



5 Female breast



Position :

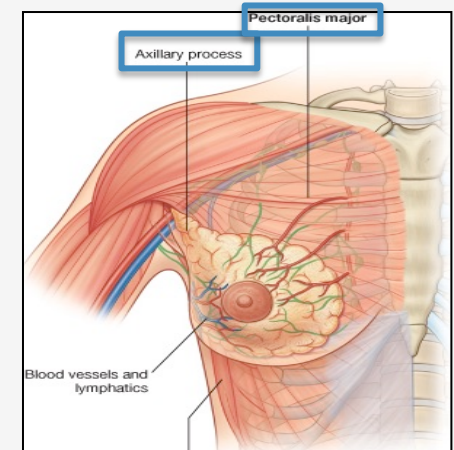
The breast lies in **superficial fascia** of the front of chest and extends from the **sternum to the midaxillary line laterally**.

Shape :

It is conical in shape and has a base (extends from 2nd to 6th ribs) , apex and tail.

THE BREAST

2\3 of the base	Infrolateral 1\3 part	Suprolateral part
Lies on : pectoralis major muscle.	Lies on : •Serratus anterior •External oblique muscles.	sends a process into the axilla called the axillary tail or axillary process



Nipple:

is a conical eminence that projects forwards from the anterior surface of the breast.

It **lies opposite 4th intercostal space**.

It carries **15-20** narrow pores of the lactiferous ducts.

Areola :

is a dark pink brownish circular area of skin that surrounds the nipple.

The subcutaneous tissues of nipple & areola are **devoid of fat**.

STRUCTURE OF MAMMARY GLAND



- ❖ The mammary gland is **not a capsulated gland**
- ❖ It consist of **15-20 lobes** and each lobe formed of a number of lobules.
- ❖ The lobes and lobules are embedded in the subcutaneous fatty tissue of superficial fascia. AND separated by interlobar and interlobular fibrous & fatty tissue , called **ligaments of Cooper**(suspensory ligaments).

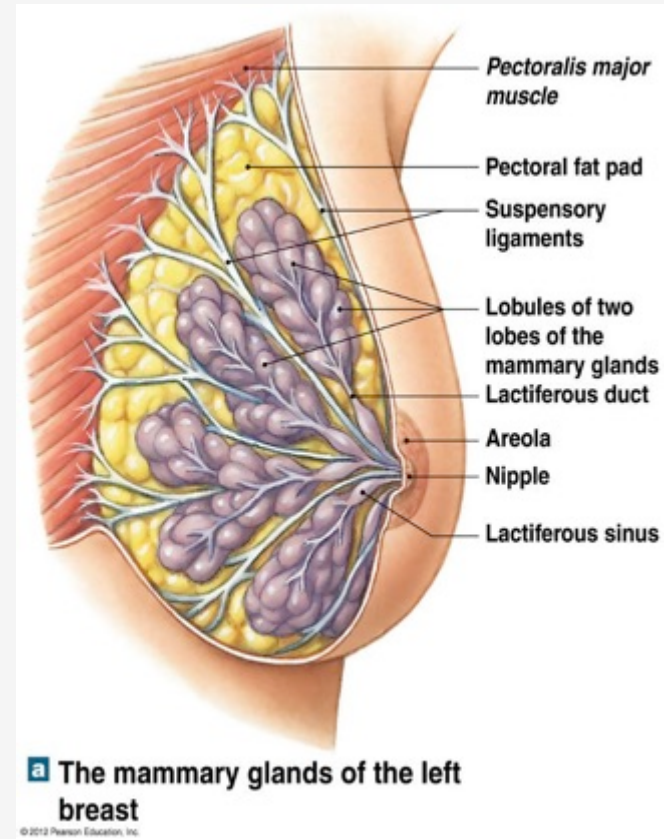
❑ Function of the **ligament of cooper** ?
 connect the skin with deep fascia of pectoralis major.

❑ Importance ?

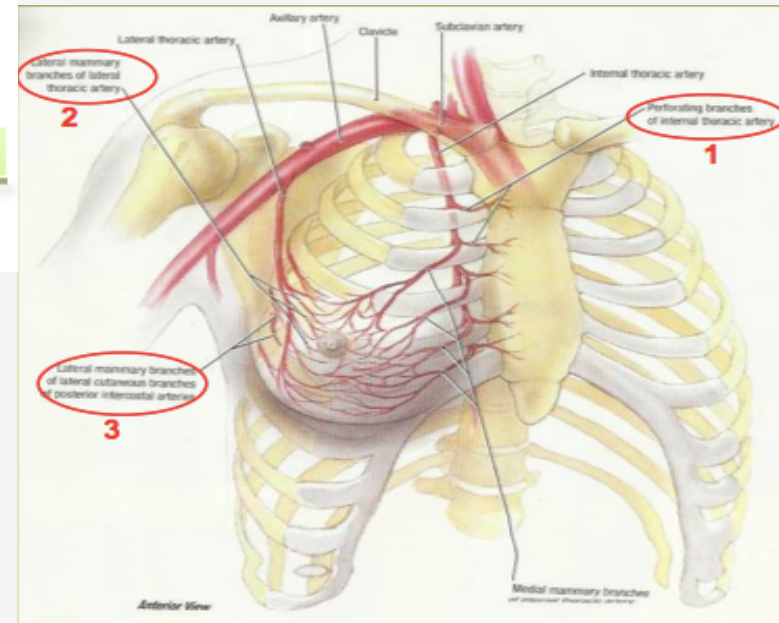
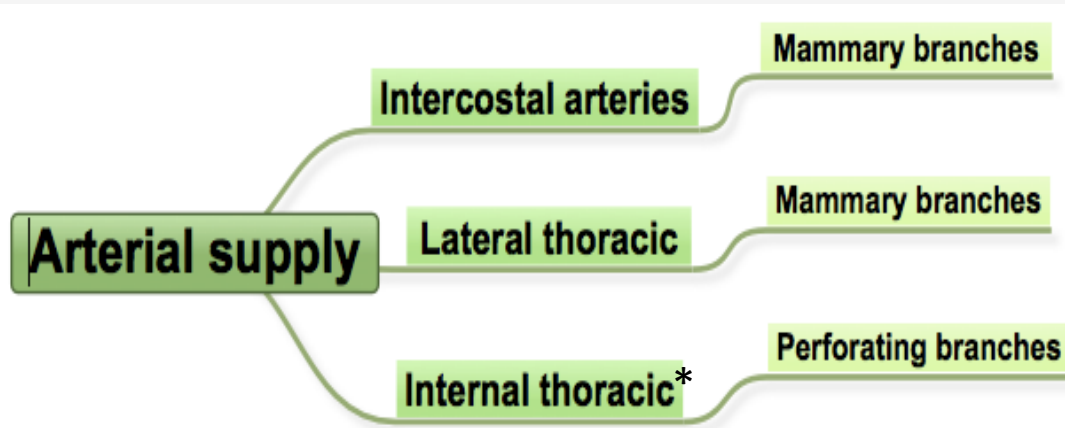
These ligaments give the breasts support by connecting the skin Of the breasts to the pectoralis muscles below them.

- ❖ It is separated from the deep fascia covering the underlying muscles by a layer of loose areolar tissue which forms the **retromammary space** (allows the breast to move freely).

- ❖ It has from **15-20 lactiferous ducts** which open by the same number of openings **on the summit of the nipple**.



BLOOD SUPPLY



- Venous supply :

- ❑ Veins are corresponding to the arteries .
- ❑ **Circular venous plexus** are found at the Base of nipple and drain into **axillary** and **internal thoracic veins**.

*internal mammary artery

AXILLARY LYMPH NODES

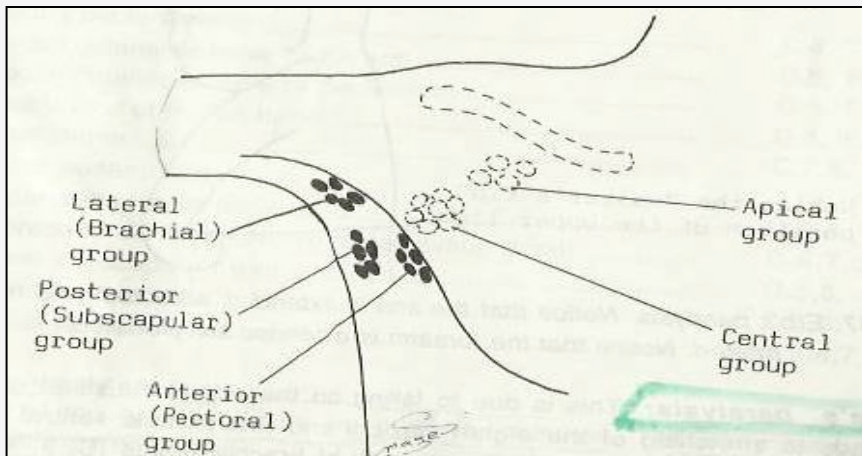
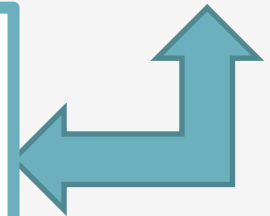


Axillary lymph nodes (All the 5 groups lie in axillary fat)

Pectoral (Anterior) group	Subscapular (Posterior) group	Brachial (Lateral) group	Central group	Apical group
lies on the <u>pectoralis minor</u> along lateral thoracic vessels	lies on <u>posterior wall of axilla</u> on lower border of <u>subscapularis</u> along subscapular vessels.	lies on <u>lateral wall of axilla</u> along 3rd part of axillary vessels.	lies in <u>axillary fat</u> at the base of <u>axilla.</u>	lies at apex of <u>axilla.</u>

Subclavian lymph trunk:

It is formed by **union** of **efferent lymph vessels** of **apical group**. It usually opens in subclavian vein. On the **left side** it usually opens into thoracic duct. then into left subclavian vein



LYMPH DRAINAGE



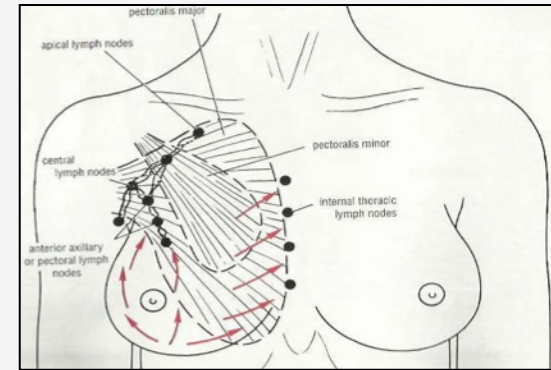
Subareolar lymphatic plexus :

Lies beneath the areola.

Deep lymphatic plexus:

Lies on the deep fascia covering pectoralis major.

Both plexuses radiate in many directions and drain into different lymph nodes.

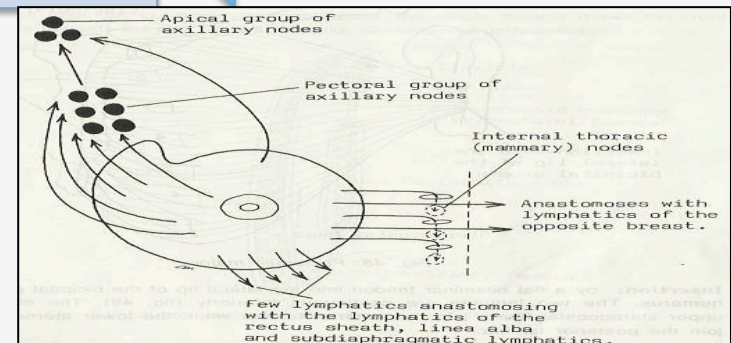


	Lymph drainage		
Part of the gland	Central & lateral parts	Upper part	Middle part
Drain into	<u>pectoral group</u> of axillary lymph nodes.	<u>apical group</u> of axillary lymph nodes.	<u>internal thoracic (parasternal)</u> lymph nodes, forming a chain along the <u>internal thoracic vessels</u>

Some lymphatic from the medial part of the gland pass across the front of sternum to anastomose with that of opposite side.

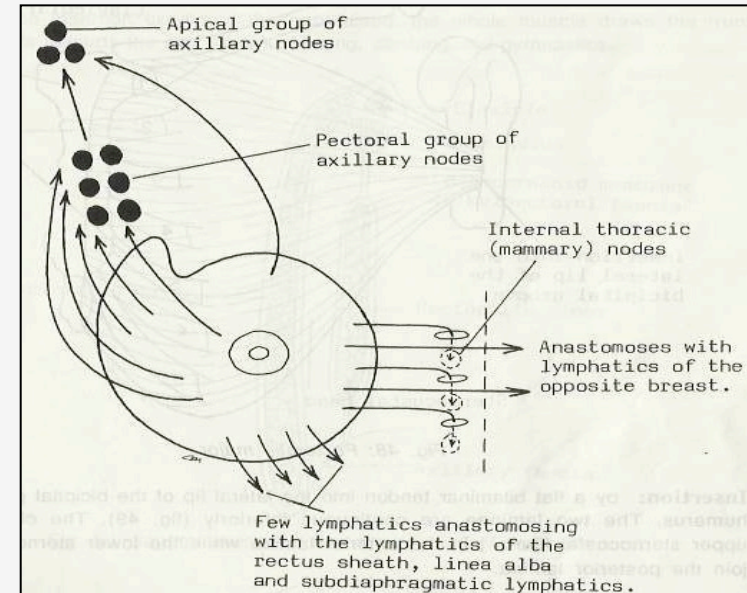


- ◆ Lymphatics from the **inferomedial part** anastomose with lymphatics of **rectus sheath and linea alba.**
- ◆ some vessels pass deeply to anastomose with the **sub diaphragmatic lymphatics.**

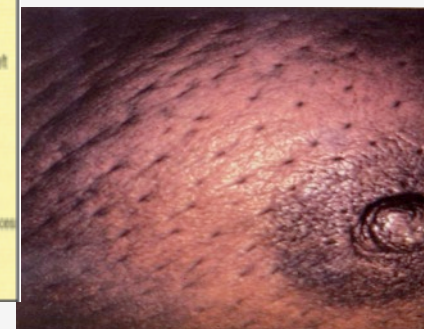
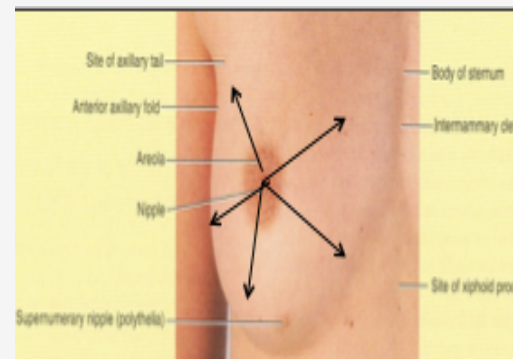




- It is a common surgical condition.
- 60% of carcinomas of breast occur in the upper lateral quadrant.
- 75% of lymph from the breast drains into the axillary lymph nodes.
- In case of carcinoma of one breast, the other breast and the opposite axillary lymph nodes are affected because of the anastomosing lymphatics between both breasts.
- In patients with **localized cancer breast**, a simple mastectomy, followed by radiotherapy to the axillary lymph nodes is the treatment of choice.



- The lactiferous ducts are radially arranged from the nipple, so incision of the gland should be made in a radial direction to avoid cutting through the ducts.
- Infiltration of the ligaments of Cooper by **breast cancer** leads to its shortening giving **peau de' orange** appearance of the breast.



Peau de orange appearance

MCQs

Q1- Which is correct regarding the mammary gland ?

- A. It extends from the 2nd to 8th ribs.
- B. Its base lies on the pectoralis major muscle.
- C. It has 4-8 lactiferous ducts.
- D. Its most lymph drains into the parasternal lymph nodes.

Q2- The lymphatics from upper part of mammary gland drain into :

- A. The parasternal lymph nodes.
- B. Subdiaphragmatic lymph nodes.
- C. Apical group of axillary lymph nodes.
- D. Pectoral group of axillary lymph nodes.

Q3- The lactiferous ducts of mammary gland are :

- A. Less than 10.
- B. From 10-15.
- C. From 15-20.
- D. More than 20.

Q4- the base of the breast extends from ... to ..?

- A. 1st to 6th
- B. 2nd to 6th
- C. 2nd to 7th
- D. 3rd to 7th

Q5 -the 2/3 of the breast's base lies in which one of the following muscles??

- A. serratus anterior
- B. external oblique
- C. pectoralis minor
- D. pectoralis major

Q6- The nipple of the breast lies opposite of ?

- A. 3rd costal cartilage
- B. 3rd intercostal space
- C. 4th intercostal space
- D. 4th costal cartilage

Q7- 45 years old female treated from breast cancer of her right breast , unfortunately we found the left breast was affected. which one of the following lymph nodes anastomose with opposite breast ?

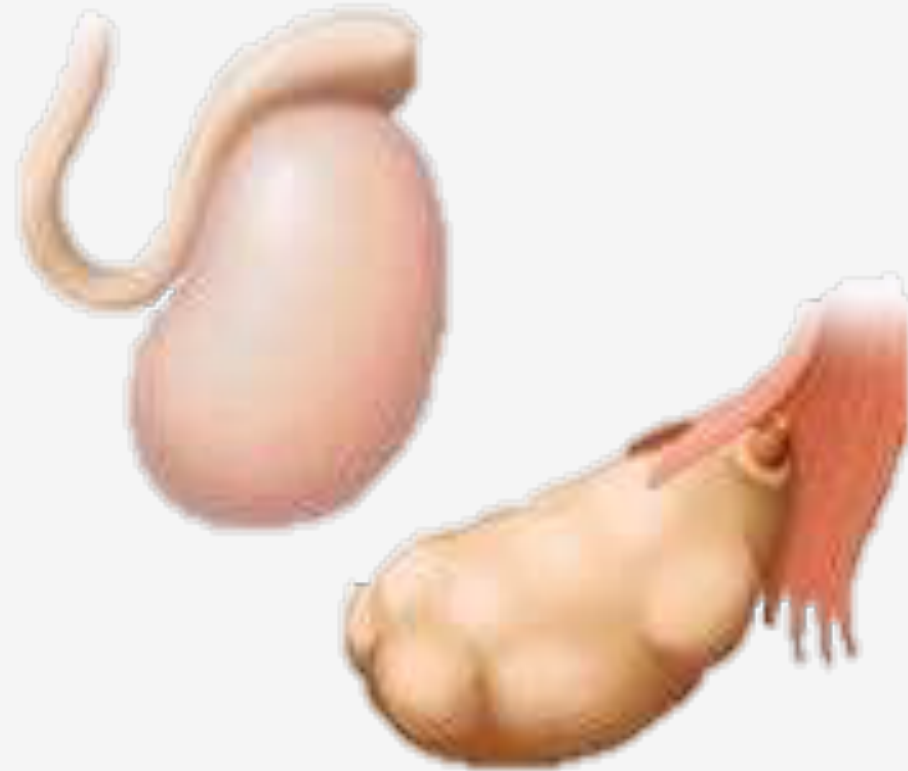
- A. Subdiaphragmatic lymph nodes.
- B. apical group of axillary lymph nodes.
- C. central group of axillary lymph nodes
- D. internal thoracic (parasternal) lymph nodes

Q8- 75% of lymph from the breast drains into the ...?

- A. Cervical lymph nodes
- B. axillary lymph nodes.
- C. Subdiaphragmatic lymph nodes.

GOOD LUCK

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ختاماً ...

نتمنى أن نكون وفقنا بتقديم المادة بشكل ميسر ومفيد ..
إن أصبنا فمن الله .. وإن أخطأنا فمن أنفسنا والشيطان ..
نشكر لكم ثقتكم وتشجيعكم ..
ونشكر أعضاءنا على جهودهم المبذولة ..

اللهم علمنا ماينفعنا .. وانفعنا بما علمتنا .. وزدنا علماً ..

قادة فريق علم التشريح
انجود المحارب .. حسن الملق