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)

1. **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

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:

- **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 → hands on hips → 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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