



# Breast Mass

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# Breast Anatomy

The breast(mammary gland)

They are modified sweatglandsin the superficial fascia of the pectoralregion in both sexes.

The breast is divided into 4 quadrants:

- 1) upper inner
- 2) upper outer
- 3) lowerinner
- 4) lower outer

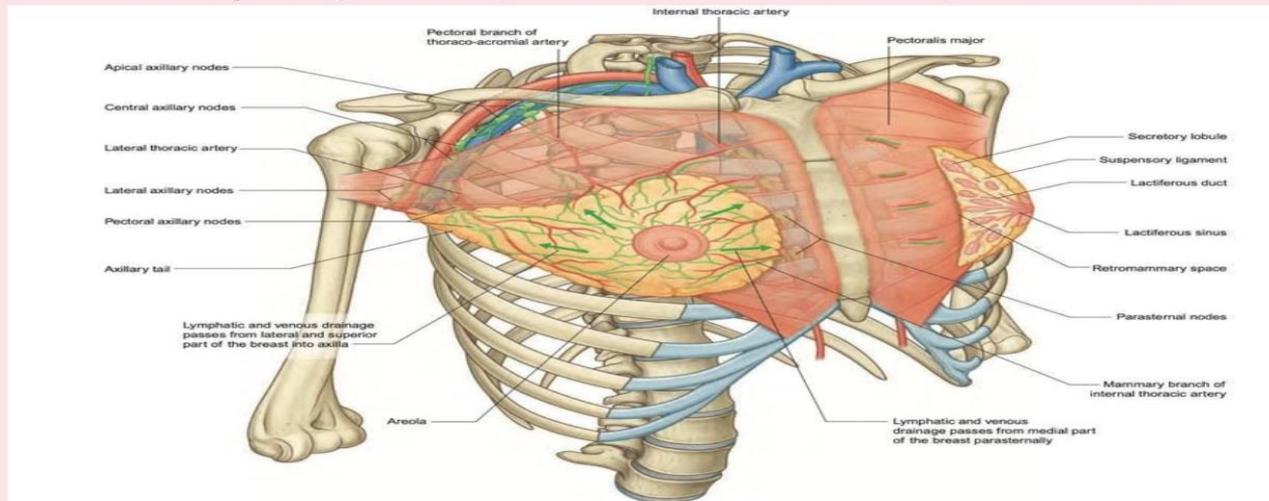


- most carcinomas of the breastdevelop in the upper lateralquadrant .

-It extends vertically from the 2nd to 6th rib (midclavicular line) and horizontally from the lateral border of the sternum to the mid-axillary line "This is the extension of the breast in nulliparous female"

-The nipple lies in the 4th intercostal space in the midclavicular line: it carries 15 to 20 narrow openings of the lactiferous ducts.

- Areola: a pigmented circular area surrounding the nipple, it may have an extension (axillary tail) that pierces the deep (pectoral) fascia to be present in the axilla so the axillary tail is the only part of the breast lying deep into the deep fascia



# *Deep Relations Of The Breast*

1) retro-mammary space (submammary space) contains loose areolar tissue that allows free mobility of the breast

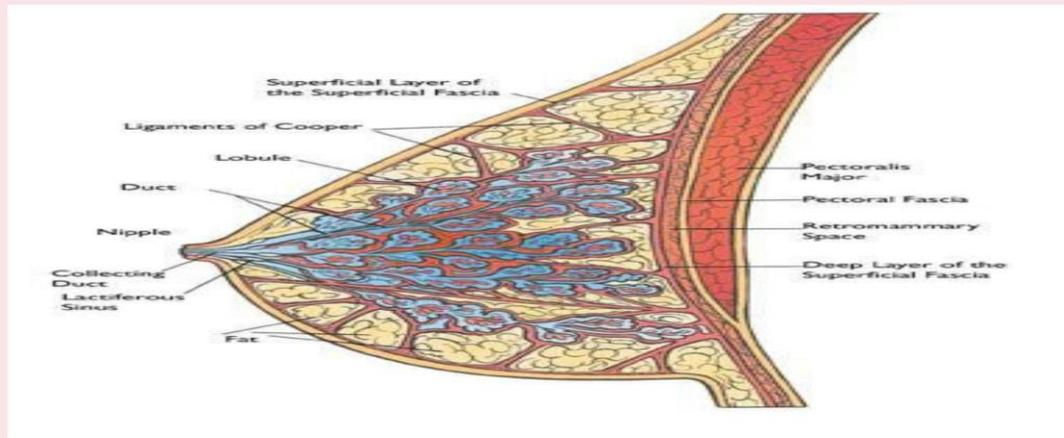
1) deep fascia

2) The breast rests on the following muscles: “

a) pectoralis major

b) serratus anterior

c) external oblique muscle



## Internal Structure (Parenchyma of the breast )

1-The Glandular tissue :

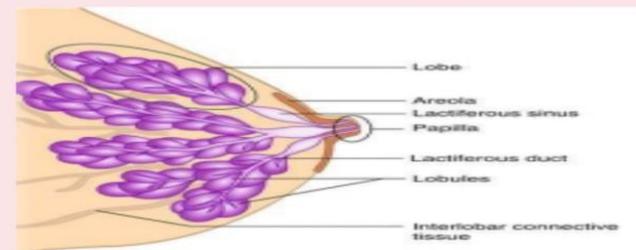
- 15-20 lobes each lobe is formed of alveoli and drained by one lactiferous duct.
- each lactiferous duct forms a dilatation called lactiferous sinus under the areola before it opens separately into the nipple.

2-Nonglandular “supporting framework”

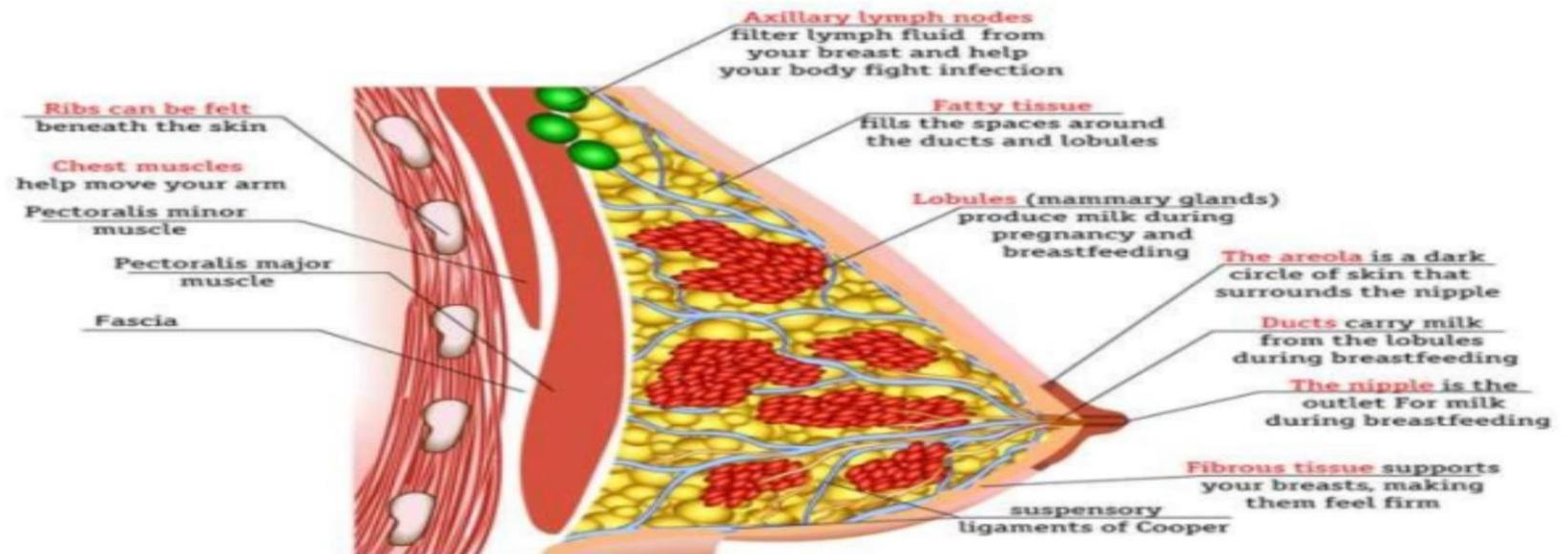
a) **fatty tissue**: forms the main bulk of the breast, it is present all over the breast except the nipple and sub-areolar area.

b) **fibrous tissue**: passing between lobes of the breast and binding the skin of the breast to the underlying pectoral fascia.

These fibrous strands are called suspensory ligaments of Cooper

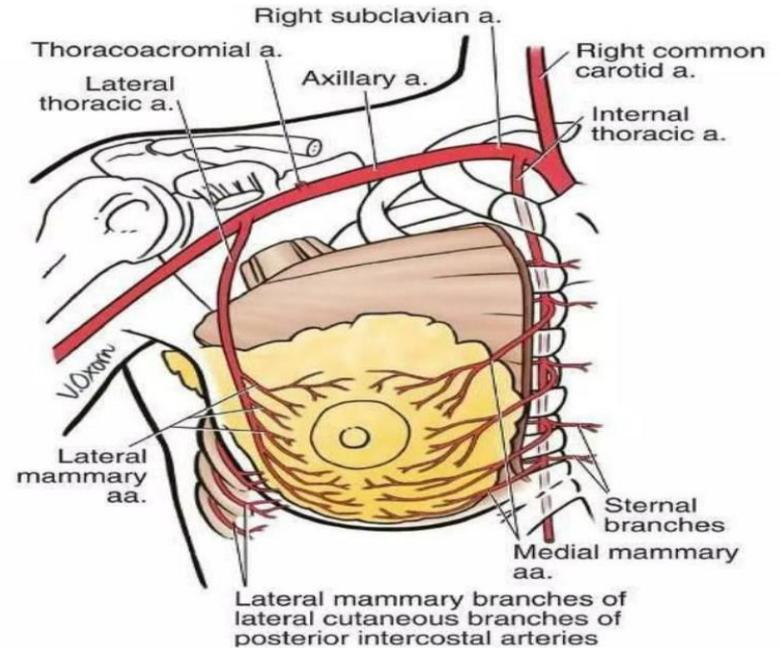


## MEDICAL STRUCTURE OF THE FEMALE BREAST



# Blood Supply

- **Axillary artery**
  - Superior thoracic
  - Thoracoacromial artery
  - Lateral thoracic artery
  - Subscapular artery.
- **Internal thoracic:**
  - Perforating branches to the anteromedial breast.
- The second to fourth **anterior intercostal** arteries.
  - The second perforating artery is usually the largest; supplies the upper region of the breast, the nipple, areola and adjacent breast.

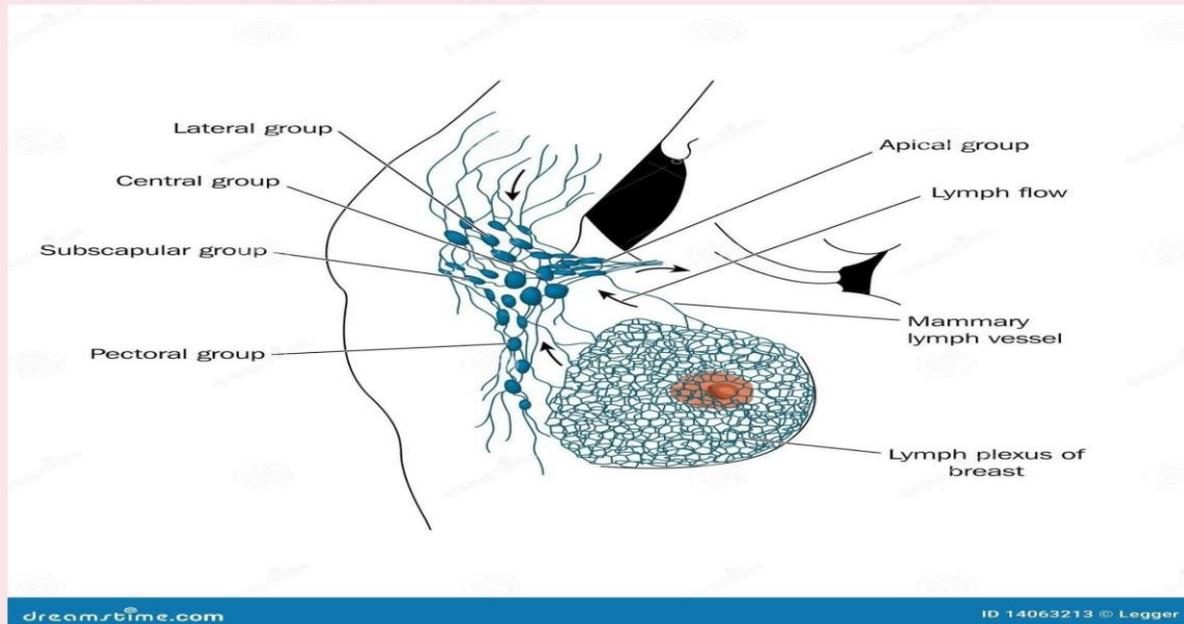


Posterior surface is relatively avascular.

# Axillary lymph node

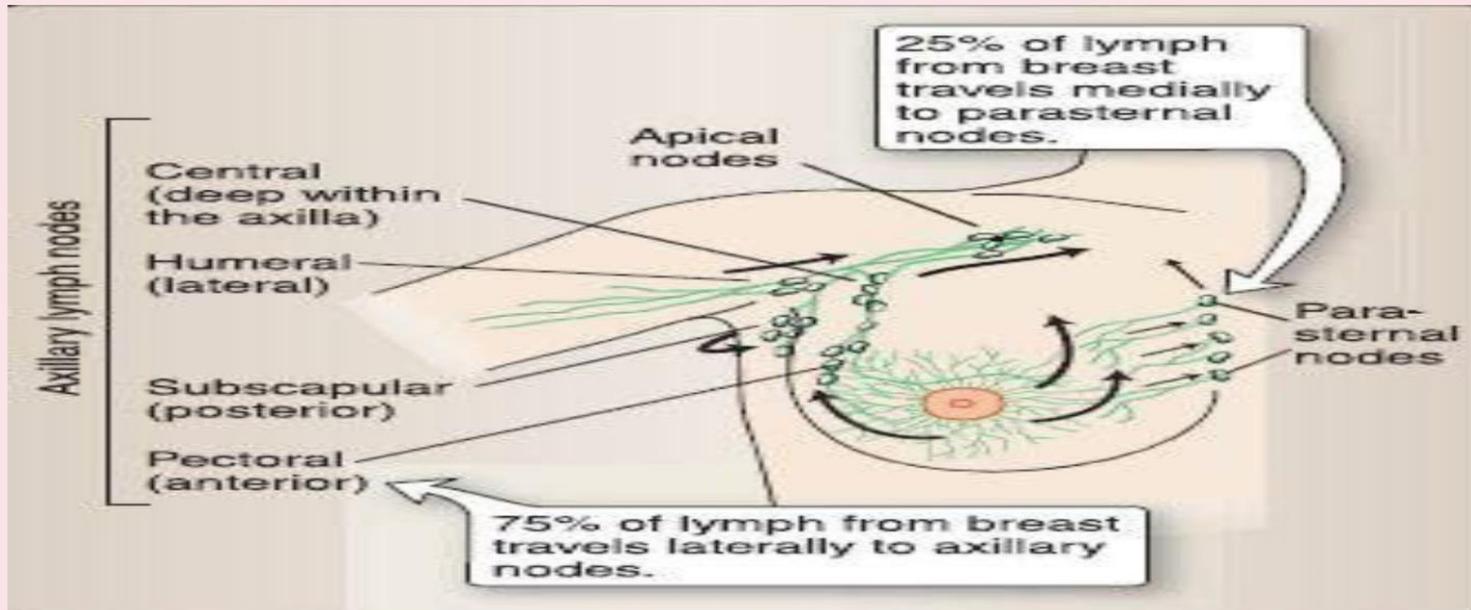
Arranged in 5 groups :

- 1) anterior or pectoral group
- 2) posterior or scapular group
- 3) lateral group
- 4) central group
- 5) Apical group



# *Lymphatic drainage of the breast*

- 1) superficial lymphatic vessel drains skin without areola and nipple.
- 2) deep lymphatic vessels drain parenchyma, nipple, and areola.



## *Lymphatic drainage of the breast*

- 1) the central and the lateral part of the gland drain into the anterior group
- 2) the tail of the breast drain into the posterior group
- 3) the upper part of the gland drain into the apical group of the axillary lymph nodes and the deep cervical lymph nodes
- 4) the medial drains into the parasternal lymph nodes
- 5) inferomedial: few lymphatics anastomosing with the lymphatics of the rectus sheath, linea alba and subdiaphragmatic lymphatics some vessels pass deeply through the falciform ligament to the liver 75% of the lymph drains into the axillary lymph node 25% of the lymph drains into the para-sternal and other lymph node

If a tumor infiltrate the breast tissue can deform ,shorten, and retract the cooperligaments and leadto dimpling of the skin.

Tumorousinfiltration and blockageof the lymphatics manifest aslymphedema and thickening of the skin, which is knownas peau d'orangebecause it resembles orange peel.



-If the tumor infiltratesthe nipple it leadsto its retraction

- If the tumor infiltratesthe retro mammary space: leading to fixation of the breast into the underlying deep fascia and pectoralis major muscle.

# *What the breast mass*

Depending on its type, breast masses exhibit great variation in characteristics such as: size, consistency, presence of pain, nipple discharge and skin changes.

- Although breast cancer is the most feared cause, most (about 90%) breast masses are nonmalignant.

# ***Clinical Manifestations***

A breast mass can manifest in various ways, and its specific symptoms can vary depending on the underlying cause. While not all breast masses are cancerous, it's important to promptly seek medical evaluation if you notice any changes or abnormalities in your breast tissue. Common manifestations of a breast mass may include:

- 1. Lump or Thickening:** A palpable lump or thickening in the breast tissue is often the most noticeable sign. It may be painless or associated with discomfort.
- 2. Pain:** Some breast masses can be painful, causing localized or radiating pain. However, not all breast lumps are painful.
- 3. Change in Breast Size or Shape:** A breast mass may cause one breast to appear larger or differently shaped compared to the other.
- 4. Changes in Skin Texture:** The skin over the breast mass may become dimpled, puckered, or develop a rashlike appearance.

# **Clinical Manifestations**

5. **Skin Redness or Warmth:** Inflammatory breast cancer, a rare and aggressive form of breast cancer, can cause redness and warmth of the breast skin.

6. **Nipple Changes:** Changes in the nipple, such as inversion (turning inward), discharge (other than breast milk), or a change in its position, can be associated with breast masses.

7. **Enlarged Lymph Nodes:** If the breast mass is due to cancer, nearby lymph nodes in the armpit (axillary lymph nodes) may become enlarged and palpable.

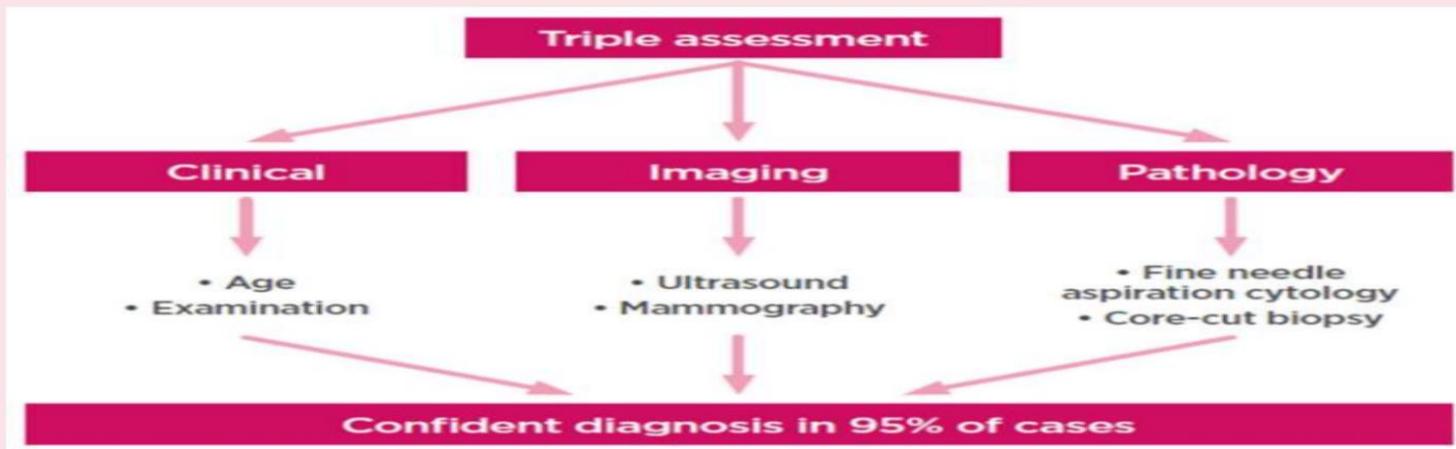
8. **Breast Swelling:** Some breast masses can cause localized swelling of the breast tissue.

9. **Skin Ulceration:** In advanced cases, a breast mass may lead to skin breakdown and ulceration.

**Breast Examination & investigation**



All patients presenting with a breast lump should have a clinical, radiological and pathological assessment (known as triple assessment) carried out during their first visit to the clinic.



# **History taking**

## 1. Patient details(name,age...)

## 2. Chief complain

- Lump in the Right/Left breast for \_\_\_\_ months /years
- Pain in Right/Left breast for \_\_\_\_ months /years
- Discharge from the left/right nipple for \_\_\_\_ months / years
- Retraction of right/left nipple for \_\_\_\_ months /years

## 3. History of Pain

- Onset – sudden/ gradual
- Site – U/L or B/L
- Duration -
- Nature of pain –
- Radiation –
- Aggravating Factor -
- Relieving Factor –
- Relation to menstruation

## 4. History of discharge from nipple

- U/L or B/L ?
- Duration –
- Nature – serous / bloody / milky
- Color –
- Odor –
- Quantity



# *History taking:*

- History taking : The Lump
- Onset: when was the lump first noticed
- Location : which side - right or left
- Single or multiple : how many ?
- Unilateral or bilateral
- Duration : since when did the pt notice the lump
- Progression : Has it changed in size (ca)
- Is there any pain : type, severity (painless in ca)
- (painful : Fibroadenosis ,Mastitis & breast abscess,Malignancy(late))
- Association with menstrual cycle: age of menarche & menopause



## *relevant gynaecological history*

age of menarche(early), menopause(late)  
parity, age at first pregnancy,  
breast feeding  
use of oral contraceptives, hormone  
replacement  
therapy  
family history of breast diseases

## *questions related to breast malignancy if suspected*

- Anorexia, weight loss
- chest pain, cough, dyspnea
- abdominal pain, distension, jaundice
- convulsion, or any neurological deficit
- backache ,bony pain, spine limited mobility

Any injury to the breast?

Any nipple discharge?

Any skin changes like skin dimpling

Have you recently been pregnant?

Ask about risk factors for breast cancer:

1. Previous personal history of breast cancer.

2. family history of breast or ovarian cancer and the age of those affected.

3. use of hormone replacement therapy.

4. Previous mantle radiotherapy for Hodgkin`s lymphoma.

# **physical Examination**

## **Preparing for physical examination:**

1. Wash your hand
2. Always introduce yourself to the patient and seek permission
3. Always offer a chaperone for examination to prevent misunderstandings
4. Take consent
5. Explain what are you going to do
6. Start from normal breast
7. Identity of patient (confirm name and date of birth)



### Privacy:

Provide a cover such as a blanket or a hospital gown (with the opening at the front) and ensure the curtain or door is firmly close.

### Position:

Initially sitting on the edge of the couch for inspection. Lying flat (with one arm above head) to palpate.

### Exposure:

You need to be able to compare both breasts visually and then palpate both breasts in turn so the patient should be exposed from the waist up and initially sat on the edge of the bed.

## **The scheme in breast examination:**

### **1. Inspection:**

**-Inspection with a different movement, position**

### **2. Palpation:**

**-Examination of axillary L.N.**

**-examination of related organ**

## *Inspect the breast during the following maneuvers:*

1. Ask the patient to raise their arms above their head so that skin becomes more apparent and skin changes more obviously noticed
2. Ask them to press their hands against their hips in order to tense their pectoral muscles to accentuate chest wall tethering
3. Let the patient lean forward with hands on knees. (large breasts & lesion in the upper quadrant)



# Inspection:

.Inspect the breasts from front and sides.

.Patient position during examination

1. Size of the breast & shape

2. Symmetry

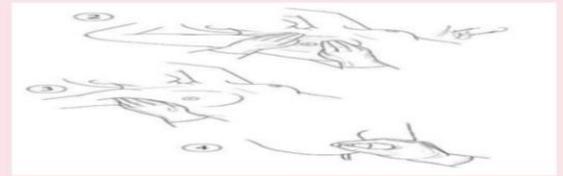
3. Duplication :

- Number and position of nipple, accessory nipples along mammary line
- - ectopic breast in ant.axillary fold
- eczematous skin chang

## *The breast is inspected for :*

- skin changes over the area of the mass and the areola. Skin changes :
  - erythema
  - rash (that isn't improved by steroids)
  - ulcers
  - dimpling
  - Edema referred "peau d'orange" (orange peel).
- Nipple inversion (retraction), and nipple discharge (red flags include bloody discharge and spontaneous unilateral discharge).
- Inspect the arm for lymphedema.





## *Palpation:*

- Palpation of breast tissue
- Lie the patient flat
- Start with normal breast
- Palpate in turn each quadrant of the breast by palm of the finger to find any lump
- Then palpate between the fingers and the thumb to note the consistency of breast tissue
- Bimanual palpation in very large or pendulous breasts
- Palpate axillary tail
- Palpate the tissue beneath the areola



## *CONT.*

Don't forget to examine the opposite/normal breast, axilla & supraclavicular fossa of the patient

- Note the temperature and tenderness
- Once the lump is identified with flat hands palpate it between fingers and the thumb to identify :
  - Size and of the lump
  - Surface – smooth/irregular
  - Edge – well/ill-defined
  - Consistency – soft, firm, hard
  - Fixed to surrounding structures (skin, breast tissue, pectoral muscle, chest wall)
- Lymph nodes palpation (central , apical, pectoral, subscapular, brachial, infraclavicular, supraclavicular)

## Signs in a breast mass suggestive of malignancy

1. Site: upper outer quadrant
2. Consistency : hard
3. Fixity : to the skin or deeper tissue
4. Skin changes : dimpling ,peudorange, skin ulceration and fungation
5. Associated nipple retraction
6. Axillary L.N. enlargemen

# *Radiological Assessment*

## *Mammography*

- In women over 35 mammography is usually performed (because women under 35; their dense breast tissue gives false positive results).
- With mammography, benign lumps are usually very well defined whereas breast cancers are (spiky dense irregular mass) or malignant microcalcification

## *Ultrasound*

In women under 35 years of age ultrasound is the preferred.

Ultrasound is particularly useful in assessing whether a lump is solid or cystic.

## *The Breast Imaging Reporting and Data System (BI-RADS)*

Is a numerical scale ranging between 0 and 6 that is used in mammogram, breast ultrasound, and breast magnetic resonance imaging (MRI) reports. It is a standardized way to report your risk of breast cancer based on your diagnostic tests...

BI-RADS	Description	Malignancy rate (%)
0	Needs additional evaluation	
1	Normal findings	0
2	Benign lesions	0
3	Probably benign lesions	<2
4	Low risk for malignancy	
	4a	2–10
	4b	10–50
	4c	50–95
5	High risk for malignancy	>95
6	Biopsy proven malignancy	100

# Pathological Assessment:

## *Fine-needle aspiration (FNA)*

allows cells to be taken from the lump. A fine needle attached to a syringe is inserted into the lump and cells are withdrawn by making several passes through the lump with negative pressure

A major advantage of this technique is that it allows drainage of a cyst (if fluid is present, then the diagnosis is invariably benign).

## *Biopsy*

Biopsy: confirms diagnosis if imaging is inconclusive..



## *Congenital abnormalities*

1- amazia :Congenital absence of the breast (the nipple and areola remain present ) may occur on one or both sides. It is sometimes associated with absence of the sternal portion of the pectoralis major (Poland's syndrome). It is more common in males



2-Polymazia: Accessory breasts have been recorded in the axilla (the most frequent site), groin, buttock and thigh.

3-Mastitis of infants: is at least as common in boys as in girls. On the third or fourth day of life,



infants usually present with unilateral swelling, erythema, warmth, tenderness, and induration of the breast, occasionally with purulent discharge from the nipple, and/or fluctuation suggesting breast abscess.



# *Inflammatory conditions*

- Acute Mastitis Inflammation of the breast parenchyma. Most commonly caused by staphylococcus aureus.(often occurs postpartum during lactation ).
- Clinical features:
  - x Tender, firm, swollen, erythematous breast  
(generally unilateral).
  - x Pain during breastfeeding.
  - x Reduced milk secretion.
  - x Flu-like symptoms, malaise, fever, and chills.
  - x In some cases, reactive lymphadenopathy
  - . x Purulent nipple discharge.



# *Fat Necrosis*

It's a nonsuppurative inflammatory lesion affecting breast adipose tissue causing necrosis of breast fat .

-Usually caused by trauma.

Present as irregularly defined and dense breast mass (generally peri areolar) causing skin retraction, erythema, or ecchymosis.

-Treatment is unnecessary



## ***Aberrations of normal development and involution (ANDI).***

- Fibrocystic changes (FCCSs) : Benign breast tumor of fibrous and glandular tissue. It is the most common benign tumor of the breast ,Usually seen in premenopausal women Hormonal relationship has been established; (increased estrogen, e.g., during pregnancy or before menstruation, may stimulate growth).
- The most common presenting symptom pain and tender nodularities in breast.

## *Duct ectasia /periductal mastitis*

Dilation of the breast ducts ,which is often associated with periductal inflammation . The disease is much more common in smokers.

Classical description of pathogenesis that the first stage is adilatation in one or more of large lactiferous ducts ,which full with a stagnant brown or green secretion this may discharge presenting features:

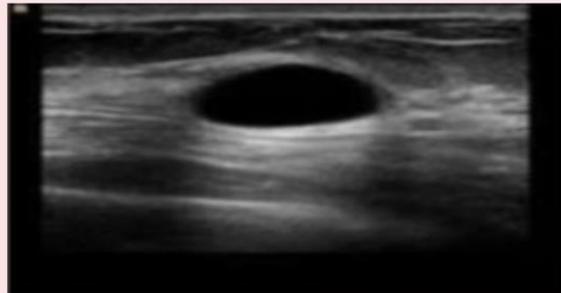
● Nipple inversion (slit –like nipple retraction ) If uncomplicated and long-standing, it is usually ignored.



## **Breast cysts**

These occur most commonly in the last decade of reproductive life(30-40) as a result of a nonintegrated involution of stroma and epithelium. They are often multiple, may be bilateral and can mimic malignancy.

- Diagnosis can be confirmed by aspiration and/or ultrasound
- Treatment A solitary cyst or small collection of cysts can be aspirated. If they resolve completely, and if the fluid is not blood-stained, no further treatment is required.
- Residual lump: excision



# Tumors types: Benign VS Malignant

## Tumor classification: benign vs malignant

A tumor is an abnormal mass in the body that grows due to cells reproducing too much or not dying when they are supposed to. Tumors are classified as benign or malignant based on multiple characteristics they display.

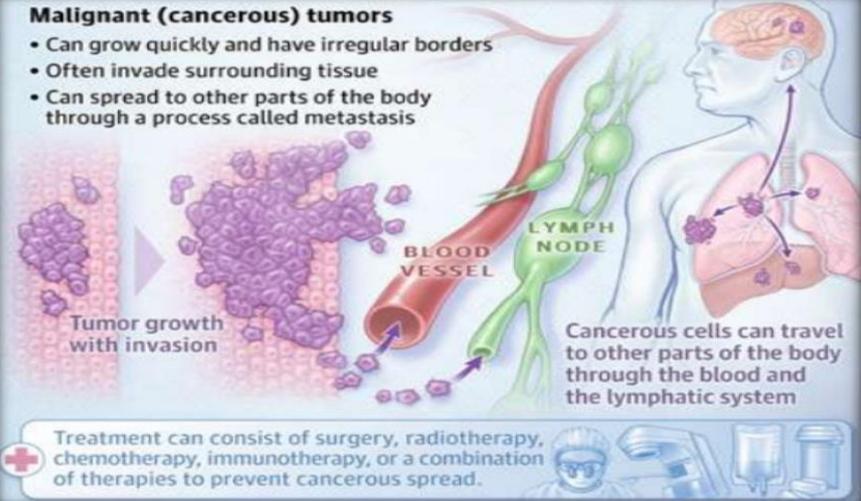
### Benign tumors

- Grow slowly and have distinct borders
- Do not invade surrounding tissue
- Do not invade other parts of the body



## Malignant (cancerous) tumors

- Can grow quickly and have irregular borders
- Often invade surrounding tissue
- Can spread to other parts of the body through a process called metastasis



## *Benign Breast Neoplasms*

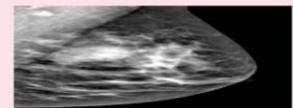
- Fibroadenomas.
- Phyllodes tumor.
- Intraductal papilloma.

# 1-Fibroadenoma

- **Fibroadenomas** : The most common, benign (non-cancerous) breast tumors made up of both glandular and stromal (connective) tissue.
- - Most common in women in their reproductive age.
- - Estrogen sensitive.
- **Clinical features:**
  - - Mostly solid.
  - - Highly mobile mass.
  - - Well-defined.
  - - Firm.
  - - May be painful during the menstrual cycle.

## **Diagnosis:**

- -Ultrasound:
  - well-defined mass.
- -Mammogram:
  - well-defined mass that may have popcorn-like calcification.
- If imaging is inconclusive: fine-needle aspiration showing fibrous and glandular tissue.
- **Management:** Regular check-ups



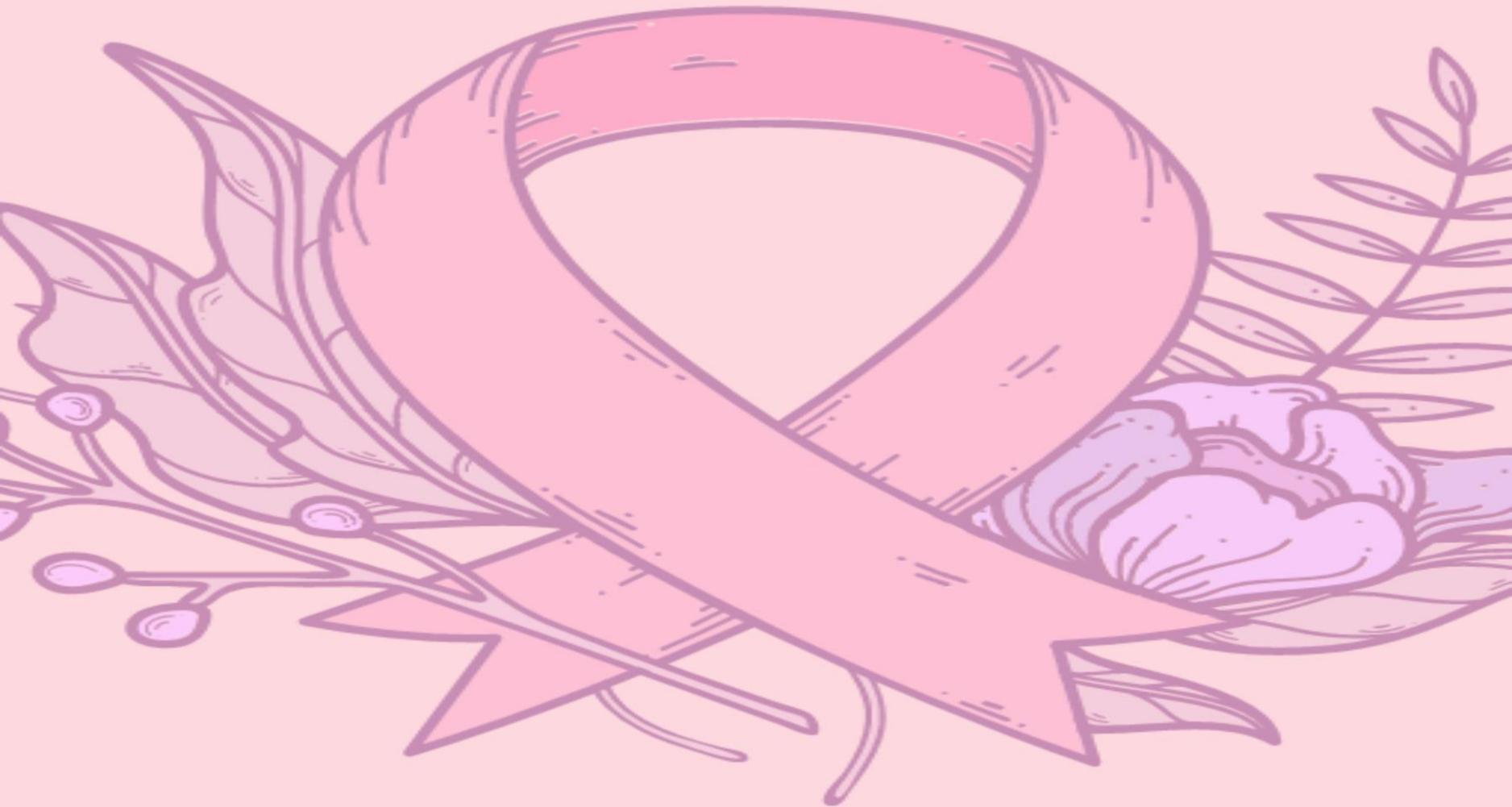
## *2-Phyllodes tumor*

- **Phyllodes tumors:** Rare breast tumors that started in the connective (stromal) tissue of the breast, not the ducts or glands ( which is where most breast cancer start.) , and most common in women in their 40s .
- - Most phyllodes tumors are benign and only 25% are malignant.
- - **Histologically** similar to that of fibroadenoma.
- **Clinical features:** - Painless, smooth, multinodular lump in the breast.
- - Average **size** 4–7 cm.
- **Diagnosis:** If a phyllodes tumor is suspected (based on clinical or imaging findings) → core needle biopsy

## *Intraductal papilloma*

- Intraductal papilloma: benign, wart-like tumors that grow within the milk ducts of breast.
- They are made up of gland tissue along with fibrous tissue and blood vessels ( called fibrovascular tissue). Clinical features:
  - Features are related to size and location
  - -Central papilloma is usually a large, subareolar located lesion.
  - -Peripheral papilloma is usually multiple small lesions located on external areas of the breast.
  - Solitary papilloma -Most common cause of bloody nipple discharge.
    - .-Single, large, central lesion. -Palpable breast tumor close to or behind the nipple.
  - Multiple papilloma -Usually asymptomatic but may cause nipple discharge in rare cases.
  - -Peripheral lesions; smaller than solitary papilloma

# *Beast cancers*



# *Breast cancers*

## *Breast cancer risk factors:*

1-Age: **The strongest risk factor** for breast cancer, most breast cancers occur in women **> 50**.

2- Family history: Having **a 1st degree relative** (mother, sister, daughter) with breast CA increases the risk **2 to 3 times**. Having **multiple cases** of breast CA among more than one of 1st degree relatives might indicate up to **5 to 6 times** increased risk.

3- Breast cancer **gene mutations**:

- 5 to 10% of women with breast cancer carry a mutation in **BRCA1 or BRCA2** genes.

- If relatives of such a woman also carry the mutation, they have a **50 to 85%** lifetime risk of developing breast cancer.

4- Personal history: Risk of developing cancer **in the contralateral breast** after mastectomy is about **0.5 to 1%/year** of follow-up.

5- History breast changes: History of a lesion that required a biopsy (e.g. **atypical hyperplasia**) increases risk.

6- Gynecologic history: **Early menarche, late menopause, or late first pregnancy** increases risk. Women who have a first pregnancy after age 30 are at higher risk than those who are nulliparous.

7- Lobular carcinoma in situ (**LCIS**): Having LCIS increases the risk of developing invasive carcinoma in either breast by about **25 times**.

8- Use of **oral contraceptives**.

9- Hormone therapy.

10-**Dense** breast tissue.

11- Radiation therapy: Exposure to **radiation** therapy before age 30.

12- Lifestyle factors: **Smoking** and **alcohol** may contribute to a higher risk of breast cancer.

# *Malignant breast cancer*

Is the **most common** malignancy in women .  
-is the **second** leading cause of **cancer death** in women.

-Is a disease of old age in **postmenopausal** women [peak incidence~**50-60** years]

# Frequency of breast carcinoma at various anatomic site :

-bone[back] met

-liver met

-lung met

-brain met

\*A breast mass in a woman older than 50 should be considered a **carcinoma** until proven otherwise.

\*Advanced tumors may result in **dimpling** of the skin or **retraction** of the nipple.

## *Signs and Symptoms:*

- \*Painless lump in 70% of patients.
- \*about 90% of the masses are discovered by the patient.
- Breast pain.
- Nipple discharge.
- Erosion.
- Retraction.
- Enlargement, or itching of the nipple.
- Redness, generalized hardness, enlargement, or shrinking of the breast.
- Axillary mass.
- Swelling of the arm.

# Inverted nipple



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# Duct milky discharge



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# Duct bloody discharge



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# Nipple retraction



# Mass types: Malignant

## 1- Carcinoma in situ:

Ductal carcinoma in situ (DCIS).  
Lobular carcinoma in situ (LCIS).



## 2- Invasive carcinoma:

**Adenocarcinoma (ductal type)** [most common type],  
**Infiltrating lobular**, medullary,  
mucinous, papillary and tubular  
carcinomas.

## 3- Inflammatory breast cancer

## 4- Paget disease of the nipple

# 1- Carcinoma in situ:

Malignant clonal proliferation of epithelial cells within the lobules & ducts.

- Both types of CIS arise from cells in the terminal duct.
- LCIS expands involved lobules.
- DCIS distorts lobules into duct-like spaces.
- Both "respect" the basement membrane & do not invade into stroma or lymphovascular channels.

## A-Ductal carcinoma in situ (DCIS):

-About **85%** of carcinoma in situ are this type.

-**Histologic appearances**; solid, comedo, cribriform, papillary, & micropapillary.

Comedo subtype: Extensive central necrosis > ass with calcifications > detected by mammography.

Excellent **prognosis** if treated

**Management**: surgery with irradiation or Tamoxifen (anti-estrogenic agents).

## B-Lobular carcinoma in situ (LCIS):

Monomorphic cells forms loosely cohesive clusters within the lobules > mutation in adhesion protein E-cadherin.

"lobular": because cells expand but do not distort involved spaces > so underlying lobular architecture is preserved .

-Always an incidental finding, no calcifications.

- Invasive Ca after LCIS diagnosis may arise in either breast (2/3 same breast & 1/3 contralateral breast)

- Management variable.

Ductal carcinoma in situ (DCIS)	Lobular carcinoma in situ (LCIS)
~ 25% of all newly diagnosed breast cancers.	1-5% of all newly diagnosed breast cancers.
Localization: unifocal.	Localization: multifocal and bilateral.
Often detected as grouped microcalcifications on mammography; DCIS does not usually produce a mass.	LCIS does not produce a mass or calcifications and is usually discovered incidentally on biopsy.
Higher risk of subsequent invasive carcinoma (ipsilateral).	LCIS is both a marker of an increased risk of carcinoma in both breasts and a direct precursor of some cancers.

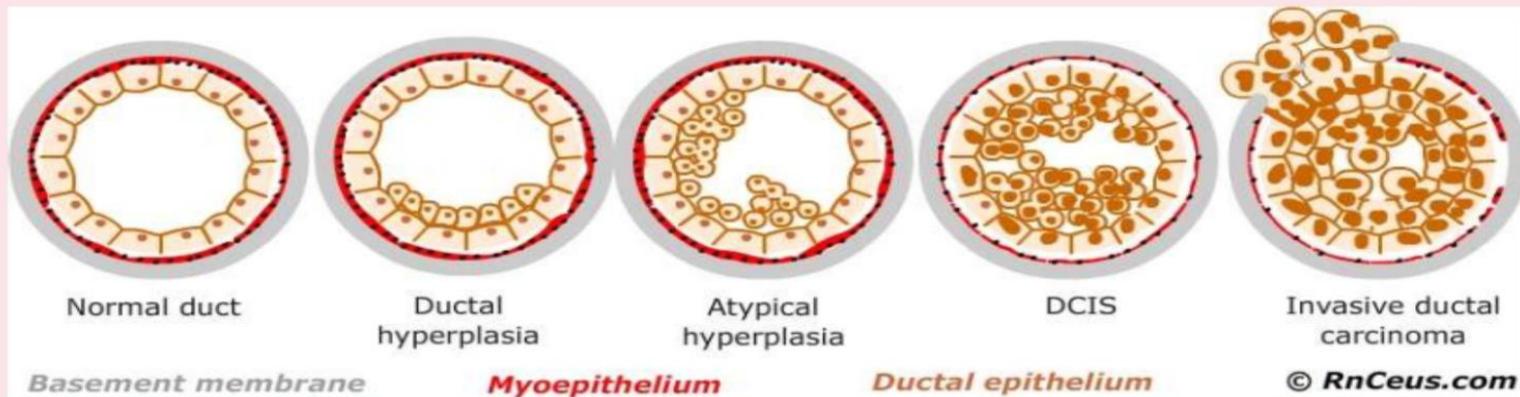
## 2- Invasive carcinoma:

The majority (80%) of breast cancer is Invasive ductal carcinoma. will classically form duct-like structures.

is the most common post-menopausal breast carcinoma.

-Usually presented as;

- unilateral.
- single.
- irregular
- large.
- firm.
- fixed
- Early metastases



## Invasive lobular carcinoma:

-10% of breast cancer

**\*Usually presented as:**

-Mainly bilateral

-Multifocal

-Less aggressive than ductal carcinoma

-Slower met

Higher incidence of multicentricity in the same breast and in the contralateral breast.

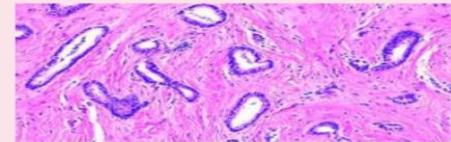
#Difficult to detect mammographically and on physical examination because of its indistinct border.

Invasive ductal carcinoma (most common)	Invasive lobular carcinoma
70–80% of all invasive breast carcinomas, usually associated with DCIS.	10–15% of all invasive breast carcinomas, two-thirds of the cases are associated with LCIS.
Unilateral localization.	Unilateral or bilateral.
Mostly unifocal tumors.	Frequently multifocal.
More aggressive, early metastases.	Less aggressive, slower metastasis.
Forms duct-like structures.	Grows in a single-file pattern (No duct formation due to lack of E-cadherin). May exhibit signet-ring morphology.

***-Overview of other types of invasive breast cancer:***

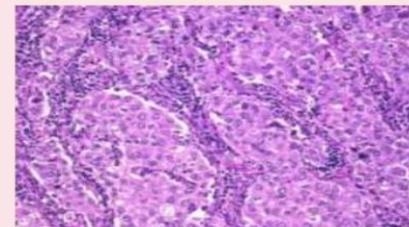
**1- Tubular carcinoma:**

- \*Typically occurs in women in their late 40s.
- \*Characterized by well-differentiated tubules that **lack myoepithelial cells**.
- \***Excellent** prognosis..



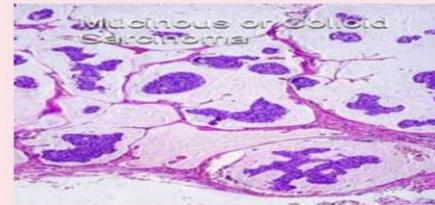
**2- Medullary carcinoma :**

- \*characterized by large, anaplastic, high-grade cells growing in sheets with associated T lymphocytes and plasma cells.
- \* Grows as a well-circumscribed mass that can **mimic fibroadenoma** on mammography.
- \* Increased incidence in BRCA1 carriers.
- \* Relatively **good** prognosis.



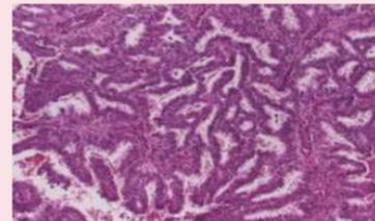
### 3-Mucinous carcinoma:

- \* More common in older women.
- \* Characterized by carcinoma with abundant **extracellular mucin** (tumor cells floating in a mucus pool).
- \* **Relatively good** prognosis



### 4- Papillary carcinoma:

- \* usually well defined border and is made up of small finger-like projections.



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**Tubular carcinoma:** 1 – 2% of invasive carcinomas.

**Medullary carcinoma:** 5% of invasive canceromas

**Mucinous carcinoma:** < 5% of invasive carcinomas.

**Papillary carcinoma:** a rare type of invasive cancers

### 3- Inflammatory breast cancer

- is a fast-growing, often fatal cancer.
- characterized by dermal lymphatic invasion of tumor cells mostly ductal carcinoma.
- As a result, the breast appears inflamed, and the skin appears thickened, resembling orange peel (peau d'orange).
- The lymph nodes feel like hard lumps.
- NO mass is felt in the breast itself because this cancer is dispersed throughout the breast.
- Unlike mastitis, no fever or leukocytosis is present.
- \* Treatment: chemotherapy + radiotherapy + radical mastectomy.
- \* Poor prognosis



## *4-Paget disease of the nipple*

-Ductal carcinoma (either in situ or invasive) that infiltrates the nipple and areola.

### Clinical feature:

- Erythematous.
- vesicular rash affecting the nipple and areola.
- Pruritus, burning sensation, nipple retraction.
- The lesion eventually ulcerates → blood-tinged nipple discharge.

**Note** that the eczematous skin lesion might resemble eczema of the nipple, however unlike the later, Paget's disease usually presents with a destroyed nipple and a skin lesion of ill demarcated edges that does not show significant response to steroidal therapy.

## *Prognosis:*

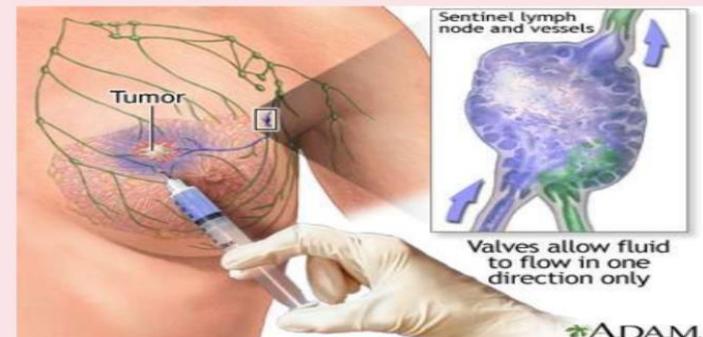
The most important prognostic factor in breast cancer is whether or not they have metastasized to the axillary nodes.

-A sentinel node biopsy is used to assess axillary lymph

## *Sentinel node biopsy:*

-Standard of care in the management of the axilla in patients with clinically node-negative disease.

- In patients in whom there is no tumor involvement of the sentinel node, further axillary dissection can be avoided.



# *Surgical treatment*

**Mastectomy** is indicated for large tumors

**The radical mastectomy** is the most commonly performed, **the whole breast**; a large portion of skin, the center of which overlies the tumor but which always includes the nipple; all of the fat, fascia and lymph nodes of the axilla.



**Simple mastectomy** involves removal of only the breasts with no dissection of the axillary lymph nodes

**Conservative** breast cancer surgery This is aimed at removing the tumor plus a margin of normal breast tissue.

**THANK  
YOU**