WHERE CLASSICAL WISDOM MEETS INTELLIGENT LEARNING

14c. Part 1. Breast examination

Breast Examination: A Step-by-Step Clinical Guide (OSCE-ready)

Purpose and scope

This guide teaches a clear, systematic breast examination suitable for clinical practice and OSCEs: what to say, how to position the patient, what to look and feel for, and how to complete the exam and plan next steps.

Preparation, consent, and safety

- Hygiene & PPE: Wash hands; don PPE if appropriate.
- Introduction & ID: Introduce yourself (name/role); confirm patient's name and DOB.
- **Explain the exam:** Inspection of both breasts, palpation of breast tissue, and assessment of neck/axillary glands, using plain language.
- Chaperone: Offer a same-gender chaperone and proceed only with agreement.
- Consent & comfort: Check understanding, invite questions, obtain verbal consent.
- Exposure & position: Ask the patient to undress to the waist; provide privacy and a drape. Begin sitting upright on the bed's edge. Ask about pain and (if relevant) the site of a lump—start palpation on the asymptomatic side.

Inspection (patient sitting)

- Neutral (hands on thighs) relaxes pectorals Look for:
- Scars (lumpectomy vs mastectomy), asymmetry (often normal), masses, nipple changes (inversion, discharge), and skin changes (scaling, erythema, puckering, peau d'orange).
 Clinical notes:
- New-onset nipple inversion merits evaluation (possible cancer, abscess, duct ectasia, mastitis).
- Nipple discharge is usually benign (pregnancy/breast-feeding); bloody or watery discharge raises concern (e.g., DCIS).
- Paget's disease: scaly, erythematous, pruritic nipple/areola; often with underlying in-situ or invasive carcinoma.
- **Peau d'orange**: lymphatic oedema with skin dimpling tethered to follicles/glands—classically inflammatory breast cancer.
- 2. Hands pressing into hips contracts pectorals
- Accentuates tethering: visible masses that **move with pectoral contraction** or **accentuated puckering** suggest deeper fixation (e.g., invasive malignancy).
- 3. Arms behind head, leaning forward breasts pendulous
- Maximally exposes breast surface; exaggerates asymmetry, skin dimpling, and puckering.

Palpation of the breast (patient supine)

Position: Raise the bed head to comfortable flat; patient **lies supine**. For the side being examined, ask the patient to **place that hand behind the head** to spread the tissue. Begin with the **asymptomatic** breast. Use the **flat palmar surface of the middle three fingers** to compress tissue against the chest wall. Employ a **systematic method**—any of

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the below are acceptable if complete:

- **Clock-face** (each "hour" from periphery to nipple)
- **Spiral** (concentric circles from nipple outward)
- Quadrants (upper/lower, inner/outer)

Don't forget the axillary tail (upper outer quadrant into the axilla)—many cancers arise here.

If you find a lump: characterise it

- Location: quadrant and distance from nipple.
- Size & shape: approximate dimensions; outline.
- Consistency: smooth/firm/stony/rubbery.
- Mobility: freely mobile? moves with overlying skin? moves with pectoral contraction (tethered)?
- Overlying skin: erythema, puckering, dimpling.
- Fluctuance: hold sides of the lump and press the centre—fluid lesions bulge laterally (e.g., cyst).

Nipple-areolar complex

- Compress areolar tissue toward the nipple to check for discharge; if history suggests discharge but none is evident, the patient may gently try to express it (if comfortable).
 - Milky: normal in pregnancy/lactation; galactorrhoea (non-puerperal) suggests hyperprolactinaemia.
 - Purulent: consider mastitis or central abscess.
 - Watery/bloody: consider ductal carcinoma in situ among differentials.

Lift the breast

• Gently **elevate the breast** to inspect skin that may be hidden when dependent. Look again for dimpling or textural change.

Lymph-node examination

Axillary nodes (patient supine)

- 1. Ask about shoulder pain; **support the forearm** to relax the axilla.
- 2. Inspect each axilla for scars, masses, skin changes.
- 3. Palpate systematically for five groups:
 - **Pectoral (anterior)**: behind lateral edge of pectoralis major.
 - Central (medial): fingertips at the apex, along thoracic wall.
 - **Subscapular (posterior)**: inside lateral edge of latissimus dorsi.
 - Humeral (lateral): inner aspect of upper arm within axilla.
 - **Apical**: reach high into the apex (warn—can be uncomfortable).
 - Repeat on the contralateral side. Hard, irregular, enlarged nodes suggest metastases.

Other regional nodes

• Cervical, supraclavicular, infraclavicular, parasternal groups should be palpated to complete regional assessment.

Closing the examination

- Tell the patient you're finished; provide privacy to dress; thank them; remove PPE; hand hygiene.
- **Summarise findings** succinctly (normal vs abnormal; side; key features).
- Plan further assessment if indicated:

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- **Mammography** (typically >35 years).
- **Ultrasound** (often <35 years due to dense tissue).
- **Tissue diagnosis** if needed: fine-needle aspiration or **core biopsy**.

Quick OSCE checklist (memorise)

- 1. Hand hygiene, intro, ID, explanation, chaperone, consent.
- 2. Expose appropriately, patient sitting.
- 3. **Inspect**: neutral \rightarrow hands on hips \rightarrow hands behind head + lean forward.
- 4. Palpate (supine, hand behind head): systematic sweep + axillary tail.
- 5. Characterise any mass; check nipple-areolar complex & discharge; lift breast to re-inspect skin.
- 6. Lymph nodes: axillary (all five groups), then cervical/supra-/infra-clavicular, parasternal.
- 7. Close: thank, hygiene; **summary**; **imaging/biopsy** if indicated.

Pearls & pitfalls

- Always start on the asymptomatic breast to establish normal baseline.
- Systematic palpation is the best defence against missing pathology—pick one method and be thorough.
- Tethering with **pectoralis contraction** or accentuated **puckering** suggests invasive disease.
- Remember that asymmetry and congenital nipple inversion can be normal; focus on change from baseline.

Source: Adapted and summarised for teaching from the Geeky Medics "Breast Examination - OSCE Guide."

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