THE PECTORAL REGION

BASRA UNIVERSITY/ COLLEGE OF MEDICINE
DEPARTMENT OF HUMAN ANATOMY

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OBJECTIVE

- ✓ THE MAMMARY GLAND
  BREAST
- ✓ SURFACE ANATOMY OF PECTORAL
  REGION

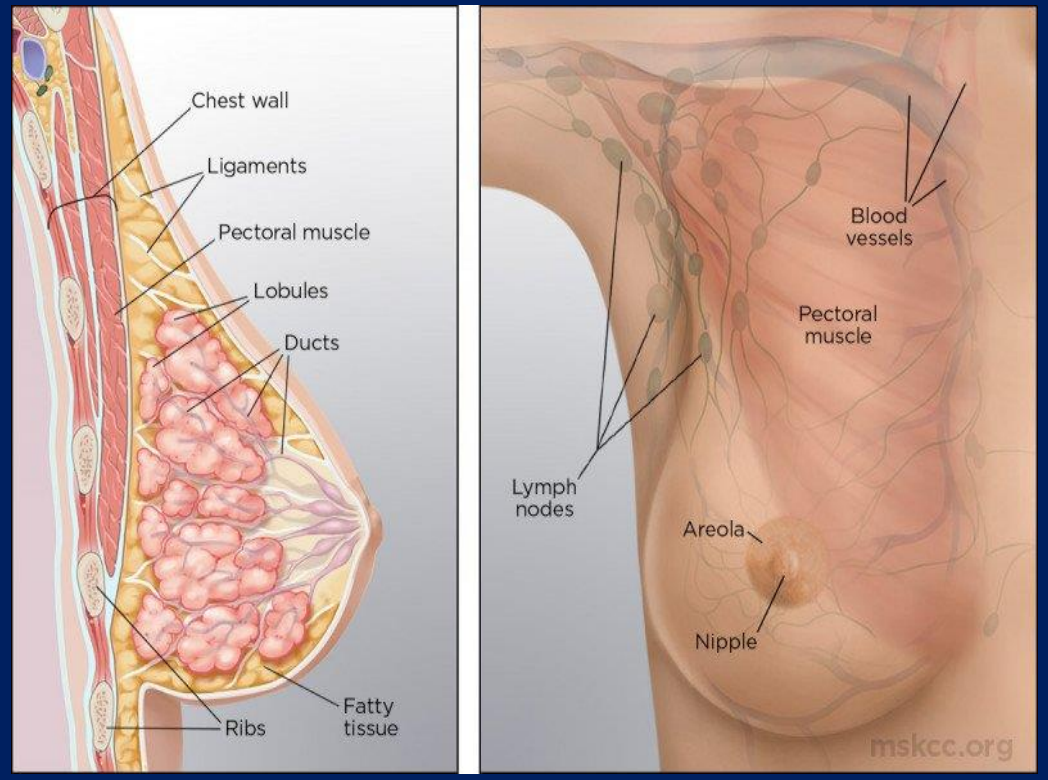
BREAST

- A modified sweat gland, which present in both sexes.
- It’s function for lactation in females.
- In males and immature females, they are similar in structure.
- At puberty of females, the breasts gradually enlarged assume their hemispherical shape.
- The increased size of the glands is mainly from the deposition of fat, so that breast size depends on the amount of adipose tissue (fat tissue) contents.

BREAST

❑ Tissue Types:

1. Glandular.
2. Fatty (adipose).
3. Fibrous (connective).

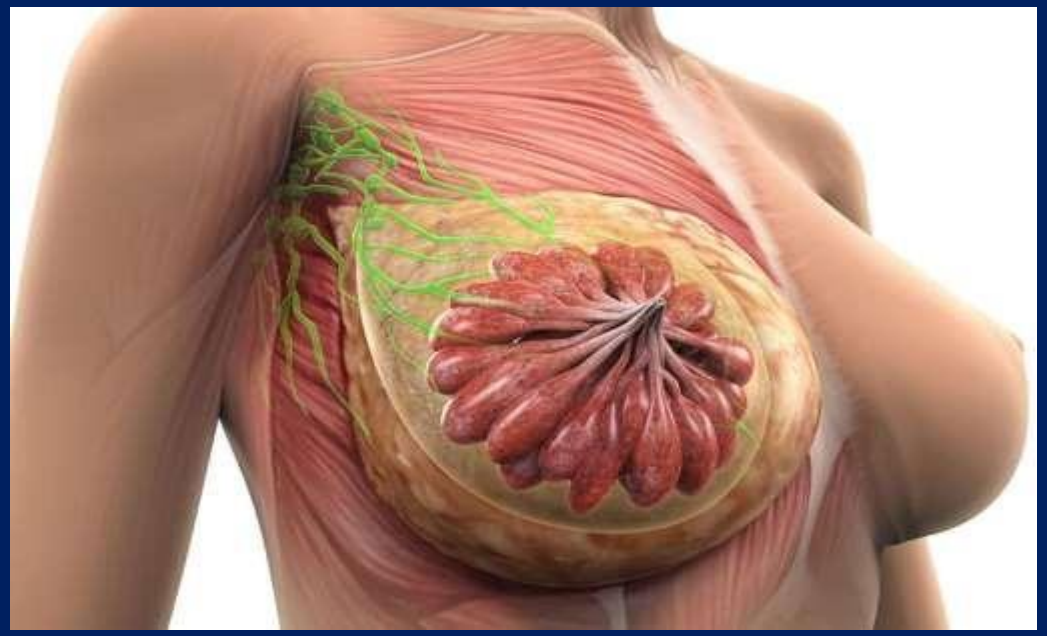


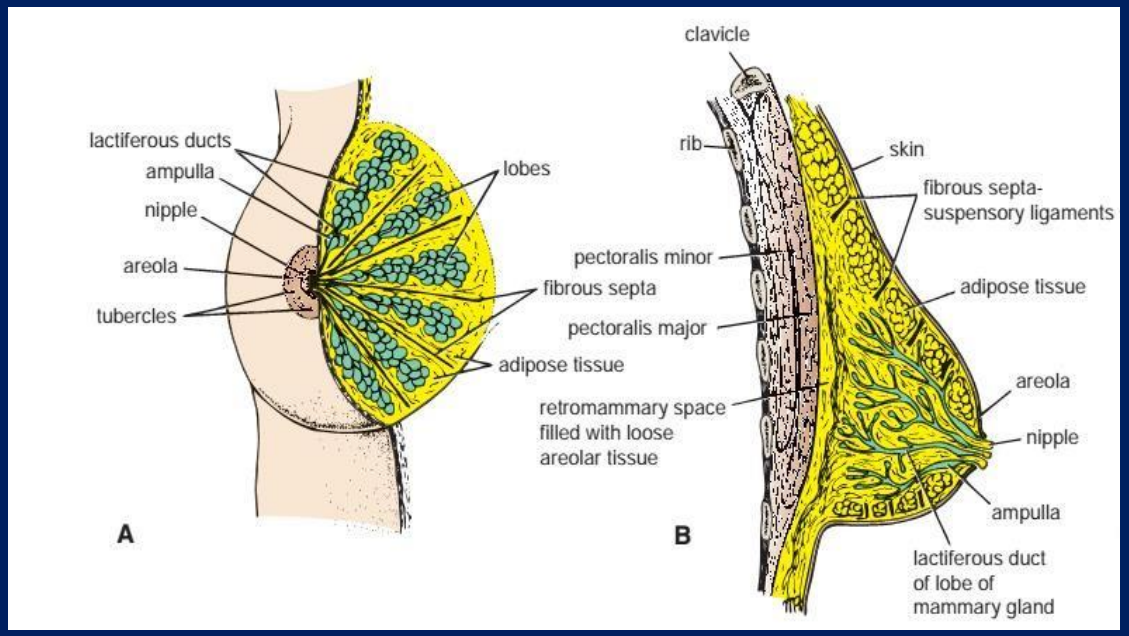
❑ Each breast contains:

1. Nipple: A small projection in the center of the breast.
2. Areola: A colored area of skin which surrounded Nipple.
3. Lobes and ducts.

BREAST

- Each breast consists of 15 to 20 pyramidal lobes of milk secreting tissue whose apices are directed to the center of the breast.
- The main duct (Lactiferous ducts) from each lobe opens separately on the summit of the nipple.





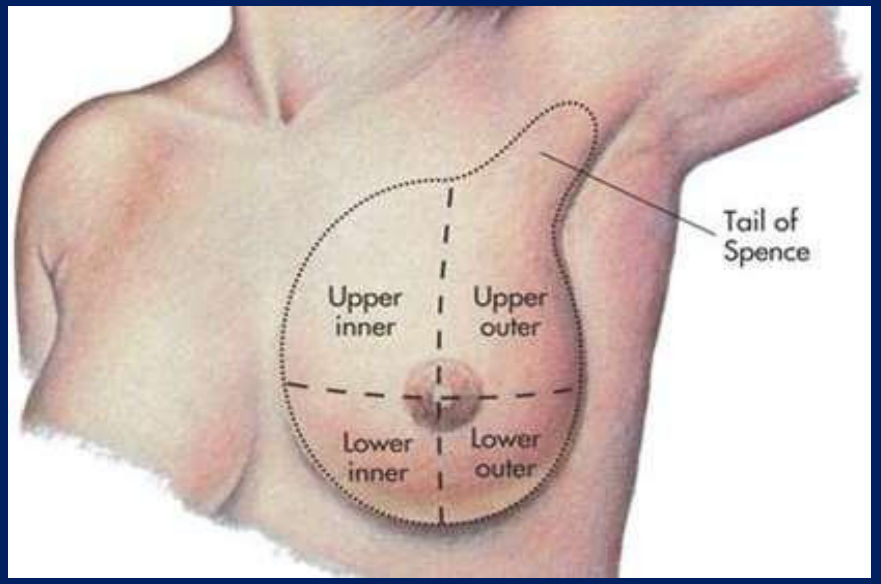
BREAST

- At puberty of females:

The base extends from the 2nd to 6th rib, it's occupy the area between sternum & mid-axillary line.

- The greater part of the gland lies in the superficial fascia.

A small part, called the *axillary tail*, extends upward and laterally, pierces the deep fascia, and enters the axilla.

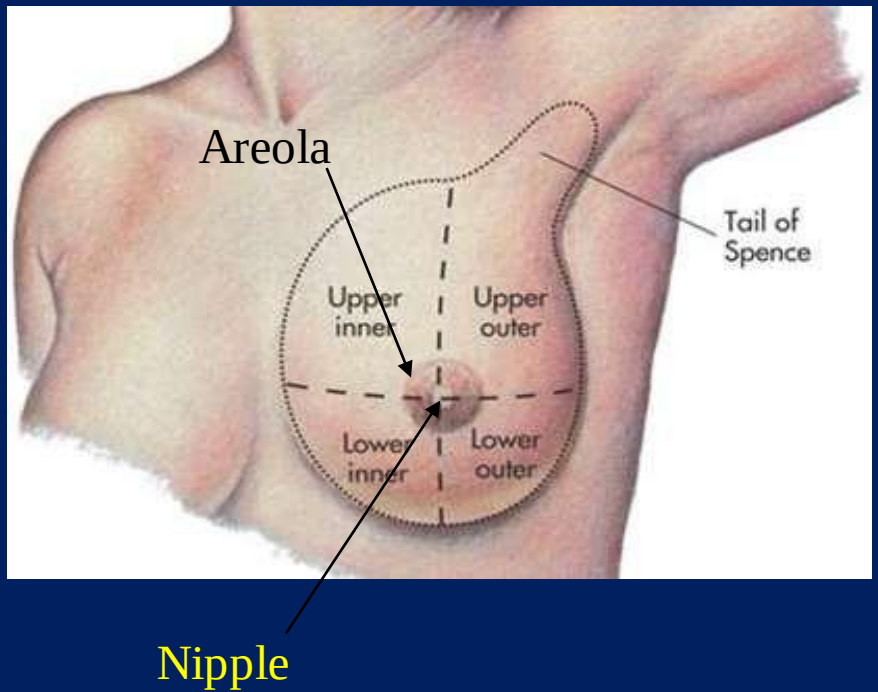


BREAST

- ***The Nipple***: On its top open the lactiferous ducts, contains smooth muscles which erect under a hormonal control.

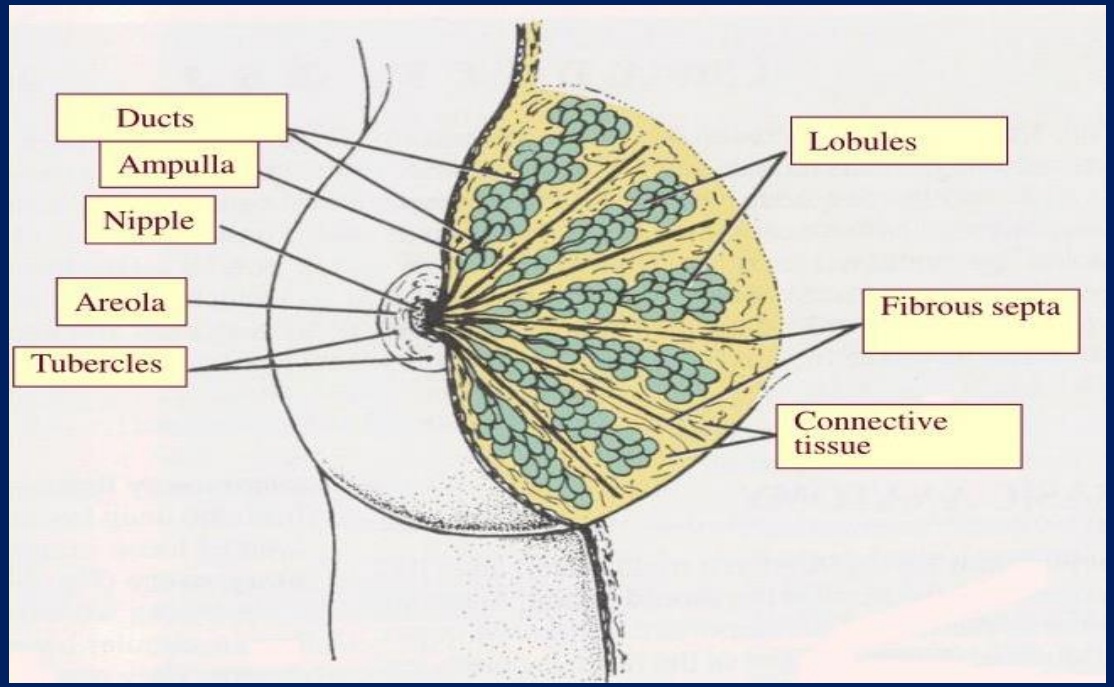
- ***The Areola***: The circular pigmented area which surrounds the nipple, it's diameter & color varies depends on many factors.

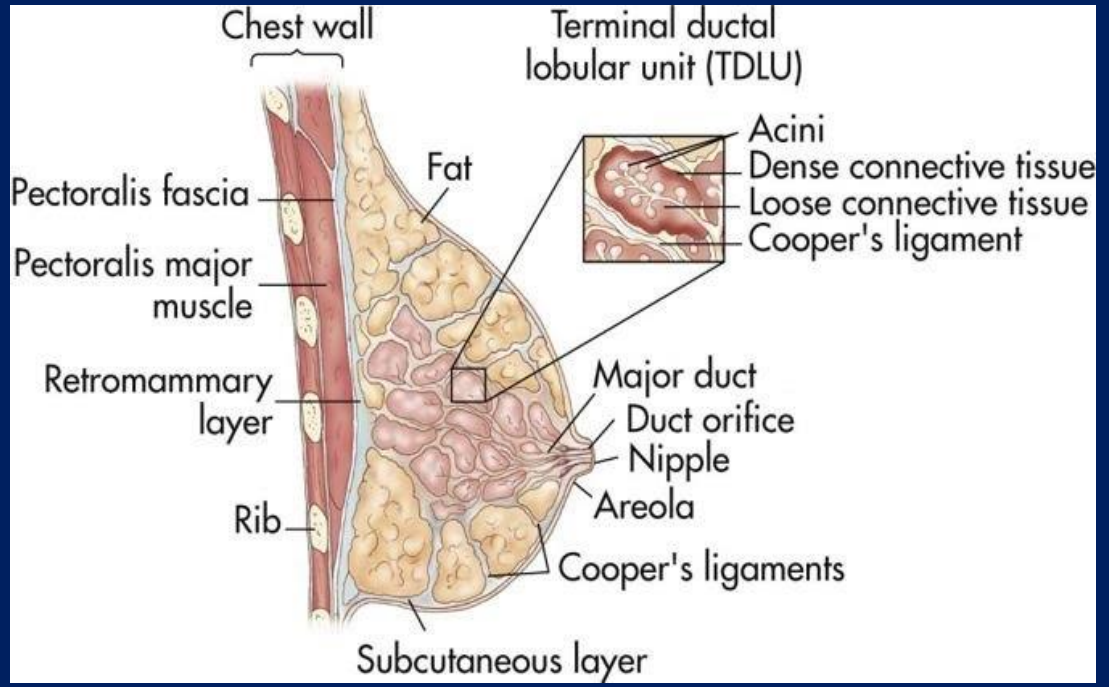
- ***The Breast tail*** (axillary process): It's extension of breast tissue into the anterior axillary fold.



BREAST

- The lobes of the gland are separated by fibrous septa that serve as ***suspensory ligaments.***
- Behind the breasts is a space filled by loose connective tissue called the ***retromammary space.***

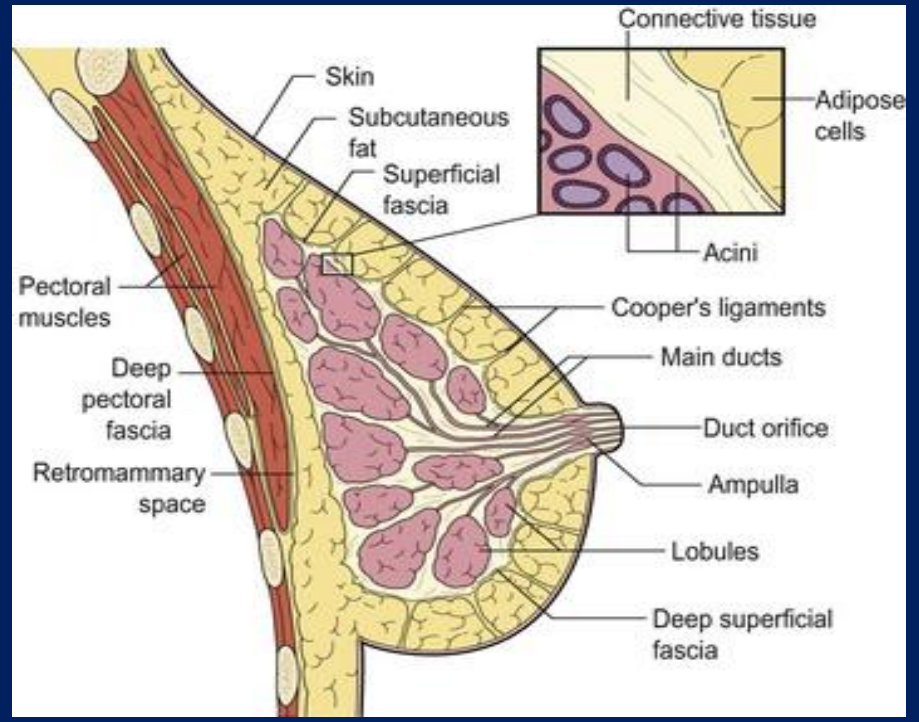




BREAST

- Suspensory ligament of ***Astley-Cooper***:

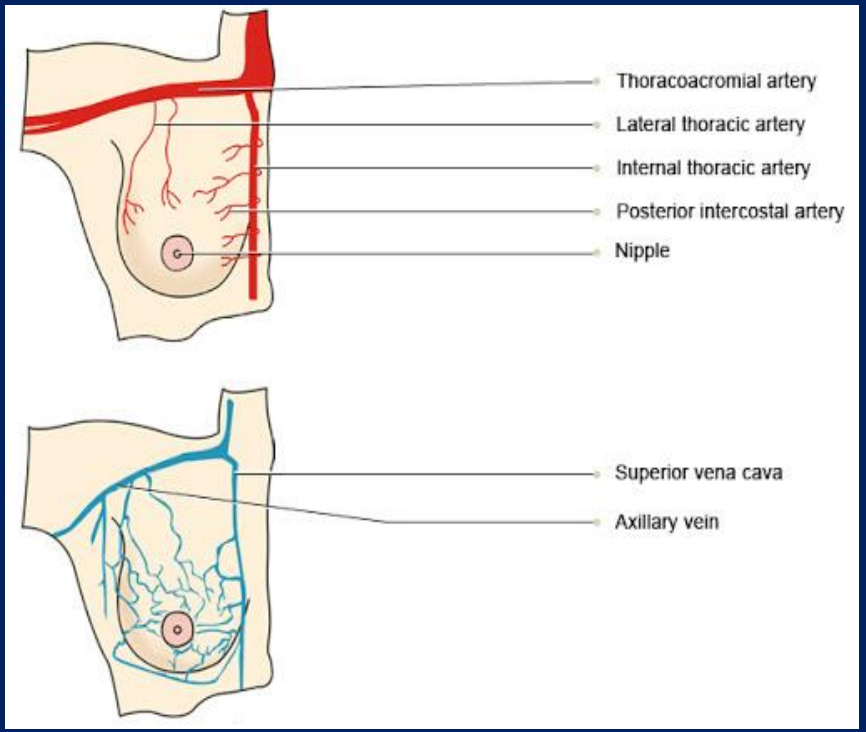
- - This conical ligament covers the breast underneath the skin & supports it's weight.
- - It's stronger at the lower than the upper half of the breast.
- - It's strong, tense in young age & becomes lax in multiparous women.
- - It's maintain structural integrity of breast & responsible for the change in appearance.



BREAST

Arterial Supply

1. The axillary artery via its Thoracoacromial and Lateral thoracic branches.
2. Perforating branches of Intercostal artery (Ant. & Lat. branches).
3. Internal thoracic arteries.

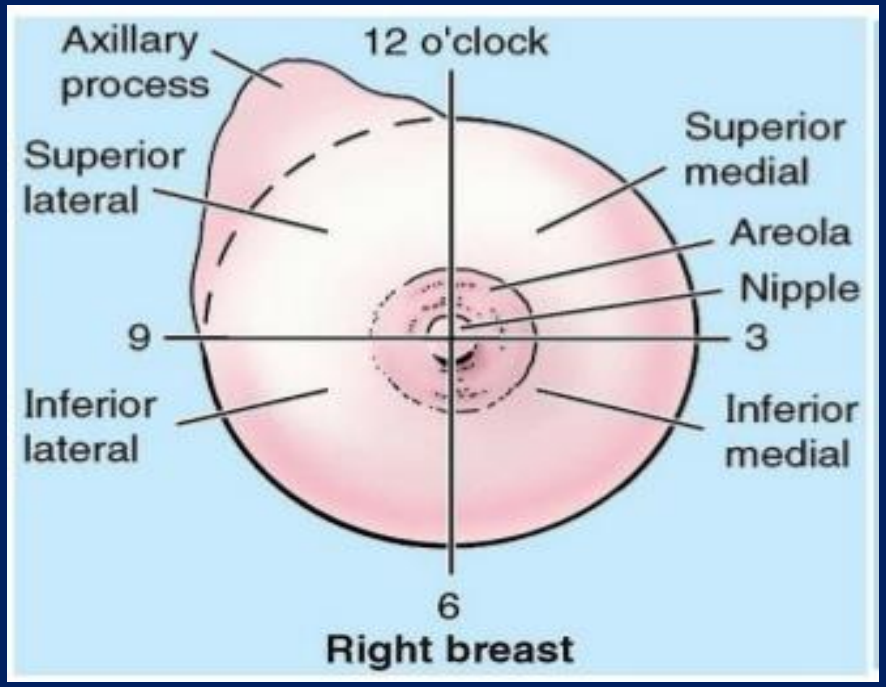


Venous Drainage

Similar to arteries but they communicate with adjacent veins of the neck above & of the anterior abdominal wall below.

BREAST

- It’s of great clinical importance because of the frequent development of cancer in the breast and the risk of dissemination of the cancer cells along the lymph vessels to the lymph nodes, so that the breast divided into 4 quadrants.



BREAST

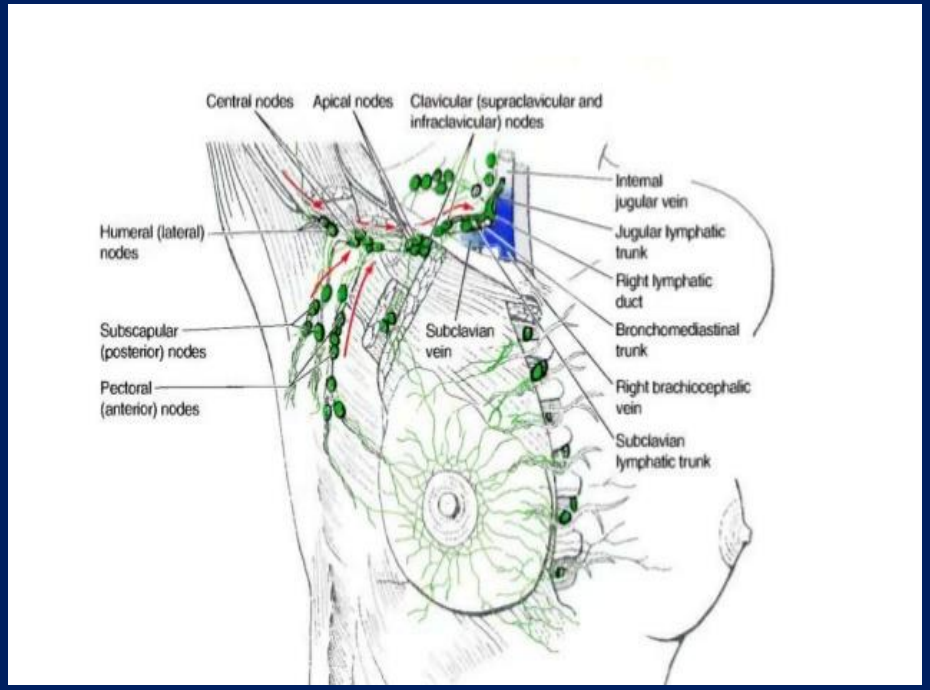
❑ Lymphatic Drainage:

1. The lateral quadrants of the breast drain into the ***axillary lymph nodes*** (L.Ns).

2. The medial quadrants drain into ***internal thoracic L.Ns***.

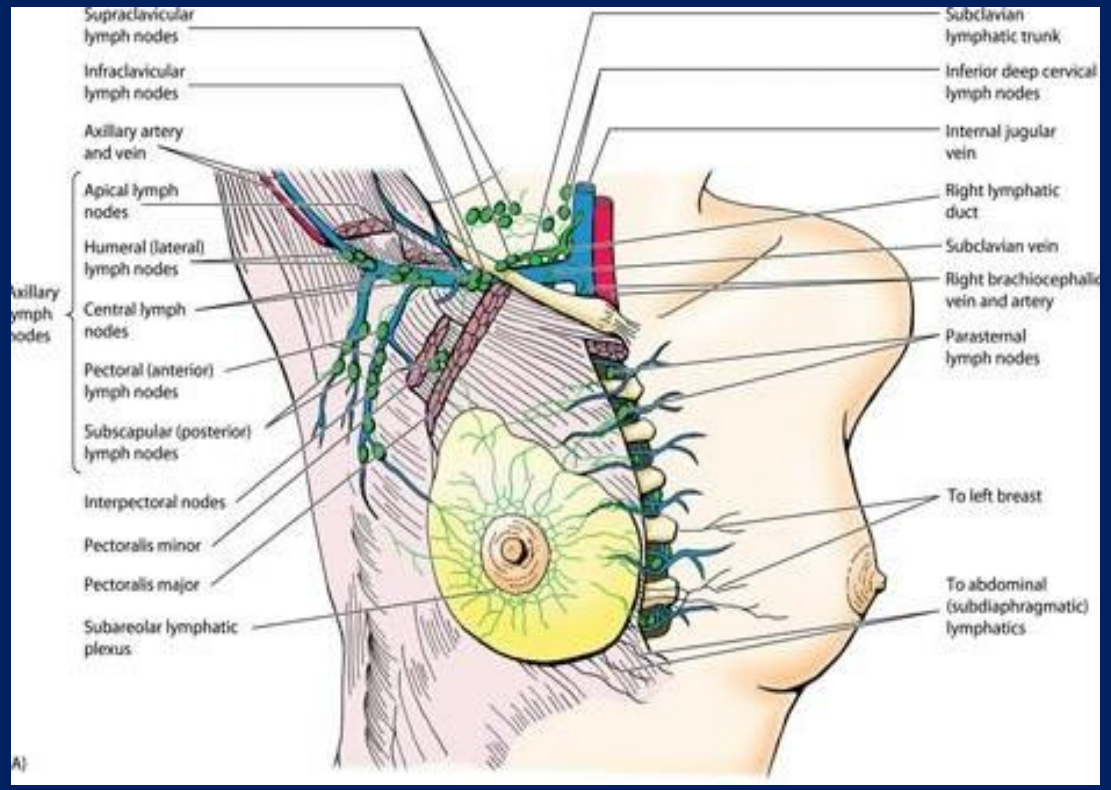
3. A few lymph vessels drain posteriorly into the ***posterior intercostal nodes.***

4. The lower quadrant drain into the ***abdominal LNs.***



BREAST

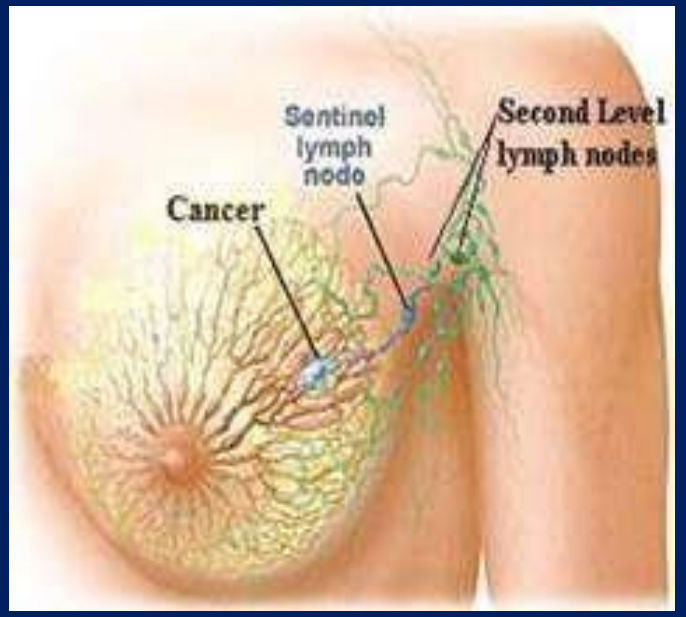
- **75%** of breast lymph (central & lateral part of breast) drains to the ***axillary LNs.***
- **20%** of breast lymph (medial part) drai to the ***internal thoracic LNs.***
- The rest of lymph drains to:
  - Intercostal LNs.
  - Subdiaphragmatic LNs.
  - Supraclavicular LNs.
  - Infraclavicular (cephalic) LNs.
  - Opposite breast LNs.

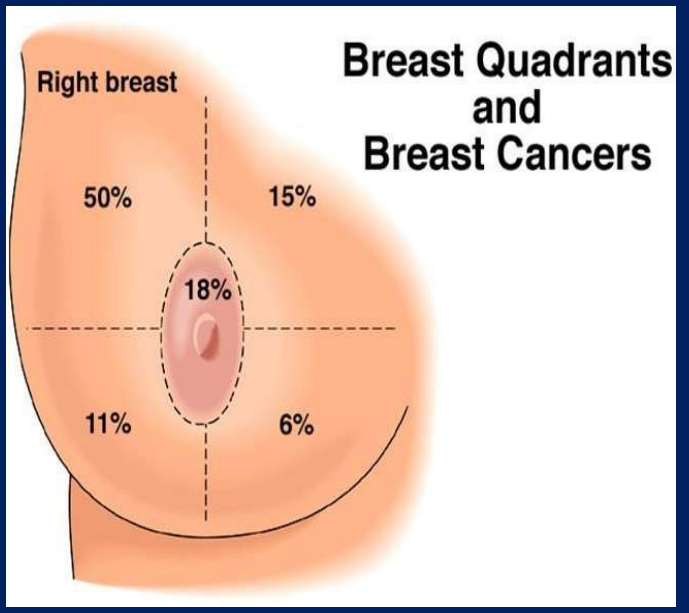


BREAST

- Cancer of the breast mainly affects the ***superolateral quadrant***.
- Spreads:

1. Locally.
2. By lymphatics to LNs.
3. By blood to distant organs.





SURFACE ANATOMY

ANTERIOR SURFACE

- Clavicle
- Acromion
- Deltopectoral Triangle
- Axillary Folds
- Axilla
- Coracoid Process

POSTERIOR SURFACE

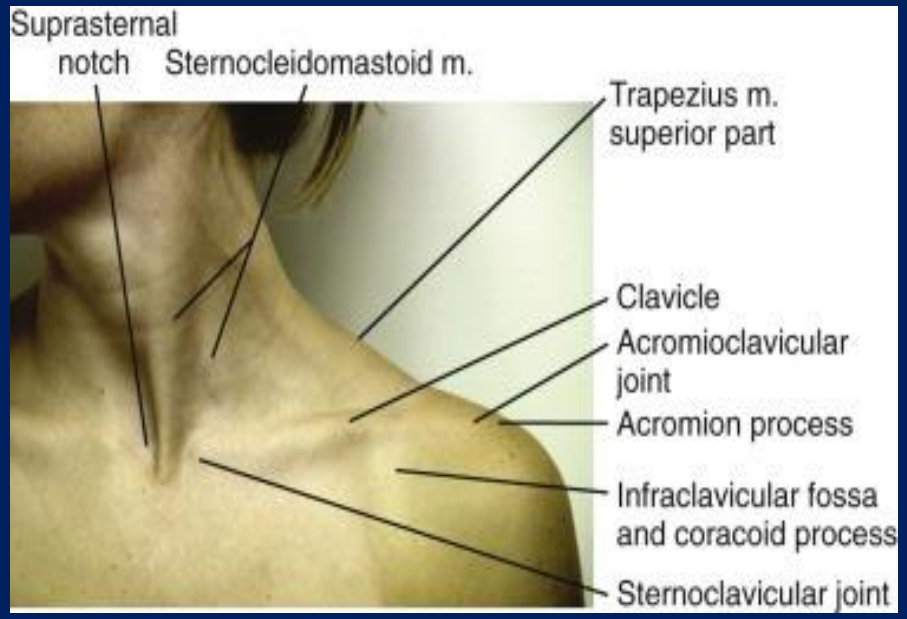
- Scapula

SURFACE ANATOMY

Anterior Surface

1.) Clavicle

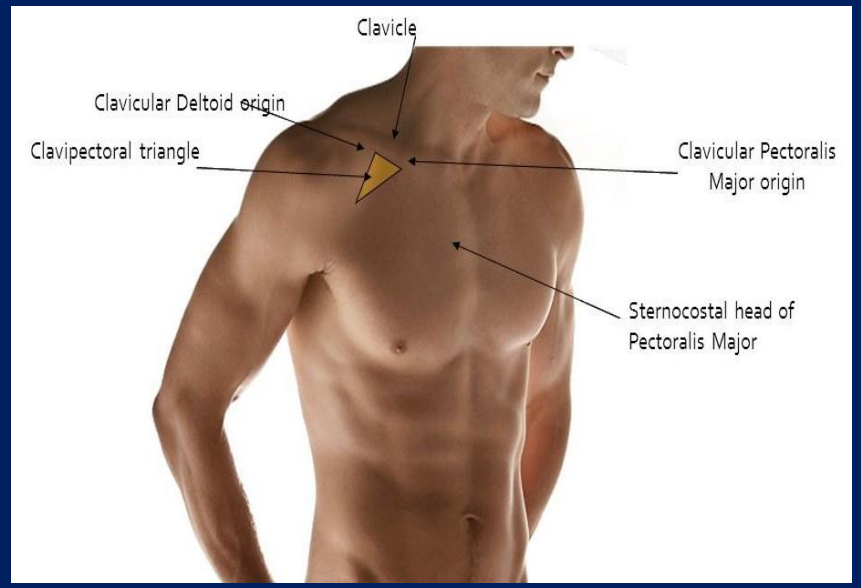
It's situated at the root of neck & throughout it's entire length lies just beneath the skin & can be easily palpated.

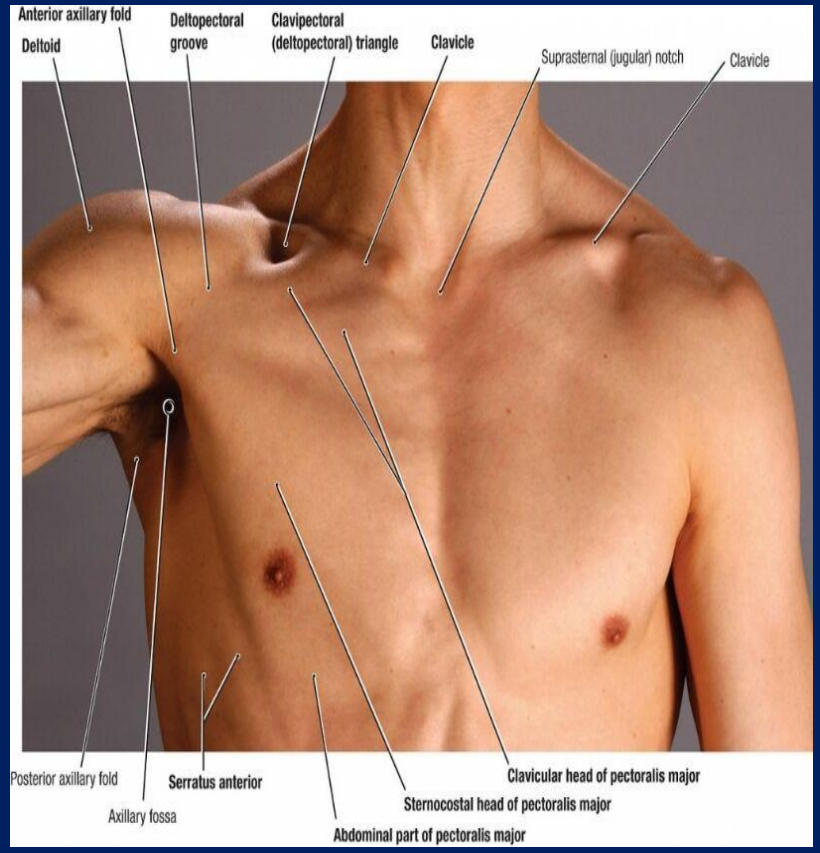


SURFACE ANATOMY

2.) Deltopectoral triangle (clavipectoral triangle)

- A small triangular depression is situated below the outer third of the clavicle & is bounded by pectoralis major & deltoid muscles.
- It's pierced by cephalic vein on it's course from the upper limb to join the axillary vein in the axilla.

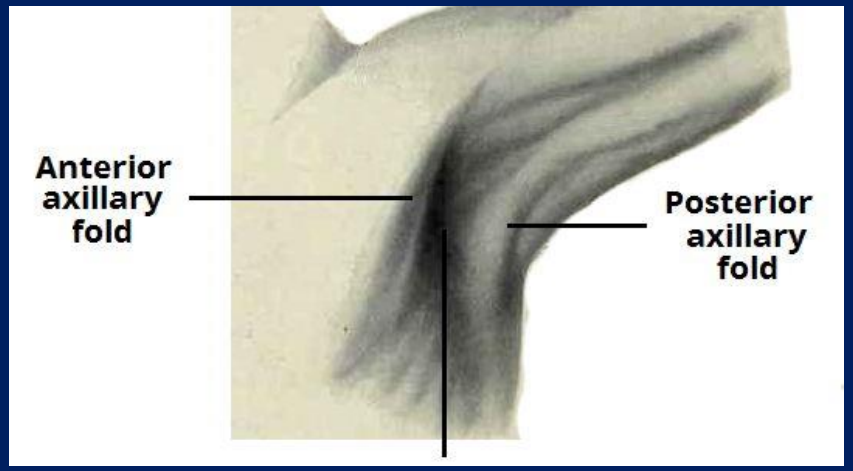




SURFACE ANATOMY

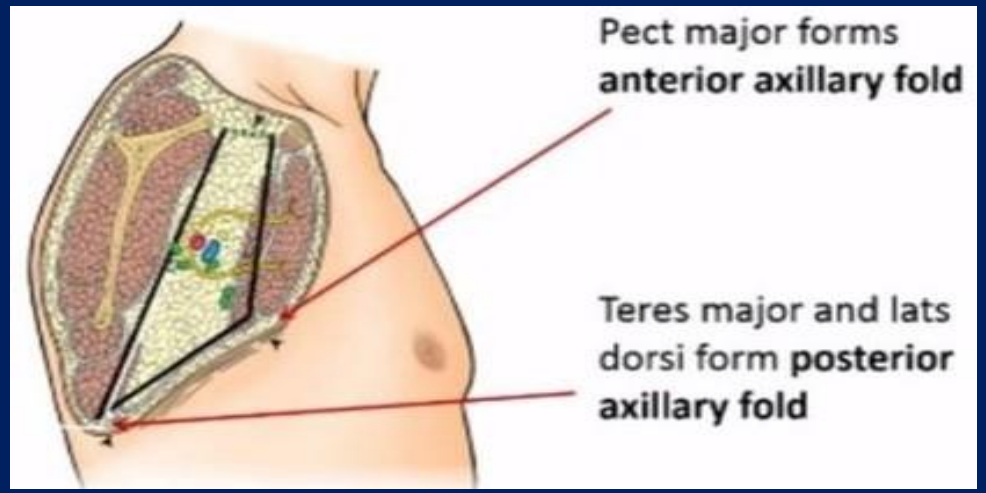
3.) Axillary Folds

- ***Anterior Axillary Fold***: formed by the lower margin of pectoralis major muscle; it's can be palpated between finger & thumb. This can be made to stand out by asking patient to press his/her hand against ipsilateral hip.



- ***Posterior Axillary Fold***:

formed by tendon of latissimus dorsi muscle as it pass around lower border of teres major muscle. It can easily palpated between finger & thumb.



SURFACE ANATOMY

4.) Axilla

The following structures can be felt in axilla:

1- inferior part of humeral head.

2. Axillary artery pulsation.

3. Cords of brachial plexus.

4. Medial wall of axilla (formed by upper ribs covered by serratus anterior muscle).

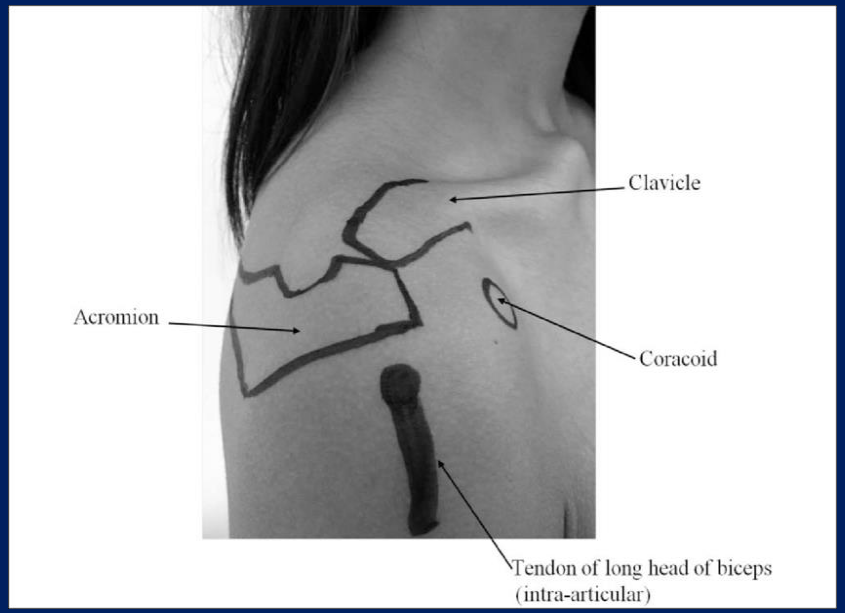
5. Lateral wall of axilla (formed by coracobrachialis & biceps muscles & bicipital groove of humerus).

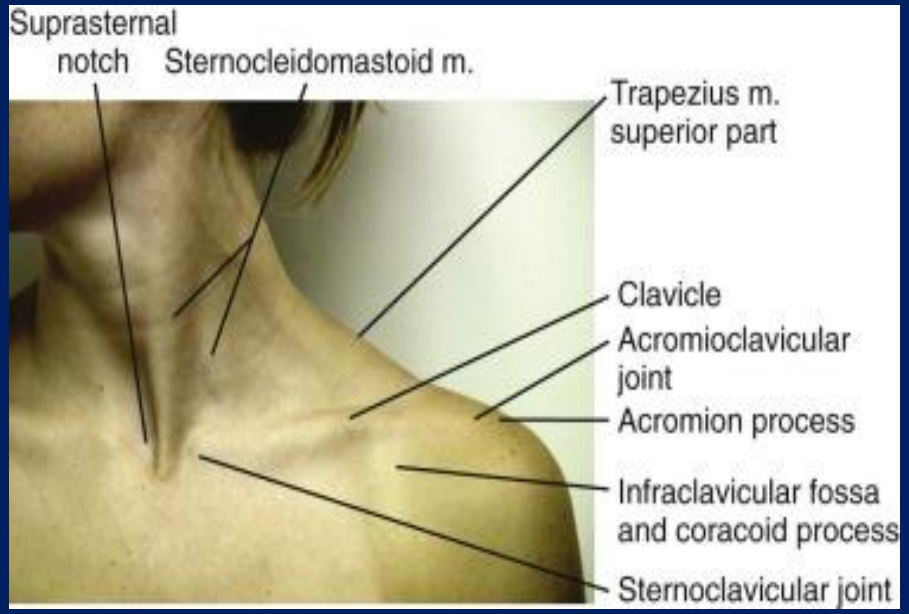
SURFACE ANATOMY

5.) Coracoid process

Can be felt on deep palpation in the lateral part of deltopectoral triangle which covered by anterior fibers of deltoid muscle.

6.) Acromion



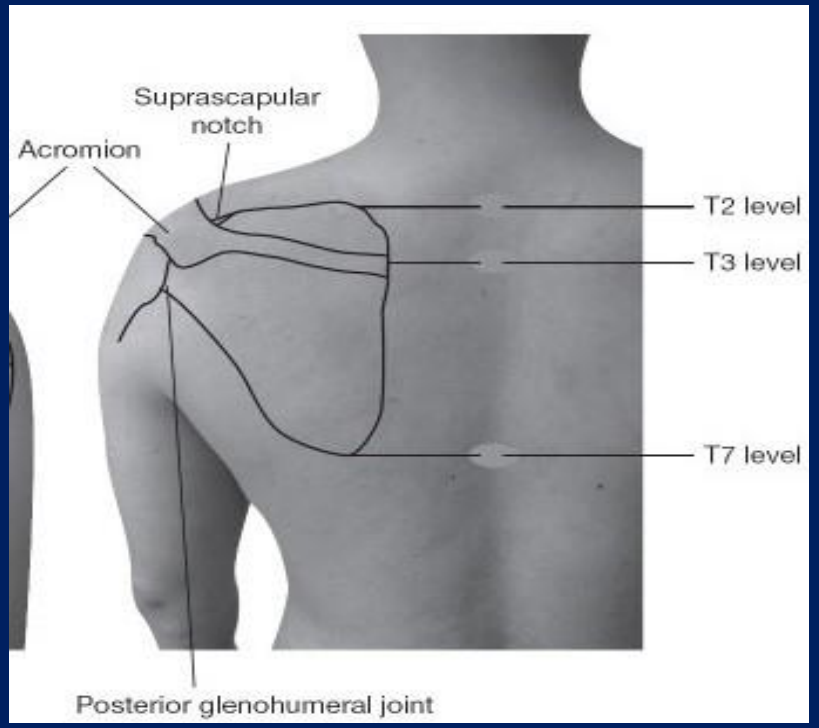


SURFACE ANATOMY

Posterior Surface

Scapula

- Crest of scapular spine can be palpated & traced medially to medial border of scapula, which join at the level of 3rd thoracic spinous process.
- Superior angle of scapula can be felt through trapezius muscle & lies opposite 2nd thoracic spine.
- Inferior angle of scapula can be palpated opposite 7th thoracic spine.



ANATOMICAL LINES AXILLARY REGION

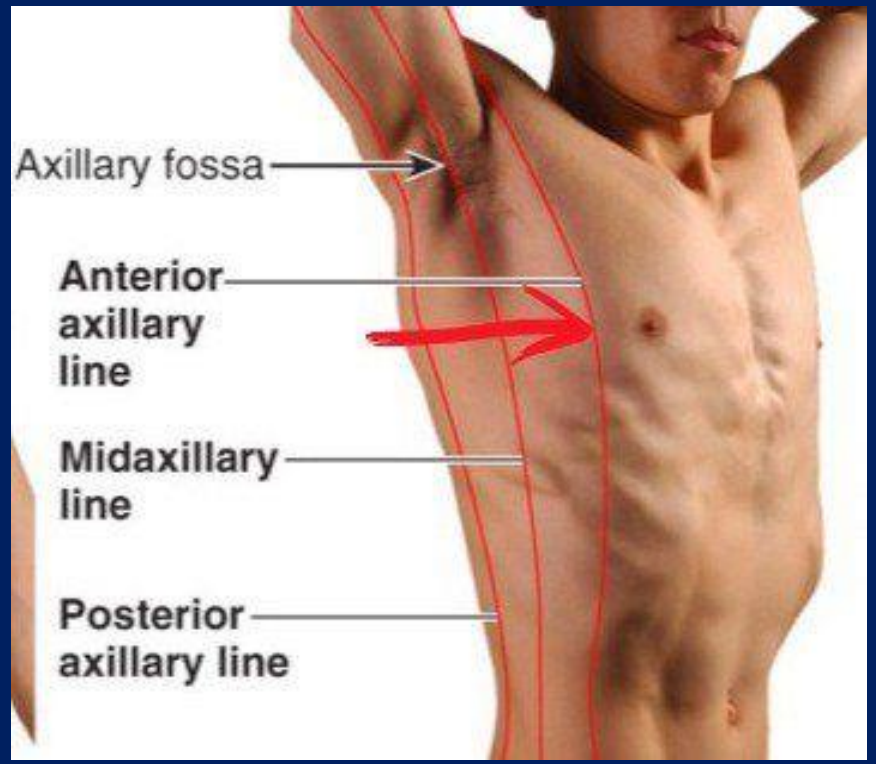
It's theoretical lines drawn through structures, used to describe anatomical location.

The ***Axillary Lines*** there are 3 lines include:

1.) The ***Anterior Axillary Line:*** It's the imaginary line that runs down from the point midway between the middle of the clavicle and the lateral end of the clavicle. The V_5 ECG lead is placed on the anterior axillary line, horizontally even with V_4.

2.) The ***Mid-axillary Line:*** It's a coronal line on the torso between the anterior and posterior axillary lines. It is a landmark used in thoracentesis and the V6 electrode of electrode ECG.

3.) The ***Posterior Axillary Line:*** is a coronal line on the posterior torso marked by the posterior axillary fold.




Thank You!