

MedEd2: Breast examination

Anatomy, Examination, Differentials & Surgery

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Anatomy

Arteries

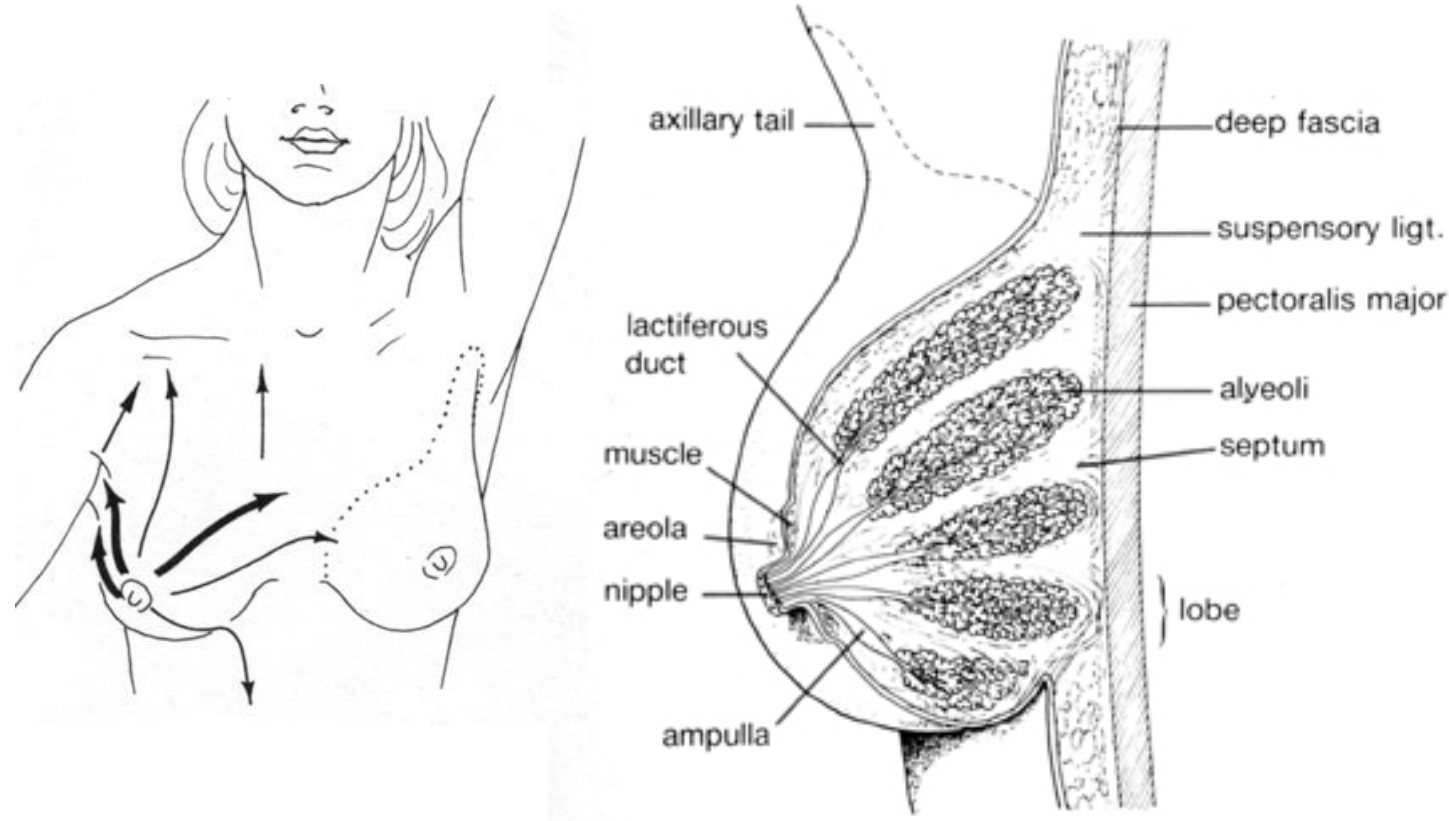
- **Axillary**
 - Most of breast
- Internal thoracic (internal mammary)
 - Some of medial breast

Lymphatics

- **Axilla (75%)**
 - Surgical levels – relation to *pectoralis minor*
 1. Inferior
 2. Posterior
 3. Anterior/Medial

Nerves

- **Long thoracic**
 - Axilla – beware in surgery!



WIPE + C + Inspection



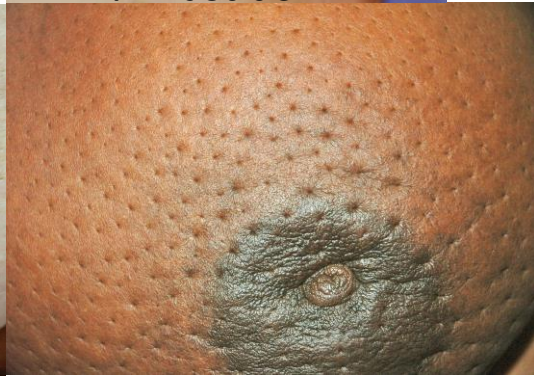
Ask to elicit



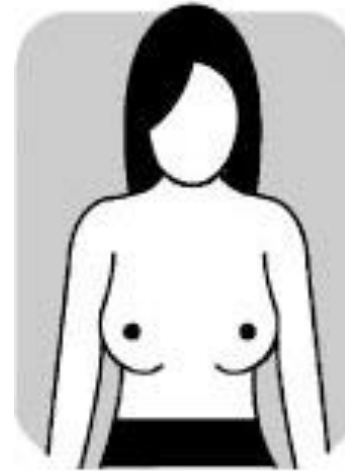
? Mastitis



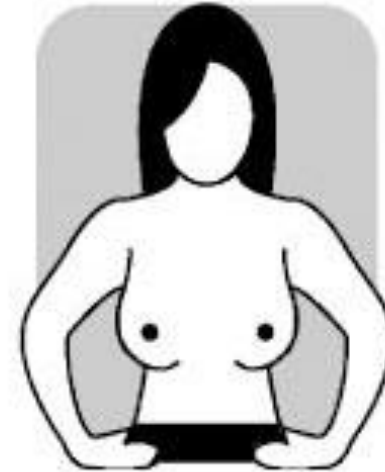
Nipple inversion
2° to BCa



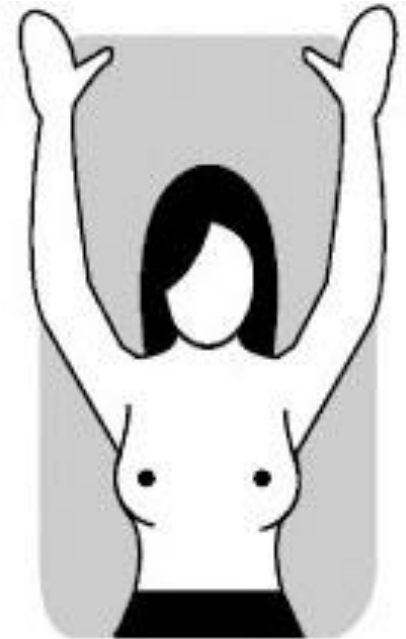
Peau d'orange



Arms relaxed



Hands on hips



Arms raised
above the head

*Look for any lumps that may become more prominent or move. Are they moving with the muscle or the breast tissue?

Palpation

1. Lymph nodes (Axillary, supraclavicular)

2. Position

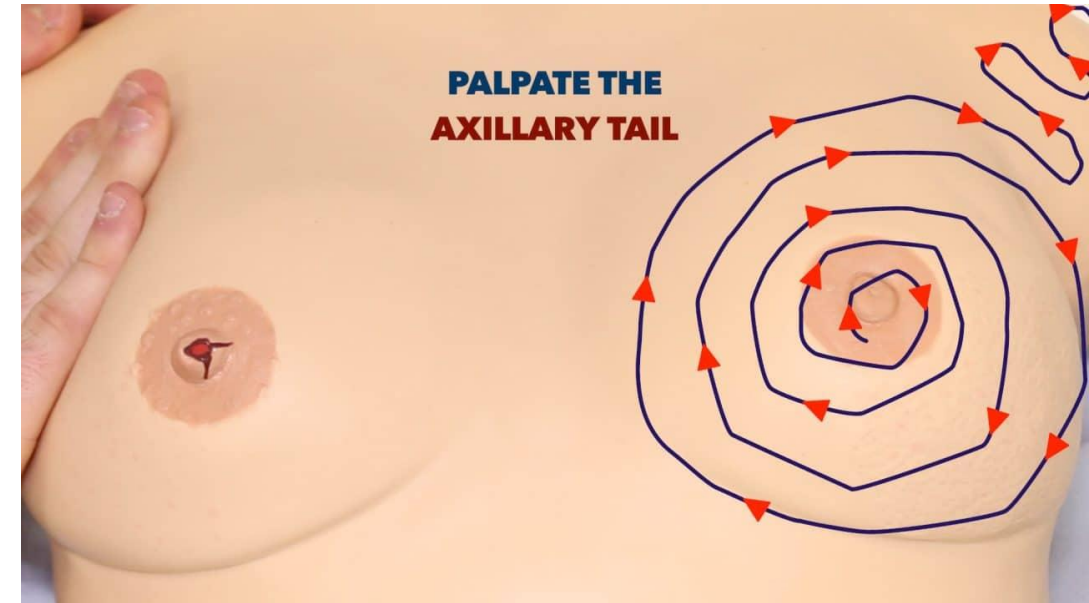
- Hand behind head
- 45°

3. **UNAFFECTED** breast

- 2 hands
- Flat of hands
- Clock face / Concentric circles

4. **AFFECTED** breast

5. Offer to check for mets (lung, liver, spine)



<https://geekymedics.com/breast-examination-osce-guide/>

Completion

Privacy + Thanks

If **LUMP** found... (see lumps presentation)

Describe lump

6 students

Site, Size, Shape, Surface, Skin, Scar

3 teachers

Tenderness, Temperature, Transillumination

CAMPFIRE

Consistency, Attachment, Mobility, Pulsation,
Fluctuation, Irreducibility, **Regional nodes, Edge**

Triple assessment

1. Full history + examination

2. Radiology

<35y → USS

>35y → Mammogram

3. Core biopsy (FNA still sometimes done)

Main OSCE points

- WIPE + Chaperone !!!!
- Be professional (allow to dress themselves early, privacy etc.)
- Do not forget the lymph nodes
- Take your time to feel and describe the lump
- Present coherently and don't jump to diagnostic conclusions
- Triple assessment (almost always)

Common DDx

Inflammatory

-Mastitis

Key Hx: Breastfeeding; breast hot, erythematous and tender; may have an abscess

-Fat necrosis

Key Hx: Usually 2° to trauma, but not always reported. Firm and irregular, so !!!

-Duct ectasia

Key Hx: Inflammation and discharge, breast is lumpy

Other benign lumps

-Fibroadenoma

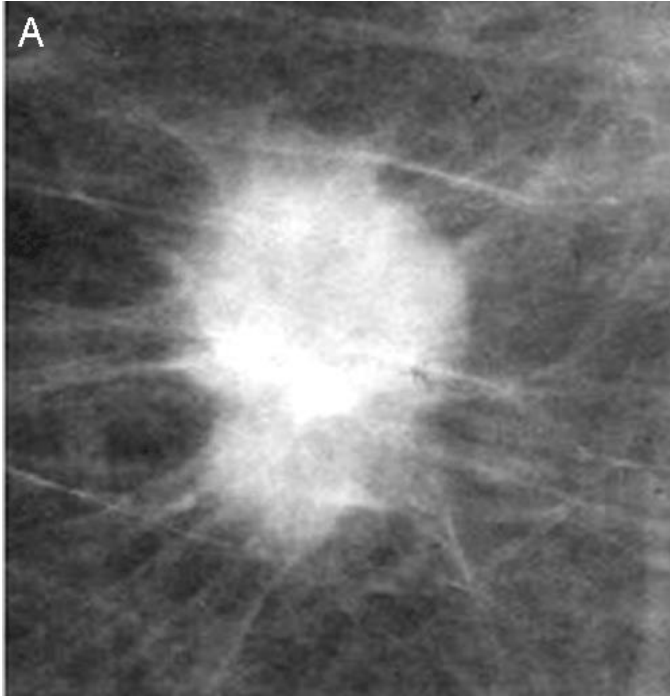
Key Hx: Young (20y-35y), firm & rubbery, mobile and round, can be large

Malignancy – key Hx points

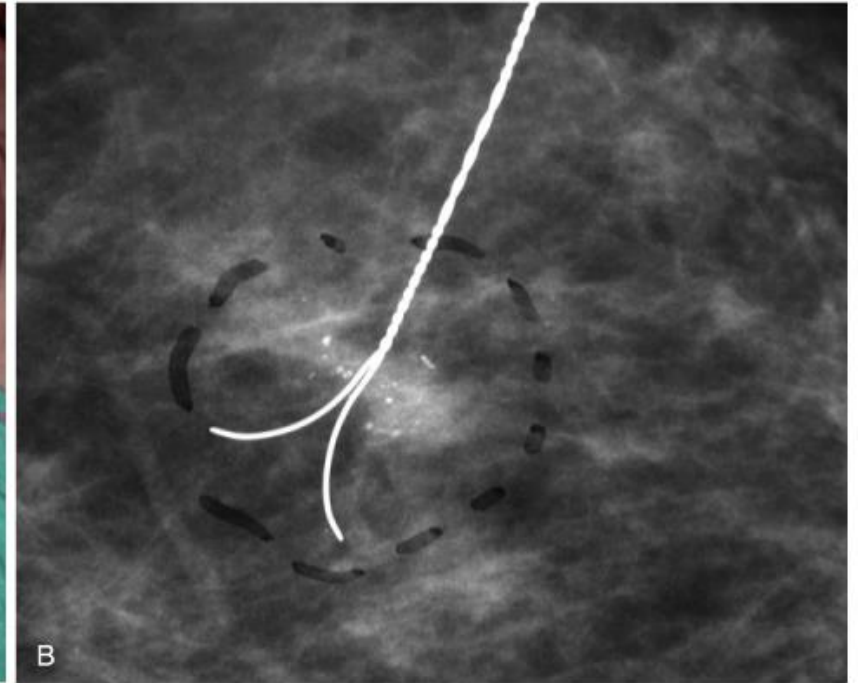
Predisposing factors

- 1.) Age (More common in older pt)
- 2.) FHx (Particularly breast cancer and gynae malignancy – even if not Mendelian)
- 3.) Good rule of thumb: “Whatever gives you higher lifetime exposure to sex hormones will put you at a greater risk”, i.e.
 - Early menarche? (will increase duration of sex hormone exposure)
 - Late menopause? (same as early menarche)
 - Ever taken OCP? Or HRT? (artificial increase in sex hormones)
 - Nr. of pregnancies and children? (hormones decrease during pregnancy)
 - Breastfeeding? (sex hormones suppressed during breastfeeding)
 - BMI? (high BMI is associated with more steroid hormone production, because of larger adipocytes)

Malignancy



Irregular shape
Spiculated borders



Mammogram
Guide wire

Surgical intervention: Mastectomy



Partial
mastectomy
(quadrantectomy)

- No LN involvement, can completely excise
- Can clear LN in the same opp if necessary



Simple
mastectomy

- Prophylactic (e.g. BRCA)
- Multifocal or cannot completely resect w partial, but neg. LN



Modified radical
mastectomy with
lymph nodes removed

- Common with LN involvement and more extensive/multifocal disease



Radical mastectomy
with chest
muscle removed

- Mostly done if pec major involvement and pos. LN

Thank you!

Questions?