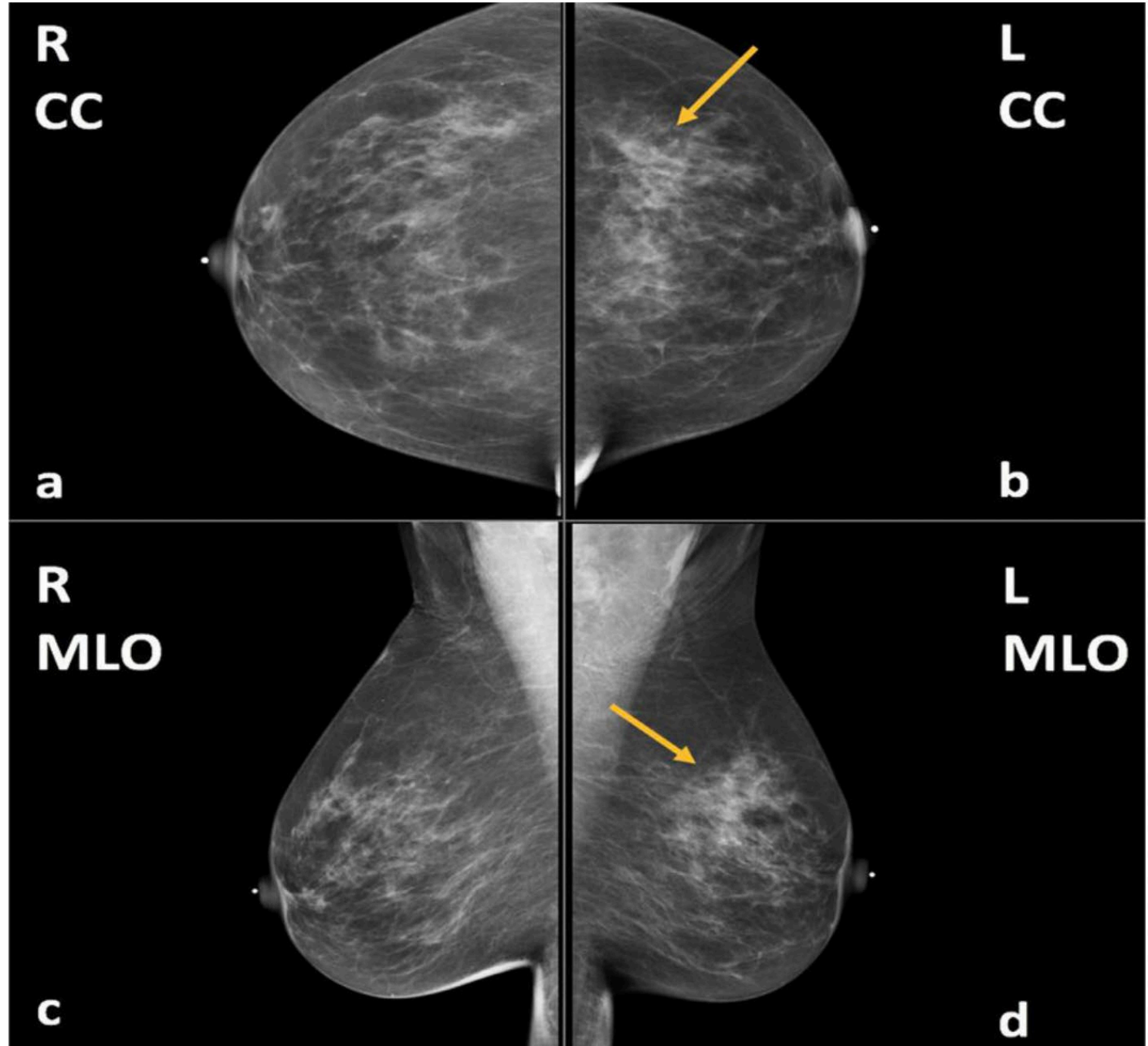
At the end of this session, participants will be able to:

- Develop an approach to the work-up of common breast-related presenting complaints
- Initiate treatment of common clinical presentations
- Identify high-risk benign breast lesions requiring surgical referral

Outline

- Breast pain
- Nipple discharge
- Breast infections
- Breast lump
- Benign proliferative breast lesions

Imaging Modalities



Breast Pain

- Up to 70% of women will experience it
- More common in pre-menopausal women than post-menopausal
- Classification:
 - Cyclic (physiologic) 66%
 - Non-cyclic 33%
 - Extramammary

Breast Pain Goals

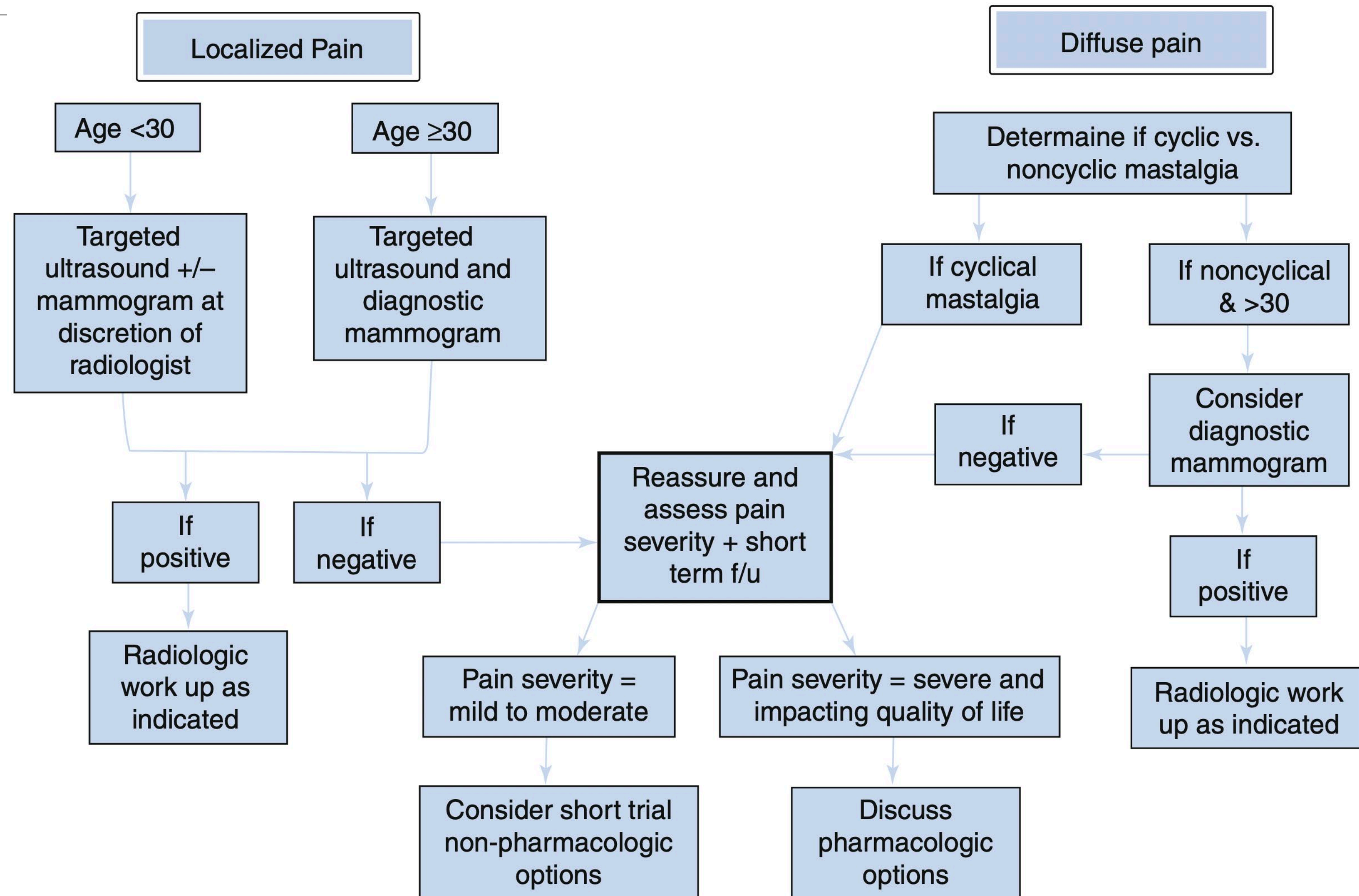
- Rule out malignancy:
 - Mammogram: >30yrs
 - U/S: <30yrs, focal pain/mass
- Alleviate pain



Breast Pain

- Cyclic:
 - Can occur in up to 60% of premenopausal women
 - Often bilateral, poorly localized
 - Described as heaviness/swelling/tenderness radiating to arm and axilla
 - Etiology:
 - Menstrual cycle: late luteal phase, dissipates with onset of menses
 - Worse with fibrocystic breast disease
 - Medications: OCP
- Non-cyclic:
 - Most common in women age 40-50
 - UOQ radiating to axilla, often unilateral
 - Etiology:
 - Large pendulous breasts, medications (HRT), diet/lifestyle, duct ectasia/mastitis
 - Extramammary:
 - Chest wall, pec major muscle, gallbladder, lung disease, thoracic outlet syndrome

Breast Pain

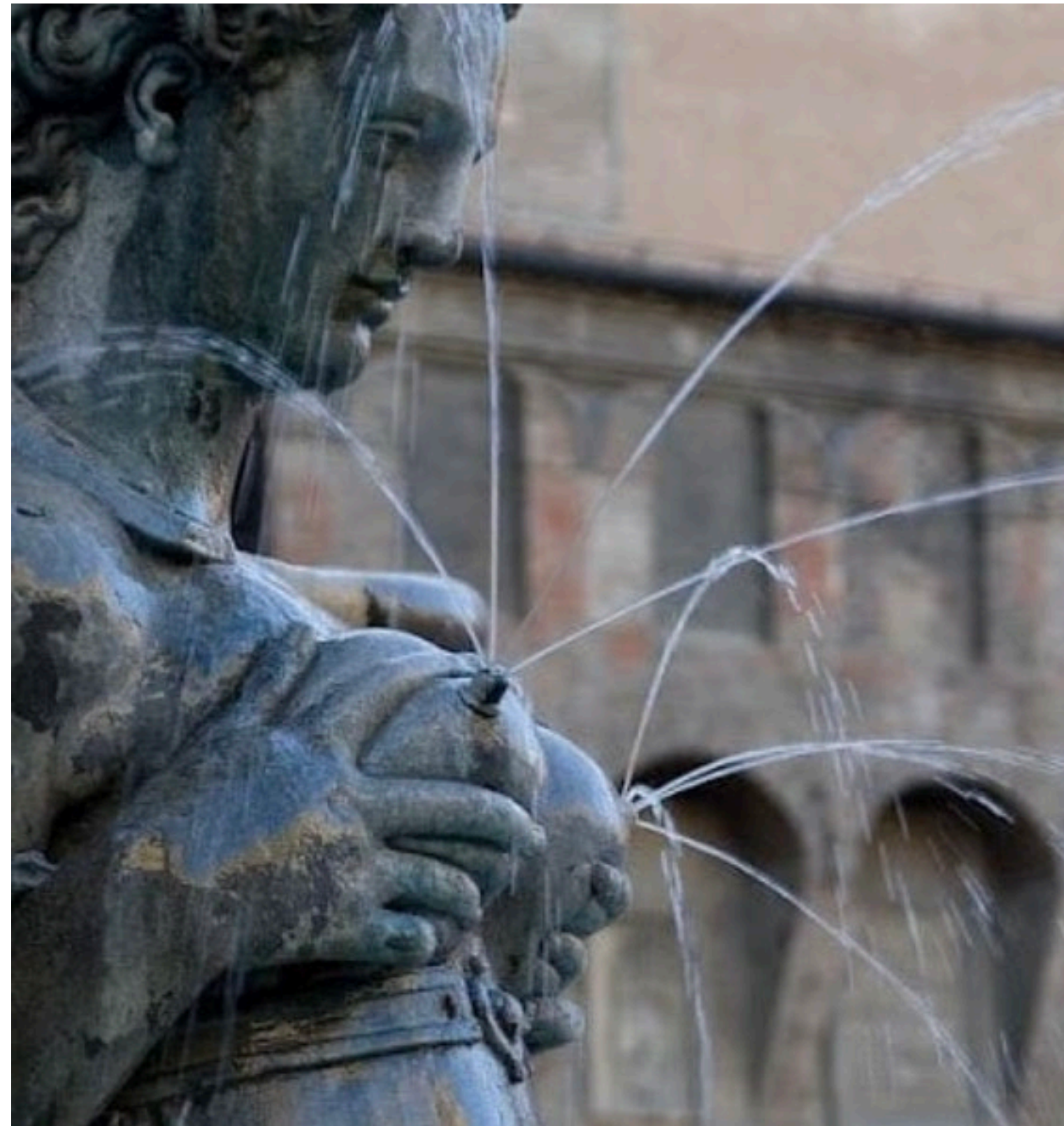


Mastalgia

- Non-pharmacologic:
 - Supportive bra, relaxation training
 - Vitamin E, Flaxseed
 - Little evidence: decrease caffeine, evening primrose oil
- Pharmacologic:
 - If on HRT/OCP: decrease estrogen component
 - NSAIDs, Acetaminophen
 - Tamoxifen 10mg od, Danazol 200mg od, Bromocriptine (prolactin antagonist)
- Chest wall pain:
 - Topical NSAIDs, Prednisolone + Bupivacaine injection

Nipple Discharge

- 50-80% of women of reproductive age can express discharge
- Etiology:
 - Physiologic
 - Duct ectasia
 - Pregnancy/lactational
 - Abscess
 - Papilloma
 - Malignancy: DCIS, invasive
 - Rare: endocrine, jogger's nipple



Physiologic Nipple Discharge

- Usually bilateral (can be unilateral), multi-ductal, multiple colours (straw, green, brown), non-spontaneous
- ?Imaging
- Treatment:
 - Ask patient to stop expressing
 - Reassurance



Nipple Discharge

- Pregnancy-associated:
 - Bloody nipple discharge can be seen in 2nd + 3rd trimester and is usually benign
- Lactational:
 - Milk secretion can continue up to 6-12 months post cessation of breast feeding
- True galactorrhea: **endocrine problem**
 - Hyperprolactinemia secondary to anterior pituitary tumour, hypothyroidism, renal insufficiency, medications
 - Investigations: prolactin, b-HCG, TSH, creatinine, CT/MRI head

Pathologic Nipple Discharge

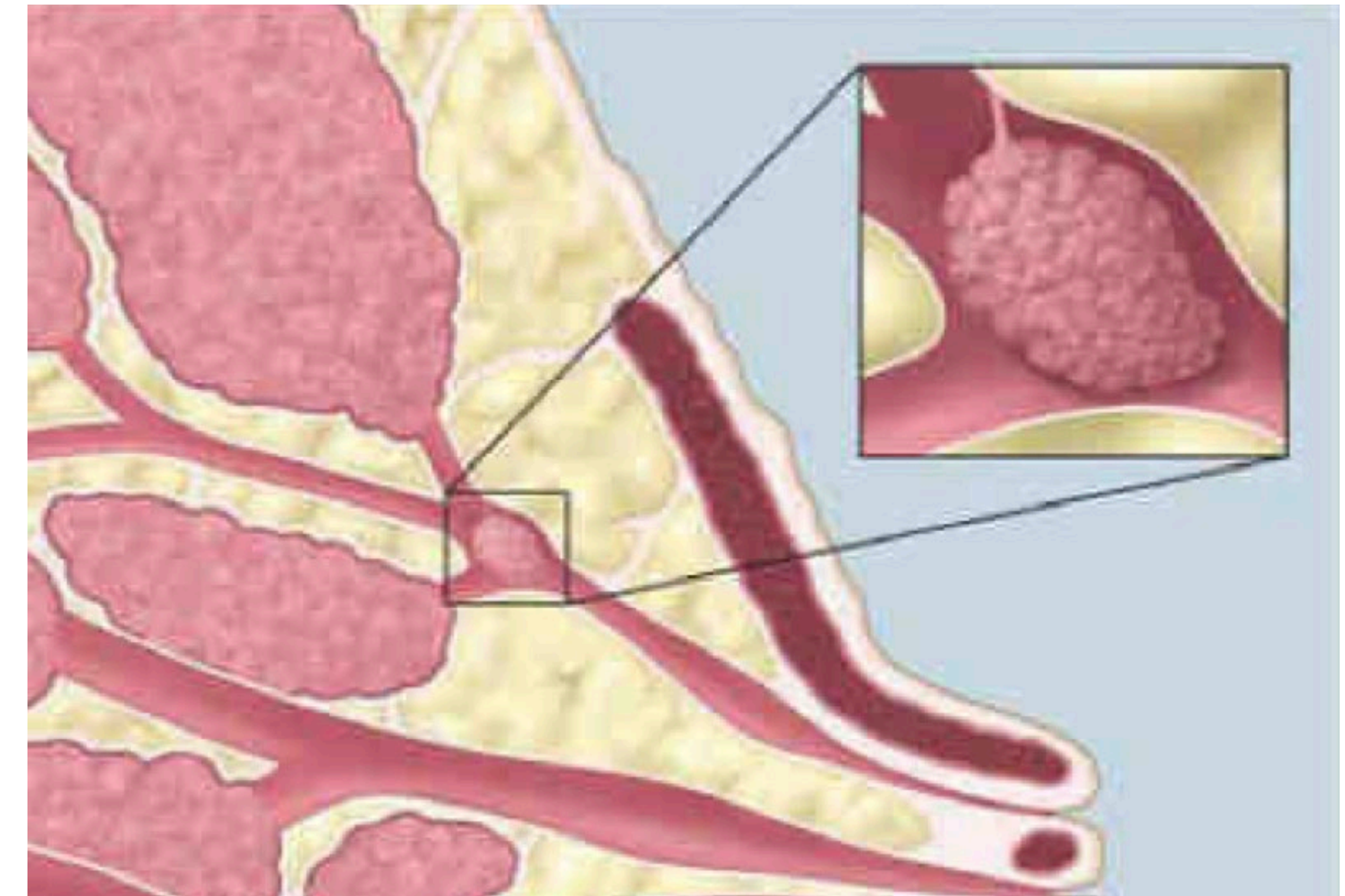
- Unilateral, uniductal, persistent, spontaneous, bloody/**clear**
- Most common cause = intraductal papilloma
- Investigations:
 - Mammogram + subareolar U/S
 - Abnormal: core biopsy
 - Normal: **3% risk of carcinoma**
 - Consider MRI: if normal
 - Subareolar U/S q6mos until resolved or 1-2yrs, OR
 - Subareolar duct excision



melbournebreastcancersurgery.com.au

Pathologic Nipple Discharge

- Treatment = subareolar duct excision
- Optional pre-op ductogram or MRI: determine depth of pathology
- Lacrimal probe/blue dye/ductoscopy-guided
- Dissect duct out for a few centimetres and excise

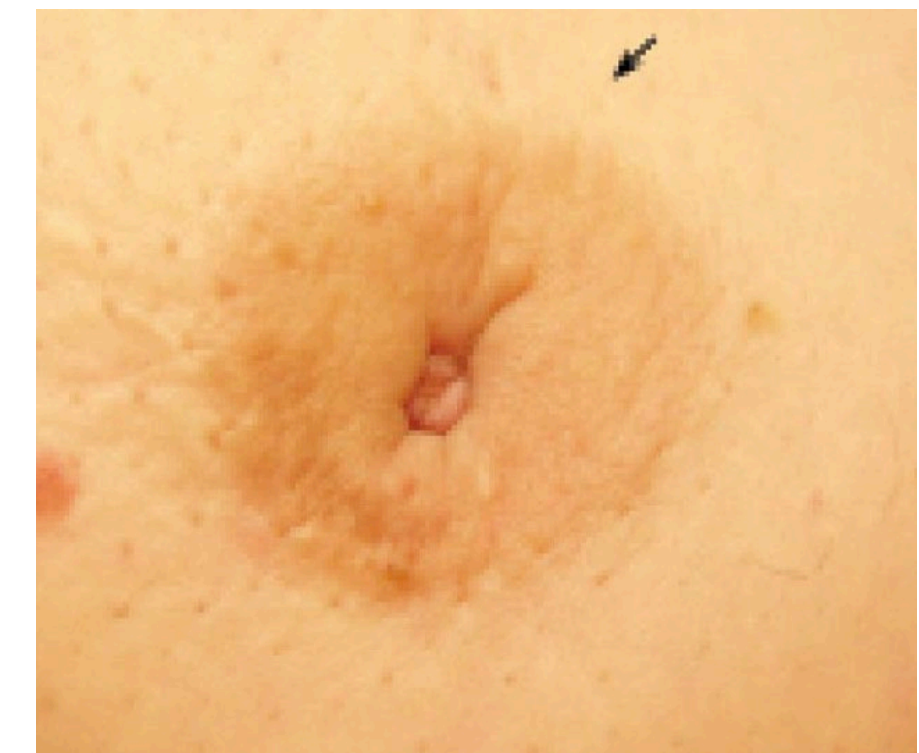


Nipple Inversion

- Commonly spontaneous during puberty
- Adult-onset less common
 - Etiology: duct ectasia, carcinoma (5-15%)
- Investigation:
 - Mammogram +/- subareolar U/S



Duct ectasia



Malignancy

Breast Infections

- Mastitis:
 - Lactational
 - Non-lactational

- Abscess



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Lactational Mastitis

- Occurs in up to 25% of lactating women
- S.aureus enters via small skin laceration + proliferates in stagnant milk ducts
- Treatment:
 - Warm compresses, continue breastfeeding
 - Abx to cover Staph/Strep **Cloxacillin**

Non-Lactational Mastitis

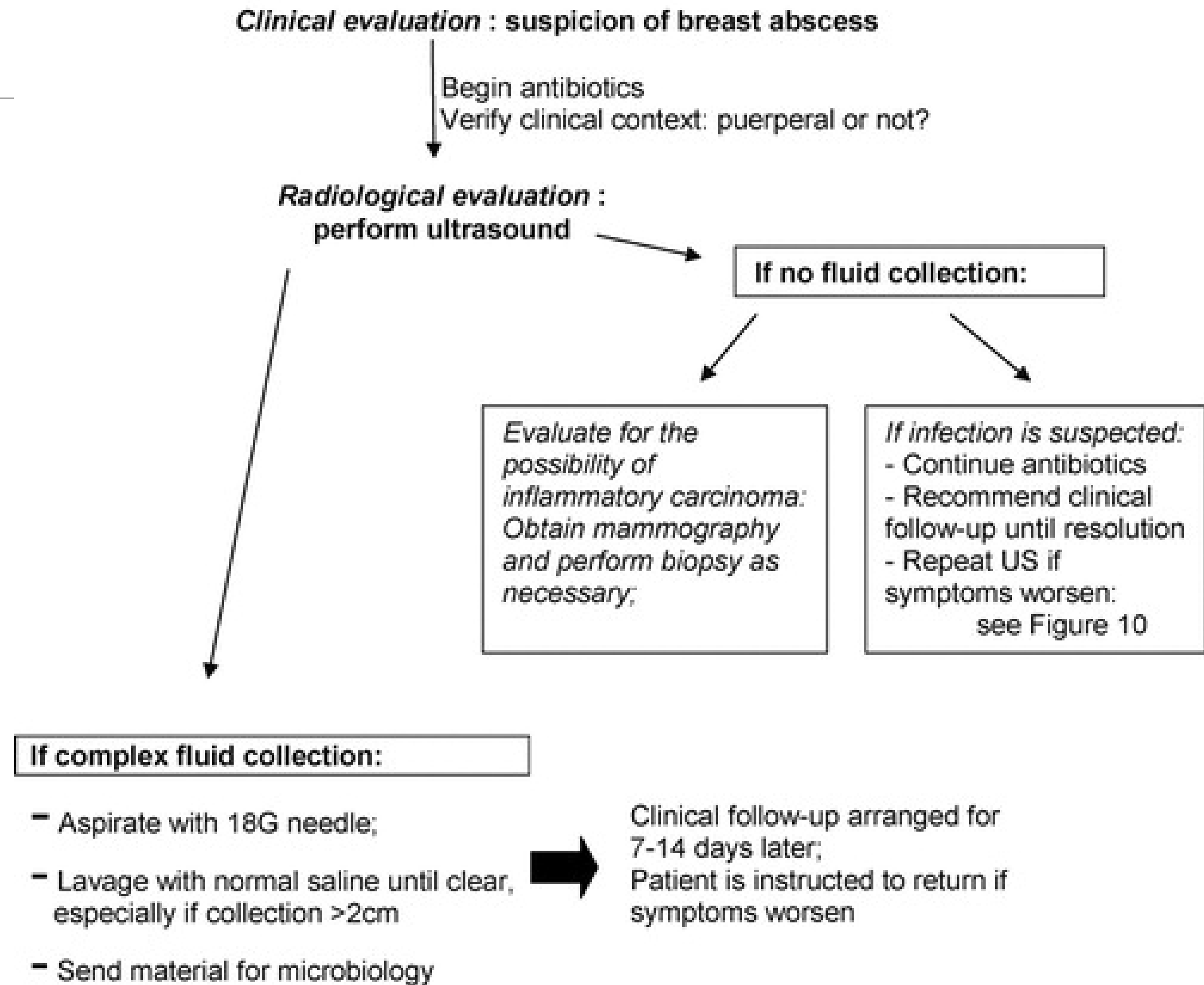
- Risk factors: obesity, diabetes, **smoking**, nipple piercing
- Treatment:
 - Smoking cessation, warm compresses, NSAIDs
 - Abx to cover aerobes + anaerobes **Clavulin**

Lactational/Non-Lactational Abscess

- Dx: U/S
- Treatment:
 - Warm compresses, NSAIDs
 - Normal overlying skin: U/S-guided aspiration
 - Abscess >5cm, compromised overlying skin, aspiration failure: I&D

Breast Abscess

Treatment algorithm: first-line management



Palpable Lump

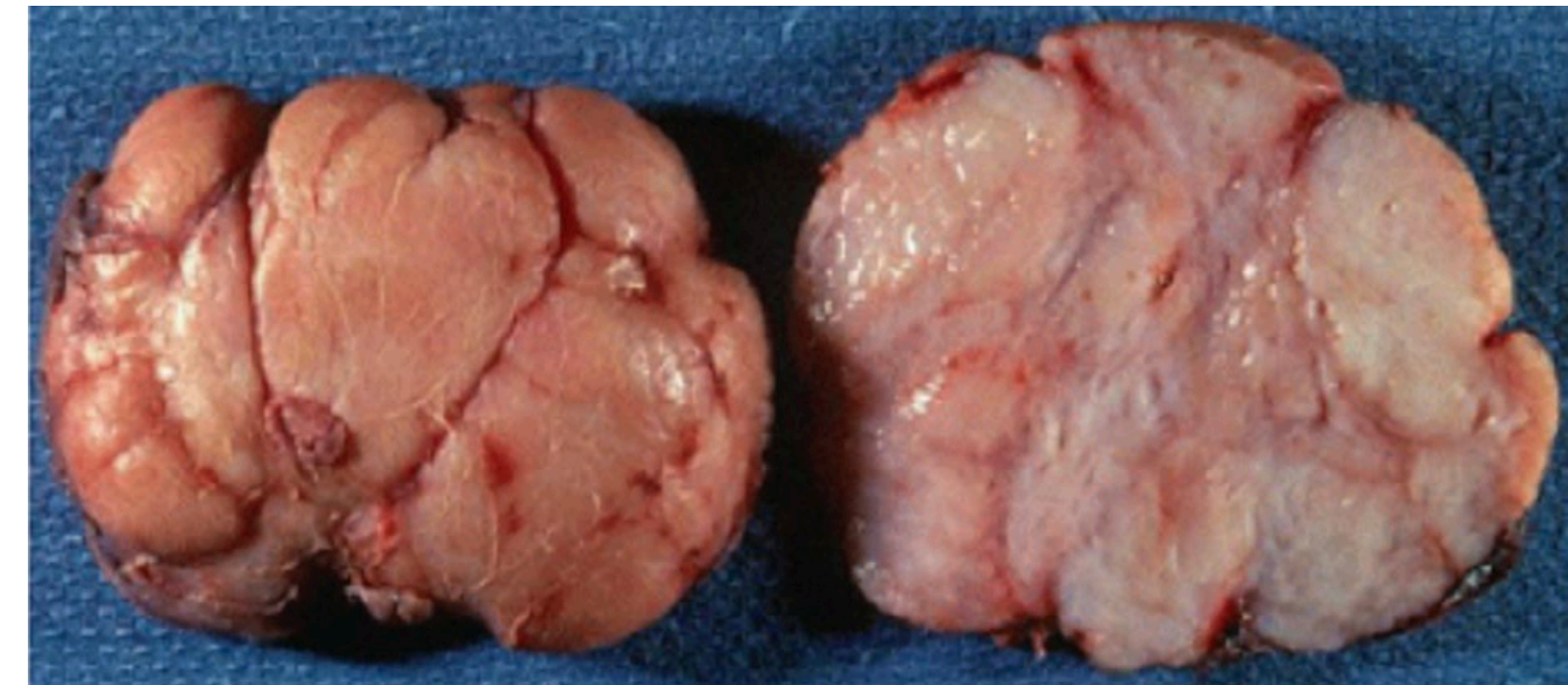
- Differential:
 - Cyst
 - Fibroadenoma/phyllodes tumour
 - Benign proliferative lesion +/- atypia
 - Fat necrosis
 - DCIS/Invasive cancer
- Investigations:
 - <30 years = U/S; >30 years = Mammo + U/S

Cyst

- Simple:
 - Asymptomatic - no further investigation/Tx
 - Symptomatic - aspirate
 - Excise if: persistent mass after aspiration, recurs after aspiration x 2, bloody
- Complicated: **<2% malignant**
 - FNA (send to path) vs follow-up U/S q6mos x 2 years
 - Persistent mass after aspiration: core biopsy +/- excise
- Complex: **20-40% risk of associated malignancy**
 - Core biopsy/FNA
 - Benign path: U/S q6-12 months x 1-2 years
 - Excise if: core indeterminate, discordant result, bloody, atypia

Fibroadenoma

- Most common age 15-35yrs, hormone-dependent
- 1/3 involute, 1/3 stay the same, 1/3 enlarge
- Well-defined, mobile, rubbery
- Dx: core biopsy
 - Could omit in young patient with typical U/S features
- Follow-up:
 - Recommendations vary
 - Core biopsy confirming diagnosis = routine follow-up
 - No biopsy done (young pt with typical features, BI-RADS3 lesions)
 - Clinical exam + U/S q6 months x 2 years
- Excise if:
 - Increase in size
 - Symptomatic
 - >3-4cm at diagnosis
 - Core biopsy: atypical hyperplasia, suspicious for malignancy
 - (Age >35 and no regression)



Phyllodes tumour

- Often diagnosed on core biopsy for suspected fibroadenoma
- Factors distinguishing from fibroadenoma:
 - Large size, rapid growth
- Histologic classification: benign, borderline, malignant
- Locally recur
- Excise with 1cm margins

Benign Proliferative Lesions

- Proliferative (RR 1.7-2.1):
 - Usual ductal hyperplasia
 - Sclerosing adenosis
 - Columnar hyperplasia
 - Papilloma
 - Radial scar
 - Flat epithelial atypia
- Proliferative with atypia (RR >4):
 - Atypical lobular/ductal hyperplasia
 - LCIS

Benign Proliferative Breast Lesions

Lesion	RR of Breast Cancer	Upgrade Rate	What to do
Papillary lesion without atypia	2	7%	Follow if: adequately sampled and concordant
Papillary lesion with atypia	2-3	37%	Excise
Radial Scar	2	No atypia: 5% Atypia: 8-28%	Excise if: atypia, discordant, inadequately sampled, size >1 cm
Sclerosing Adenosis	2	?	Follow
Columnar Cell Lesions	2	?	Follow
Flat Epithelial Atypia	1-2	5-15%	Follow if: concordant and adequately sampled
Atypical Ductal Hyperplasia	4	10-30%	Excise
Atypical Lobular Hyperplasia	4	0-10%	Follow if: concordant and adequately sampled
Lobular Carcinoma in Situ	10-14	3-5% (recent)	Follow if: concordant and adequately sampled



Refer for consideration of excisional biopsy

Fat Necrosis

- Reassurance

Conclusions

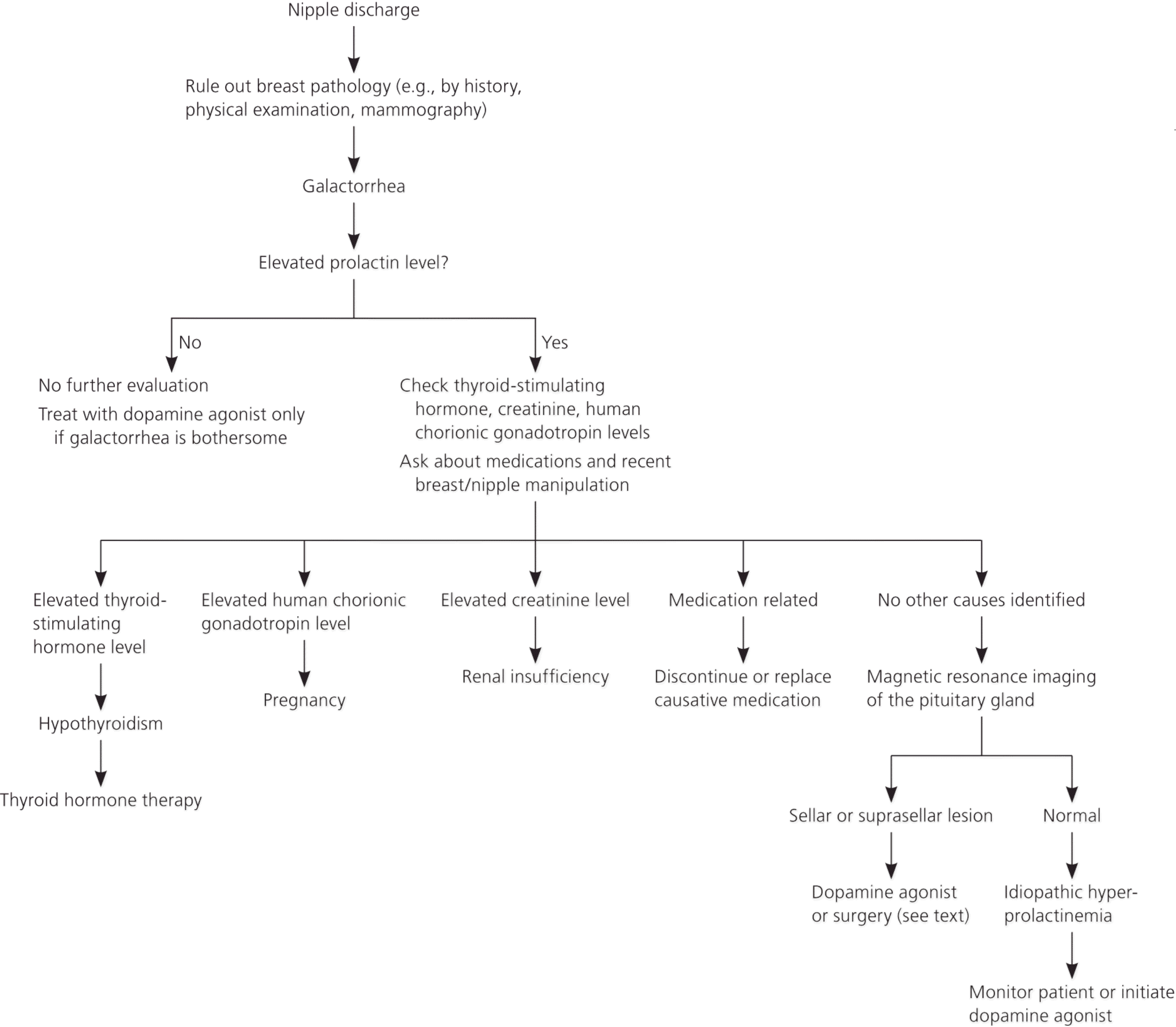
- Most breast complaints are benign
- Women can present with breast pain, palpable lump, nipple discharge, or skin changes
- Breast complaints require careful assessment with thorough history, physical examination, and diagnostic work-up if indicated
- Goals: symptom management, breast cancer risk assessment

References

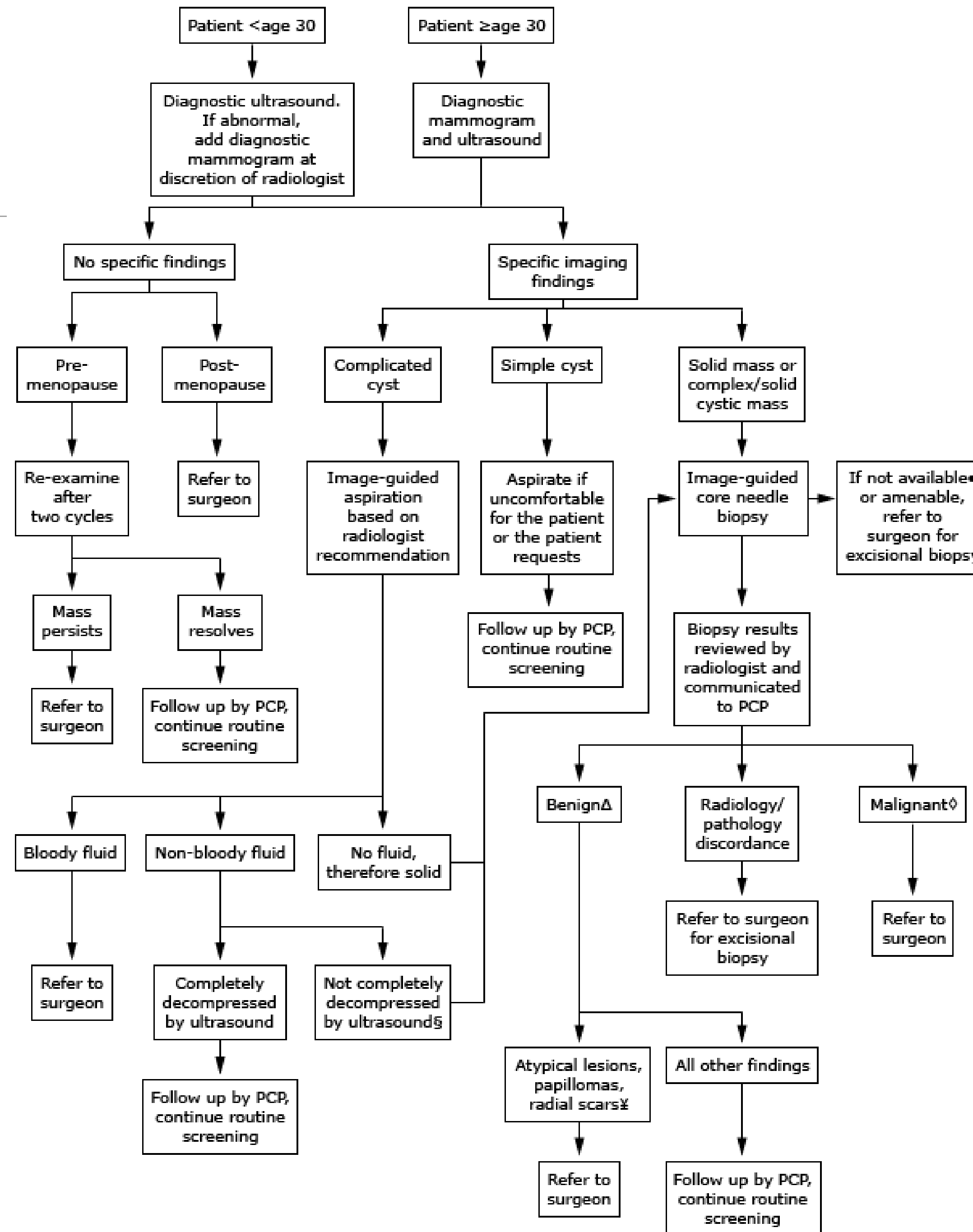
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Questions?

Galactorrhea



- Physician-detected lump:



Excision Warranted

- **P**apilloma
- **E**xpert opinion: rad/path discordance
- **A**LH/ADH
- **R**adial scar
- **L**CIS

MRI screening

BRCA1&2, CDH1 (associated with lobular carcinoma), Cowden syndrome (PTEN), Li Fraumeni syndrome (TP53), CHEK2, PALB2

1st degree relative of BRCA carrier

Lifetime risk >20-25%: NCI <https://bcrisktool.cancer.gov>

Prior radiation that included the breast age 10-30yrs

Requires an additional risk factor:

- Extremely dense breasts
- ALH/ADH/LCIS
- Personal history of breast cancer

Supplemental screening

Indications:

- Lifetime risk of breast cancer >20-25%
- Extremely dense (BI-RADS D) + personal/immediate family member breast cancer Hx

Modalities:

- MRI
- U/S – newly-approved in BC but indications unclear

Breast Cancer Risk Assessment

- <https://bcrisktool.cancer.gov>

- Not to be used if:
 - BRCA1/2
 - personal Hx DCIS/invasive cancer



Breast Cancer Risk Assessment Tool

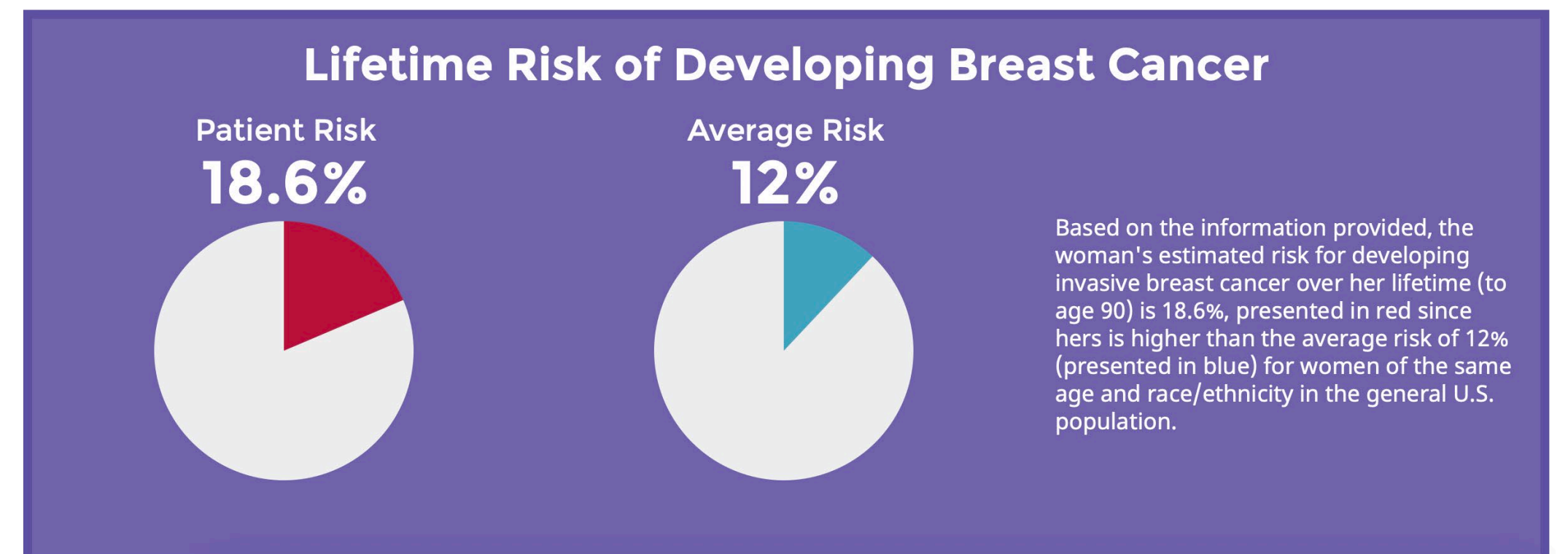
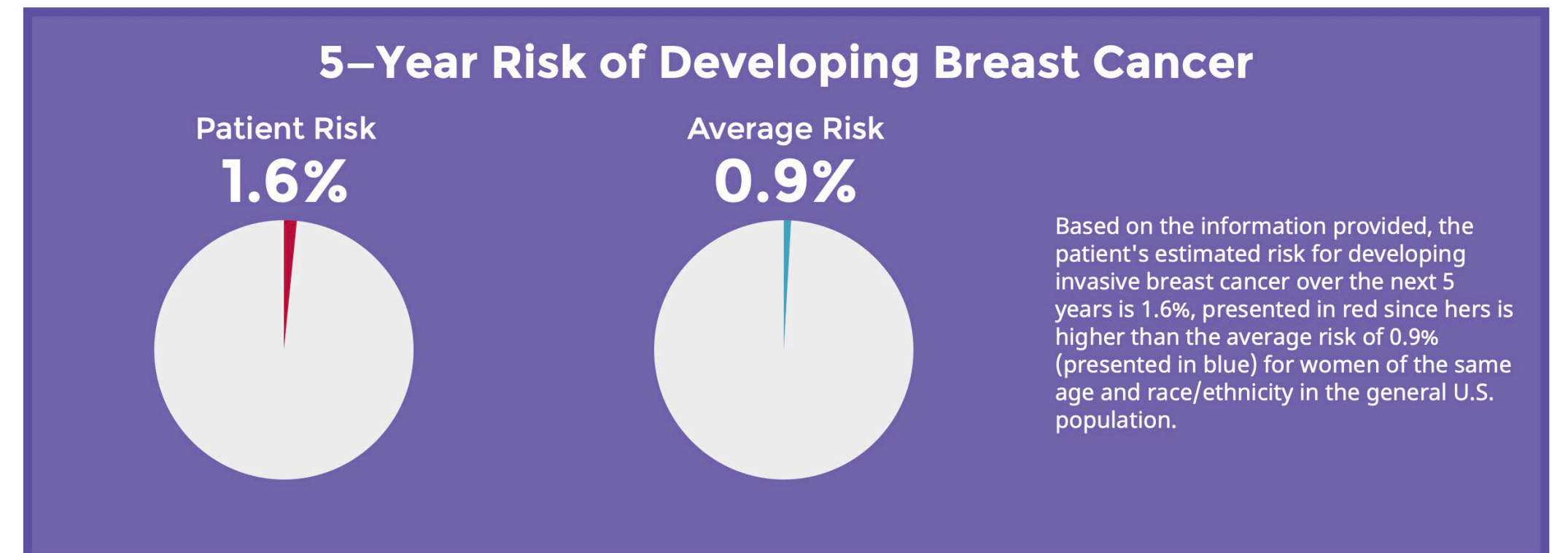
RISK CALCULATOR ABOUT THE CALCULATOR

The Breast Cancer Risk Assessment Tool

The Breast Cancer Risk Assessment Tool allows health professionals to estimate a woman's risk of developing invasive breast cancer over the next 5 years and up to age 90 (lifetime risk).

The tool uses a woman's personal medical and reproductive history and the history of breast cancer among her first-degree relatives (mother, sisters, daughters) to estimate absolute breast cancer risk—her chance or probability of developing invasive breast cancer in a defined age interval.

Assess Patient Risk



BI-RADS Classification

BIRADS category	Assessment	Recommendations
0	Assessment incomplete	Need to review prior studies and/or complete additional imaging
1	Normal	Continue routine screening
2	Benign finding	Continue routine screening
3	Probably benign finding	Short-term follow-up mammogram at 6 months, then every 6 to 12 months for 1 to 2 years
4	Suspicious abnormality	Perform biopsy, preferably, needle biopsy
5	Highly suspicious of malignancy	Biopsy and treatment as necessary
6	Known biopsy proven malignancy, treatment pending	Biopsy confirms cancer before treatment begins