

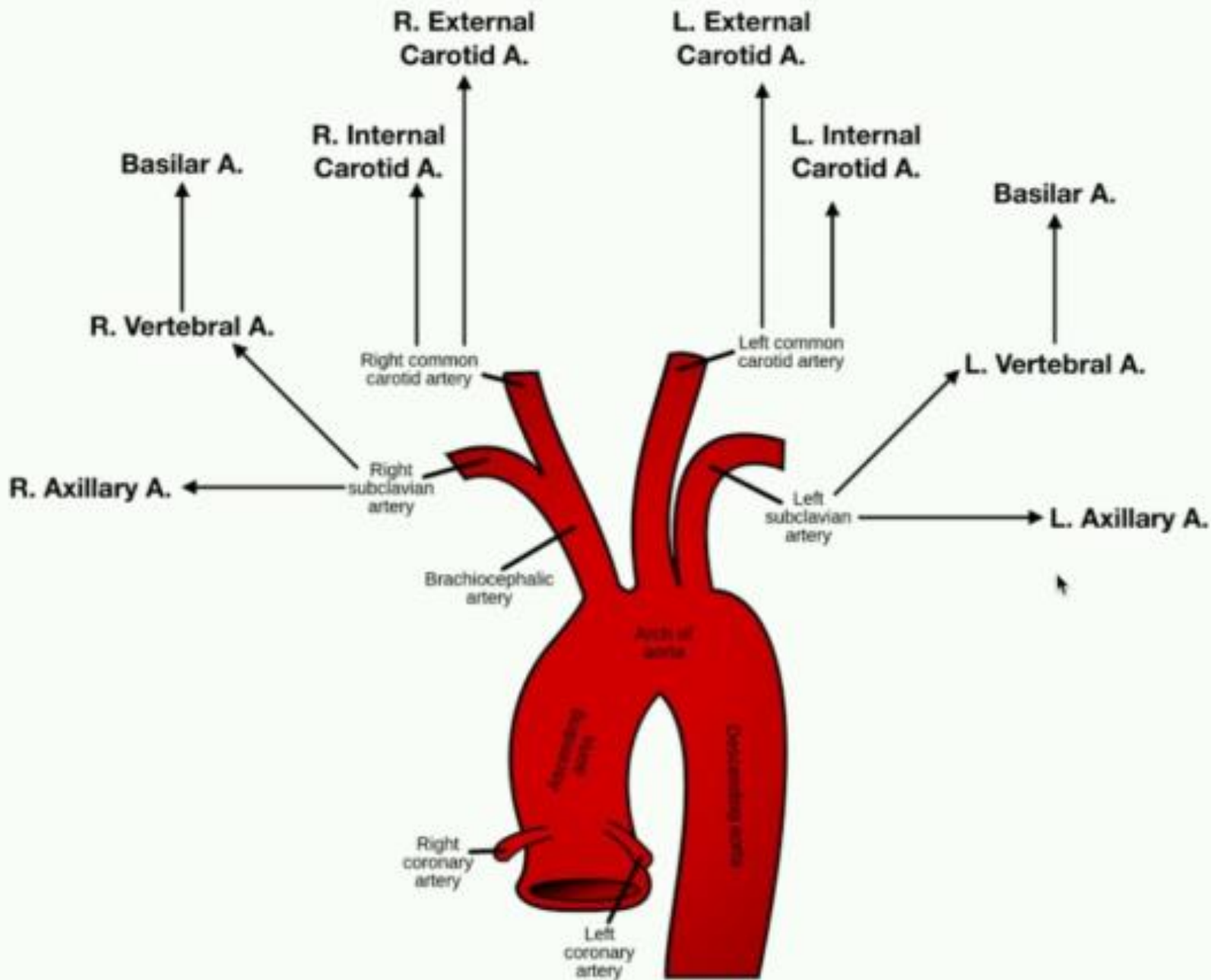
إذا سألت  
فسأل الله..  
وإذا استعنت  
فاستعن بالله

CARDIOVASCULAR MODULE 2024

Dr. AMAL AQEEL ALBTOOSH

The background of the slide is a stylized, abstract representation of anatomical structures in shades of red and white. The shapes are organic and flowing, resembling the branching patterns of blood vessels or the contours of muscles and organs. The text is centered in a bold, black, sans-serif font.

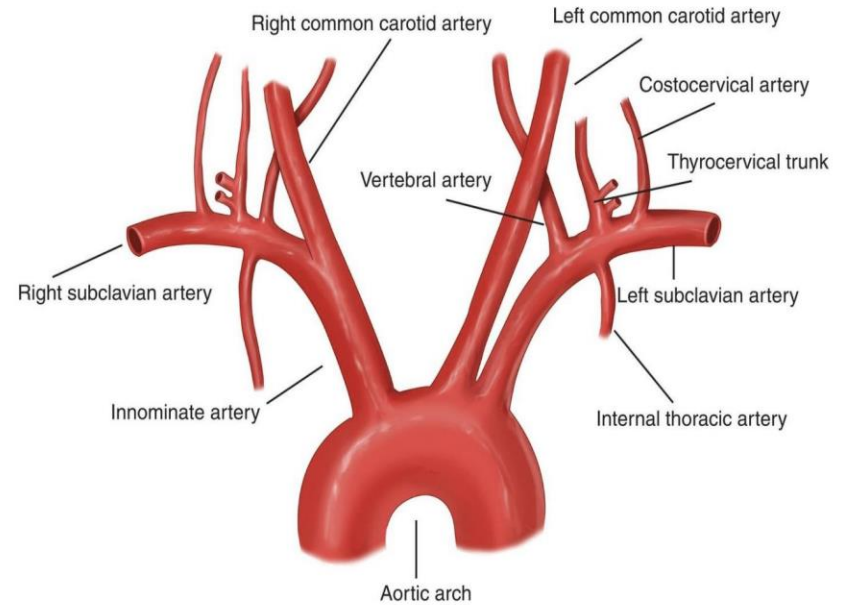
**MAJOR VESSELS OF  
UPPER LIMB  
THEIR SURFACE ANATOMY**

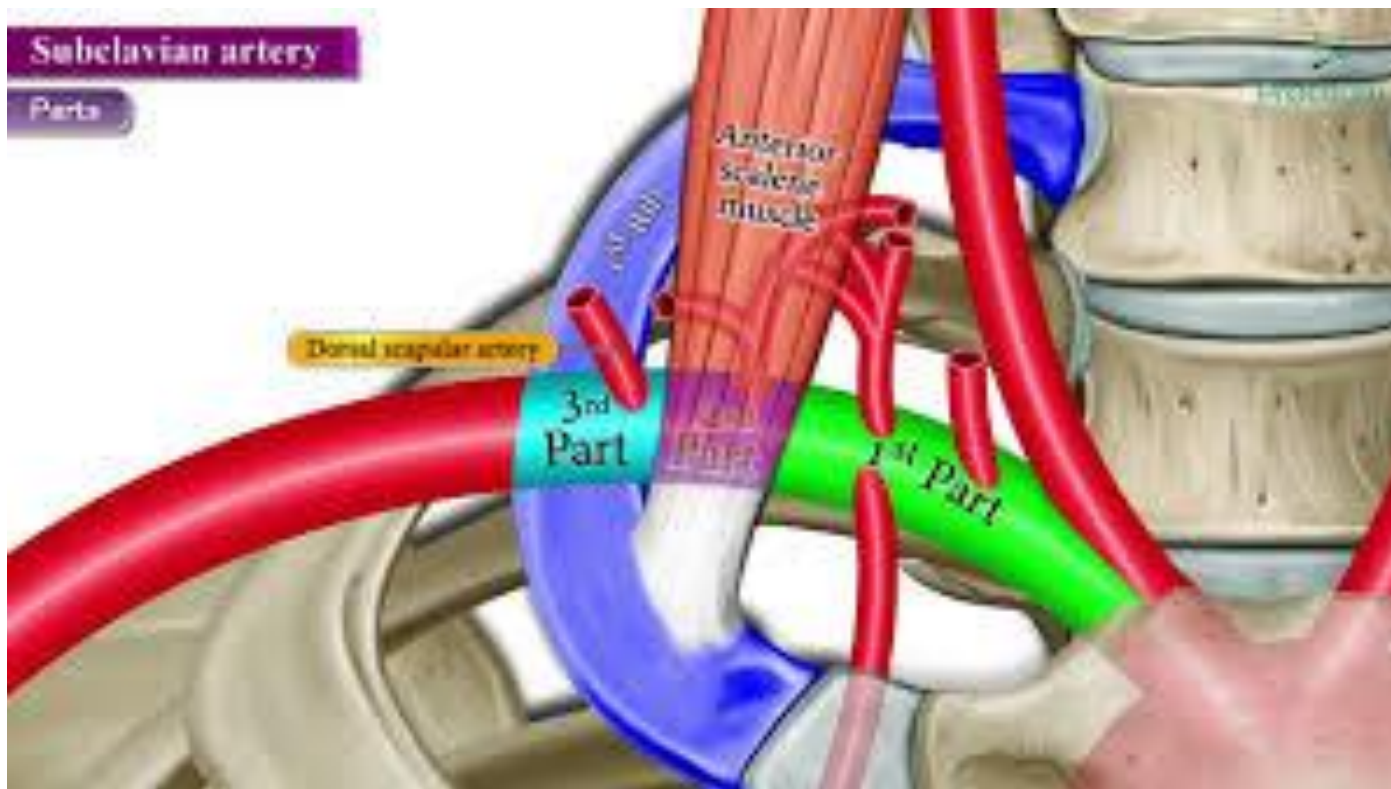


# Subclavian Artery

## START:

- ❖ The right subclavian artery arises from the brachiocephalic artery behind the right sternoclavicular joint
- ❖ The left artery arises from the arch of aorta behind the manubrium sterni. Both arteries enter the neck behind the sternoclavicular joints.





**Parts: The scalenus anterior muscle divides the artery into 3 parts;**

- ✓ **1<sup>st</sup> part (medial)**
- ✓ **2<sup>nd</sup> part (deep)**
- ✓ **3<sup>rd</sup> part (lateral) to the muscle.**

# Branches of subclavian artery

## 1 1st part: gives 3 branches

(1) Vertebral artery.

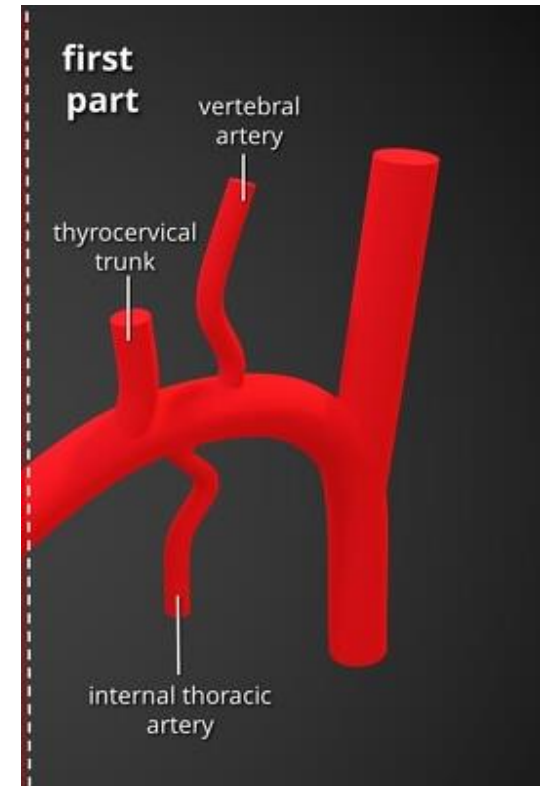
(2) Internal thoracic (mammary) artery.

(3) Thyrocervical trunk that give

A- Inferior thyroid artery

B- Suprascapular artery

C- transverse cervical artery

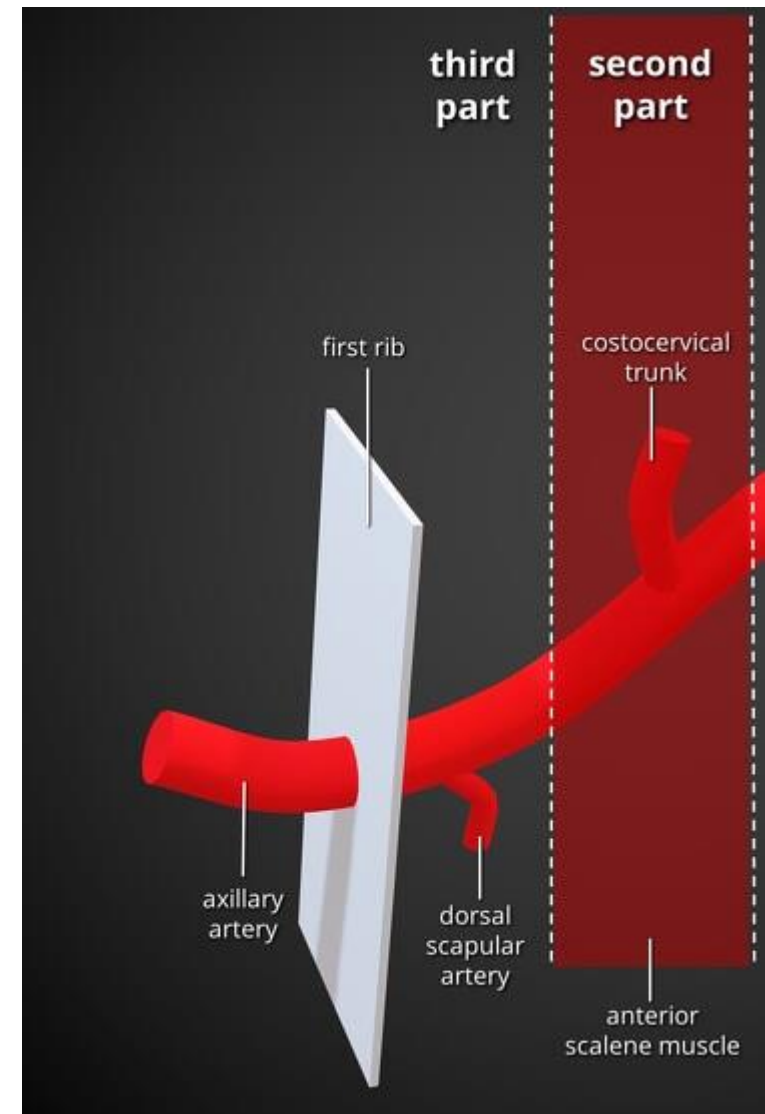


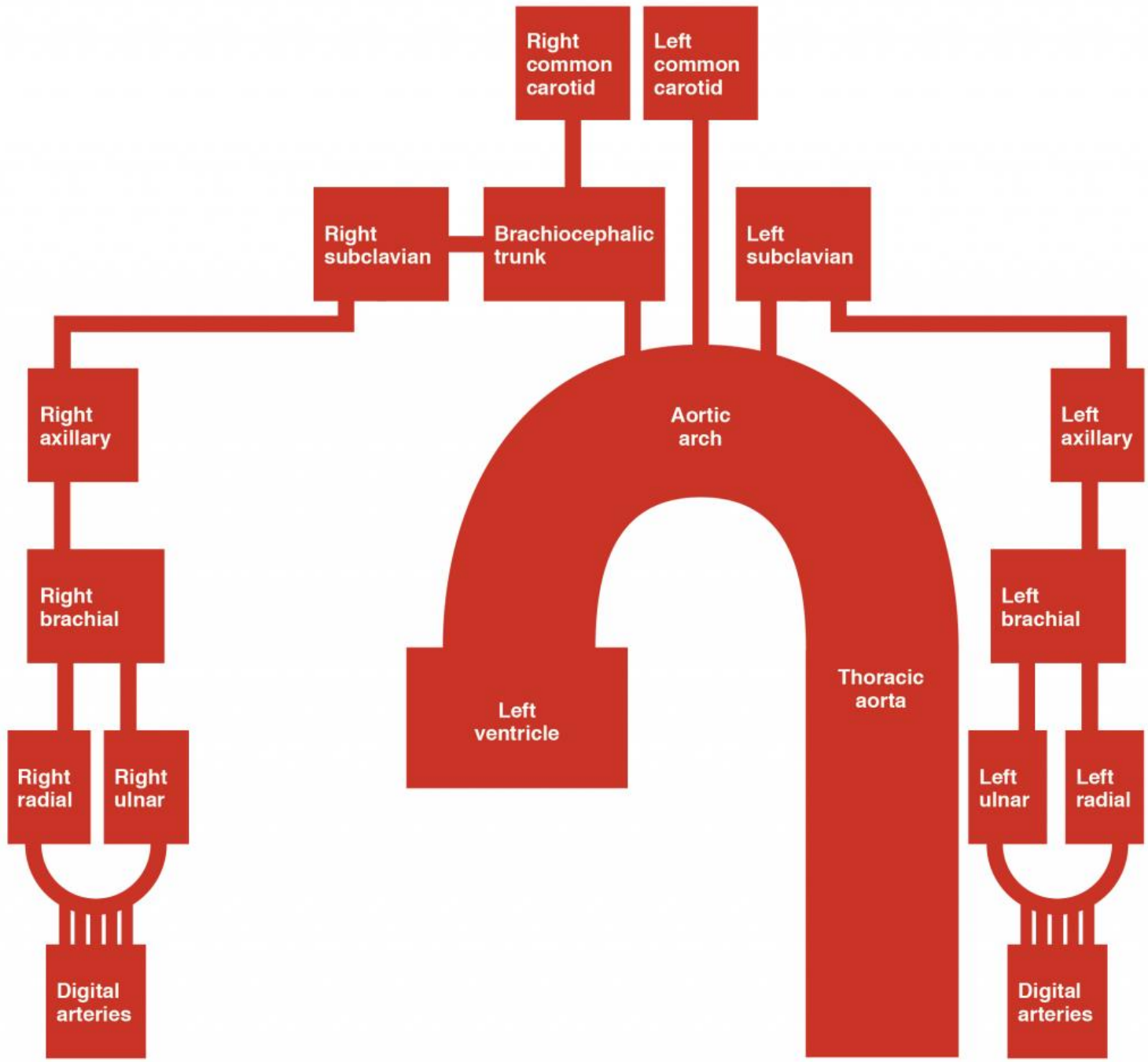
# Branches of subclavian artery

**2nd part: costocervical trunk:**

- 1. Superior intercostal artery:  
give the 1st and 2nd posterior  
Intercostal arteries.**
- 2. Deep cervical artery**

**3rd part: no branches, but  
occasionally gives dorsal  
scapular artery  
if deep branch of transverse cervical  
artery absent**







## Axillary Artery

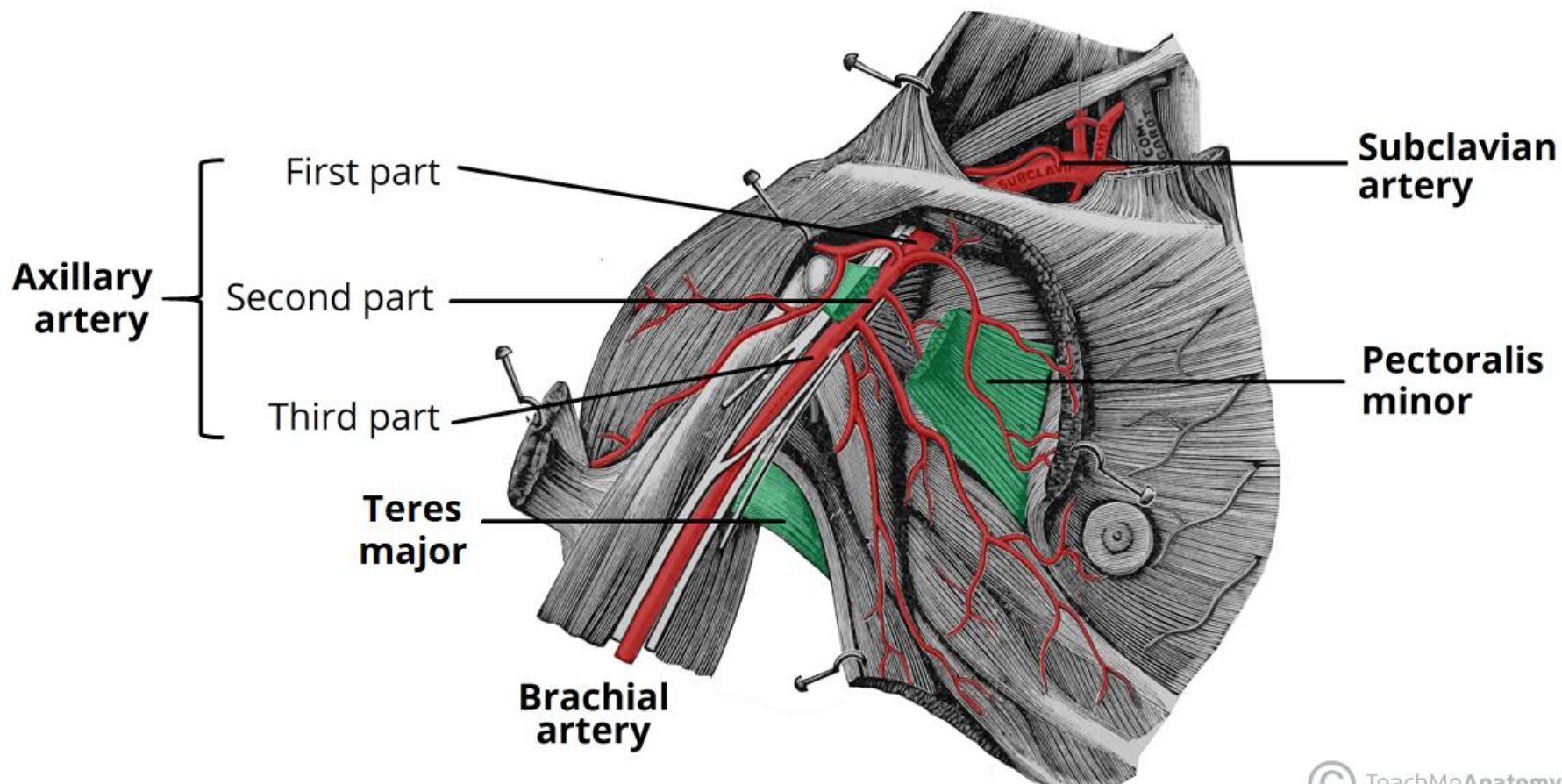
**START: AT** the lateral border of the 1st rib as a continuation of the subclavian.

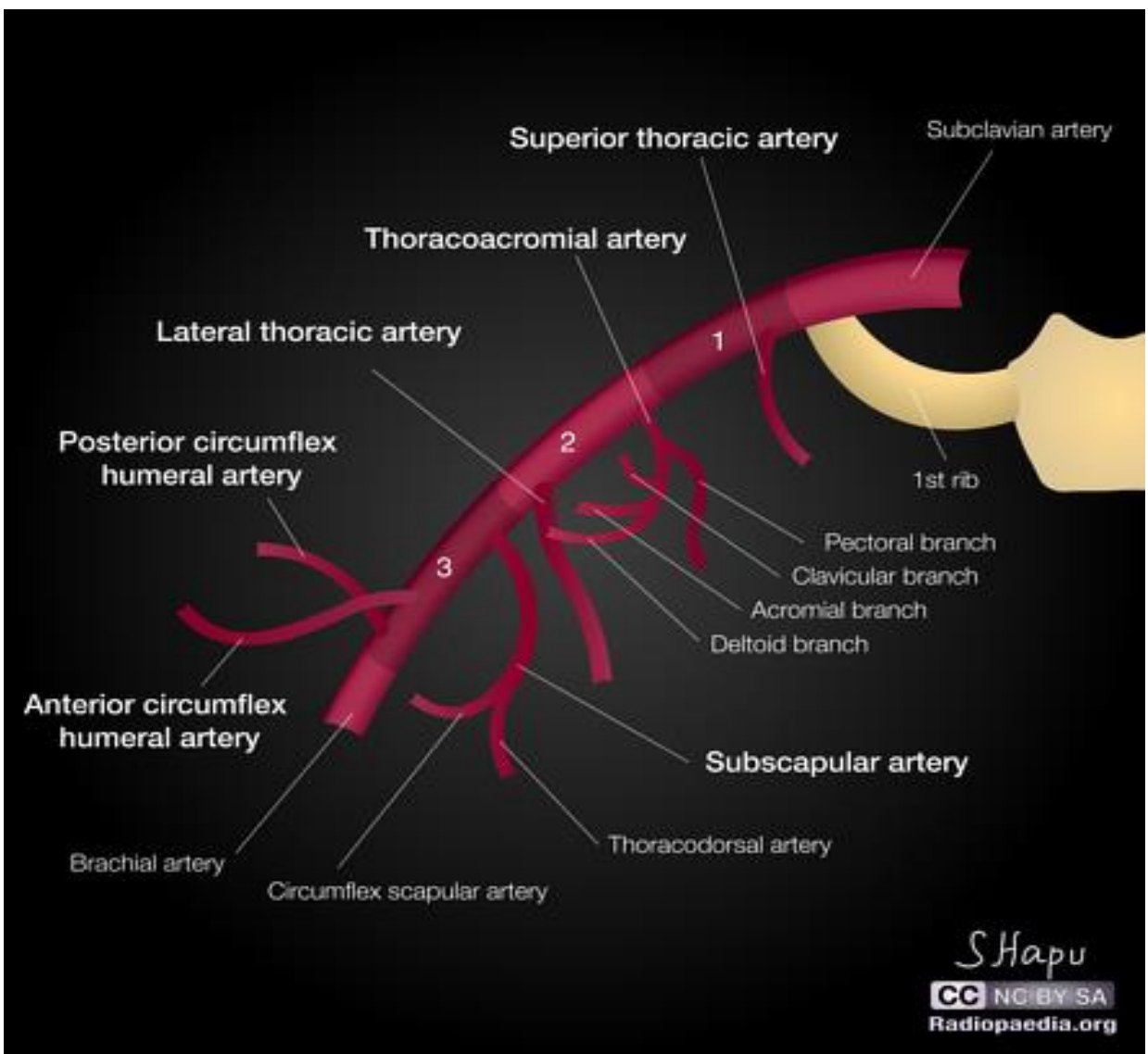
**END: AT** the lower border of the teres major muscle.

❖ It continues as the **BRACHIAL ARTERY**.

❖ The **PECTORALIS MINOR MUSCLE** crosses in front of the axillary artery

❖ IT divides it into three parts





# Third Part of the Axillary Artery

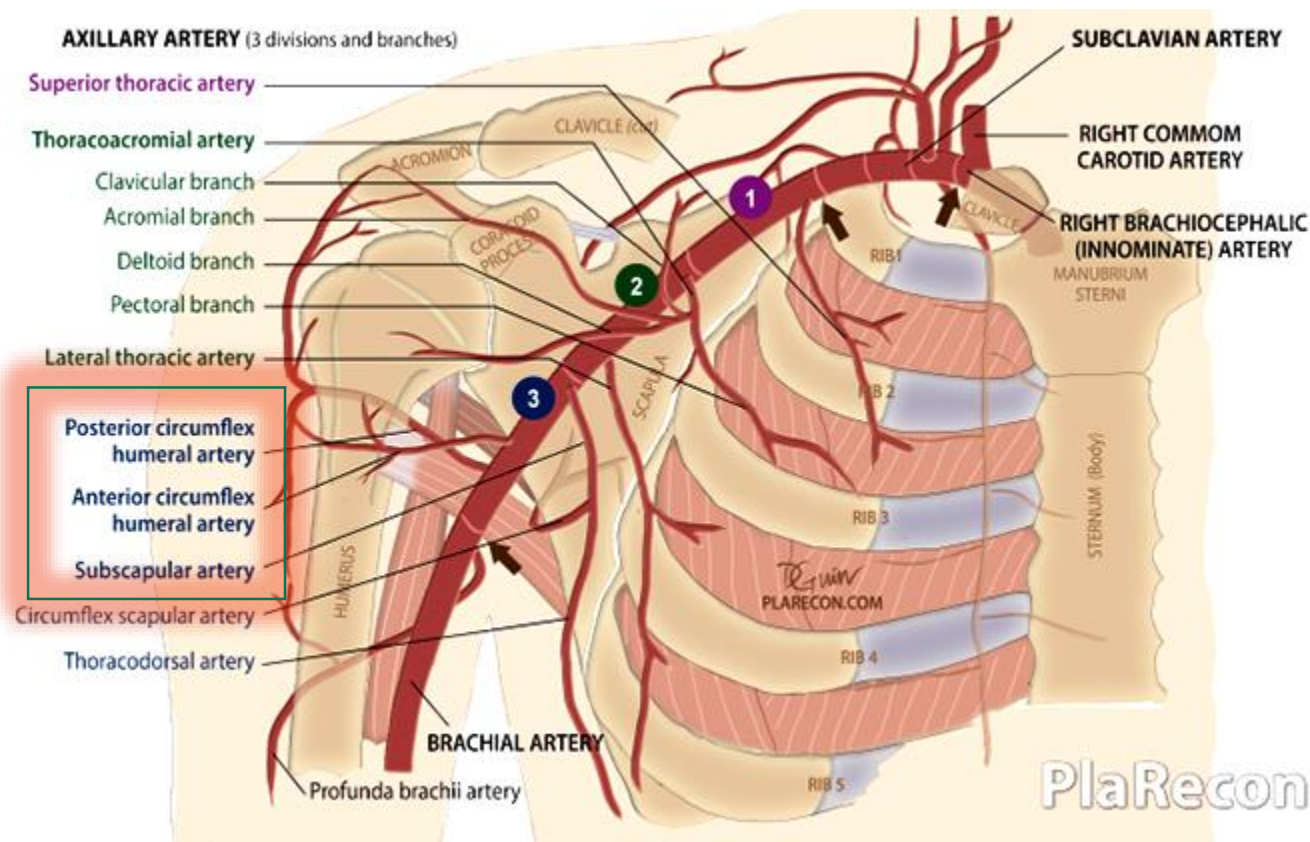
**START:** The lower border of the pectoralis minor

**END:** The lower border of the teres major

## Branches of the Axillary Artery

From the third part:

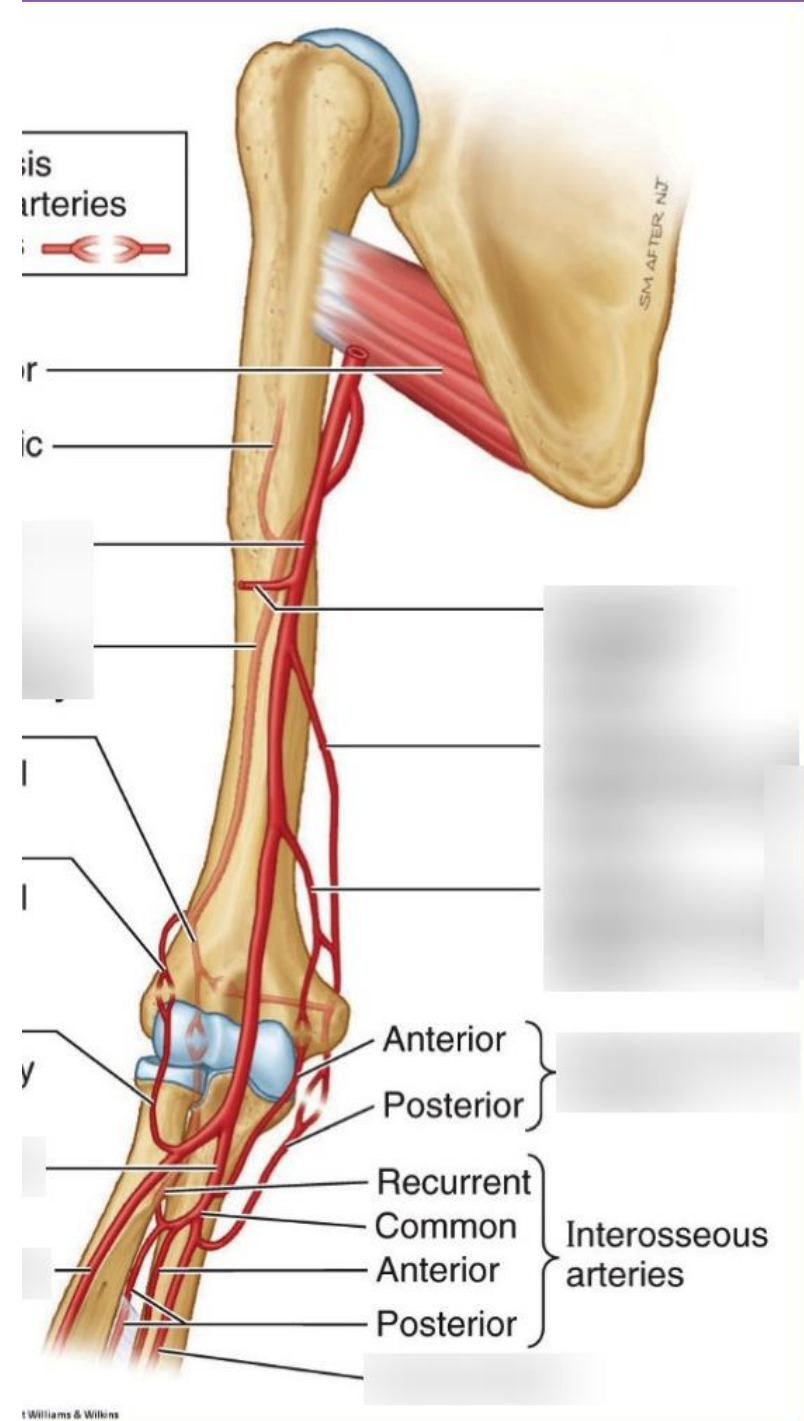
1. The **subscapular artery runs along the lower border of the subscapularis muscle.**
2. The **anterior and posterior circumflex humeral arteries**



## Brachial Artery

**START:** at the lower border of the teres major muscle as a continuation of the axillary artery.

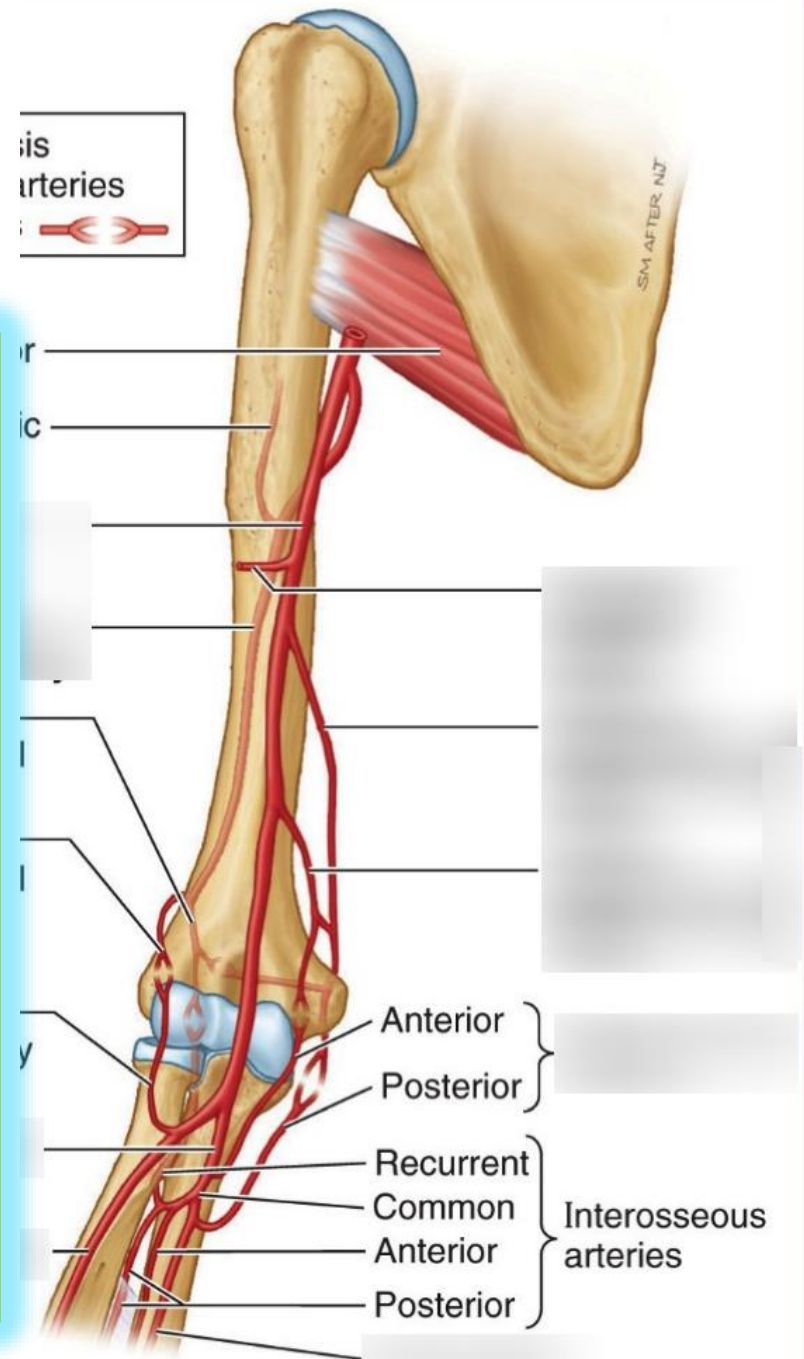
**END:** It terminates opposite the neck of the radius by dividing into the radial and ulnar arteries.



# Brachial Artery

## Branches

- ✓ **Muscular branches to the anterior compartment of the upper arm**
- ✓ **The nutrient artery to the humerus**
- ✓ **The profunda artery arises near the beginning of the brachial artery and follows the radial nerve into the spiral groove of the humerus.**
- ✓ **The superior ulnar collateral artery arises near the middle of the upper arm and follows the ulnar nerve**
- ✓ **The inferior ulnar collateral artery arises near the termination of the artery and takes part in the anastomosis around the elbow joint**



# Arteries of the Anterior Fascial Compartment Of the Forearm

## Ulnar Artery :

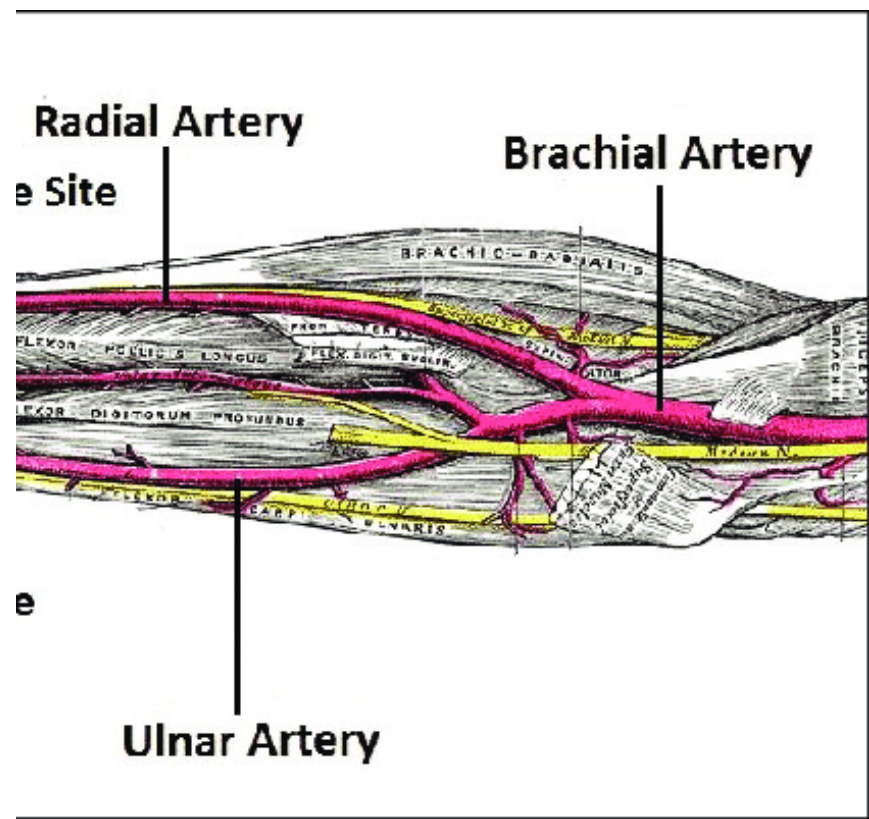
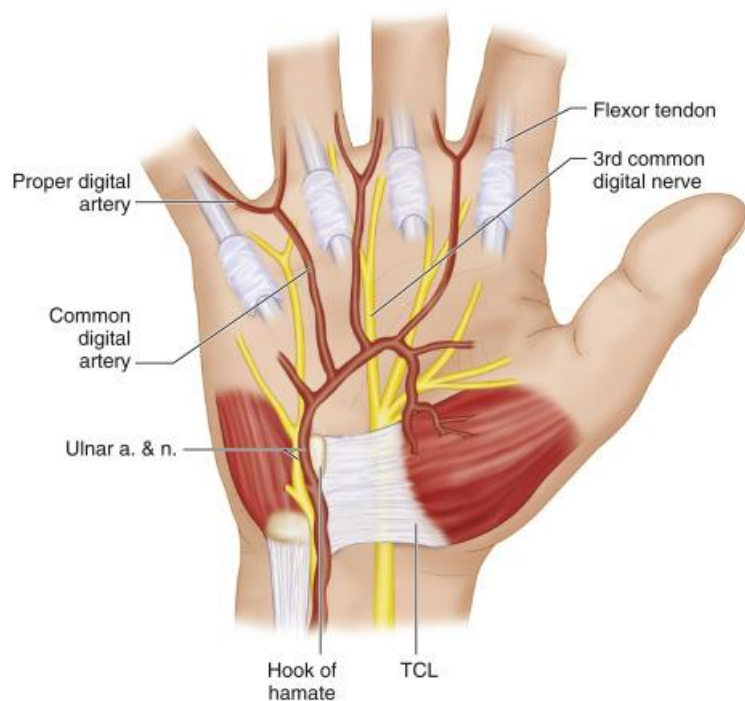
**START:** in the cubital fossa at the level of the neck of the radius

➤ **The ulnar artery is the larger of the two terminal** branches of the brachial artery

➤ It descends through the anterior compartment of the forearm

➤ enters the palm **in front of the flexor** retinaculum in company with the ulnar nerve

**END :** It ends by forming the **superficial palmar arch**.





## Branches OF ULNR ARTERY

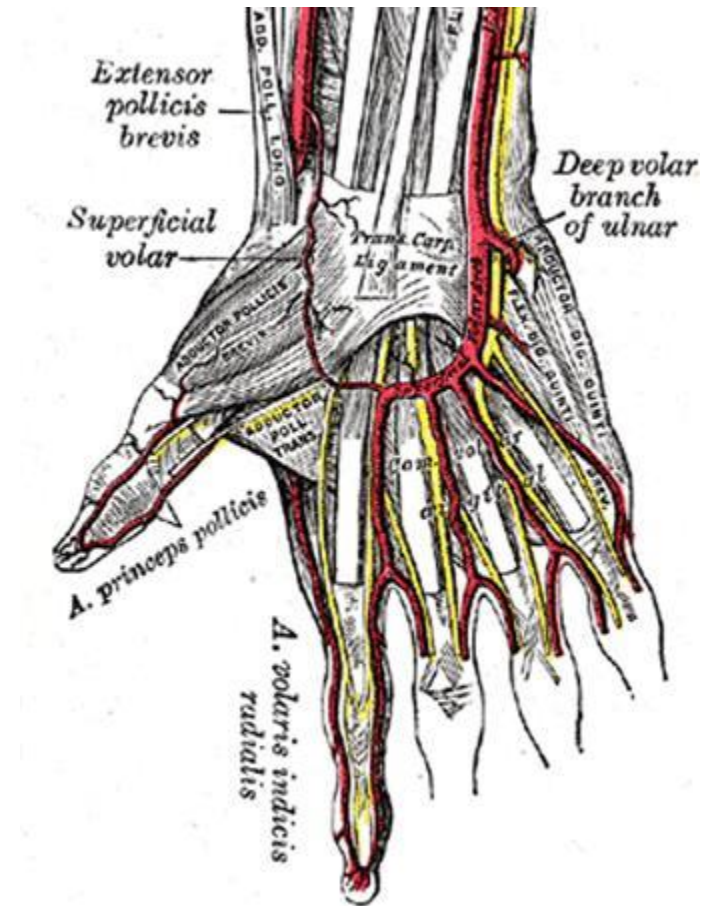
- Muscular branches to neighbouring muscles
  - Recurrent branches that take part in the arterial **anastomosis** around the elbow joint
  - Branches that take part in the arterial **anastomosis** around the wrist joint
  - The **common interosseous artery**, which arises from the upper part of the ulnar artery and after a brief course divides into the **anterior and posterior interosseous arteries**.
- The **interosseous arteries** are distributed
- ✓ to the muscles lying in front of and behind the interosseous membrane;
  - ✓ they provide nutrient arteries to the radius and ulna bone.





The superficial palmar arch is a direct continuation of the ulnar artery

- ❑ The arch is completed on the lateral side by one of the branches of the **radial artery**.
- ❑ The curve of the arch lies across the palm, level with the distal border of the fully extended thumb.
- ❑ OTHER BRANCHERS OF ULNAR ARTERY  
Four **digital arteries** arise from the **convexity of the arch** and pass to the fingers
- ❑ The **deep branch of the ulnar artery** arises **in front** joins the radial artery to complete the deep palmar arch

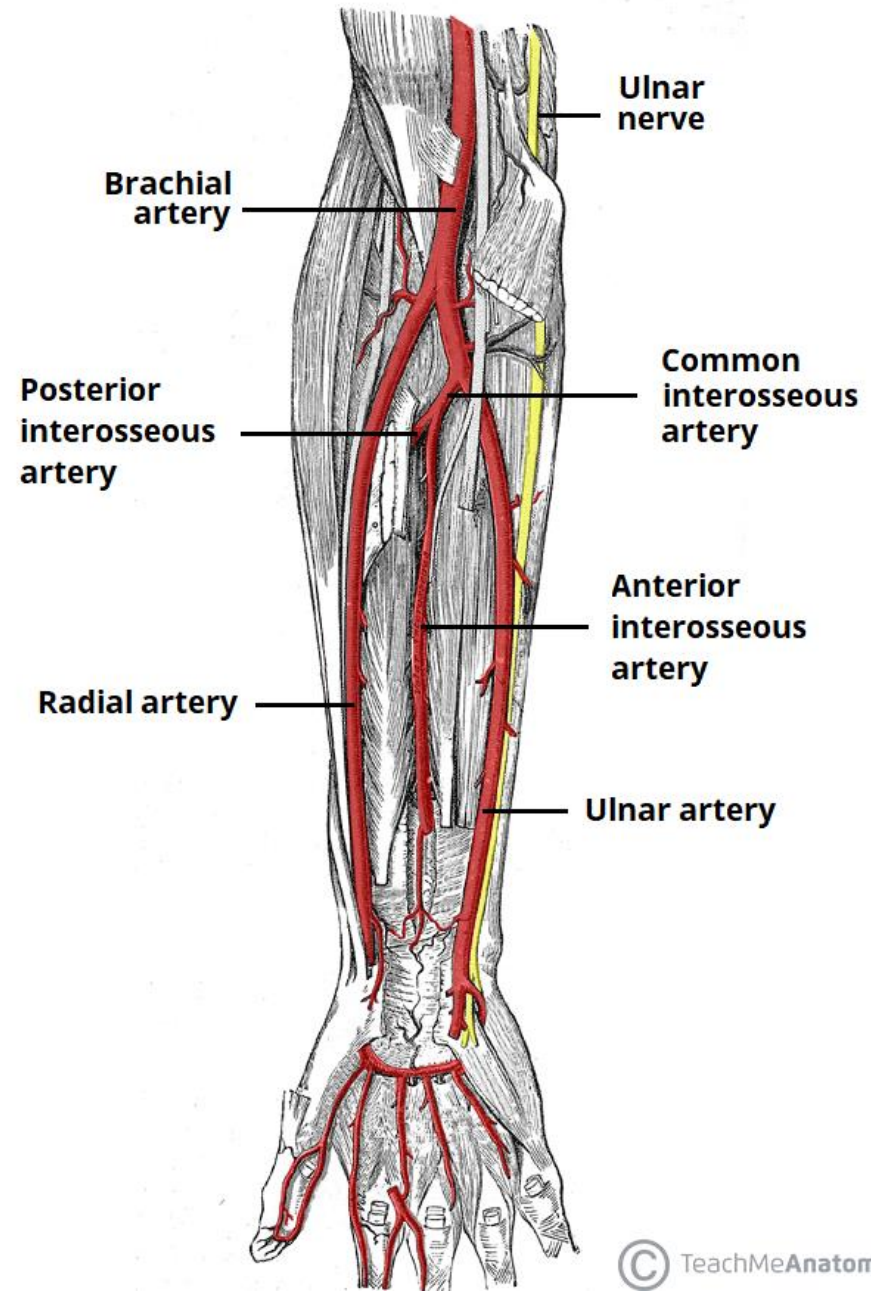


# Radial Artery

- ❑ The radial artery is the smaller of the terminal branches of the brachial artery.
- ❑ **START:** It begins in the Cubital fossa at the level of the neck of the radius
- ❑ **END:** The radial artery leaves the forearm by winding around the lateral aspect of the wrist to reach the posterior surface of the hand

## Branches in the Forearm

- ■ Muscular branches to neighbouring muscles
- ■ Recurrent branch, which takes part in the arterial **anastomosis** around the elbow joint
- ■ Superficial palmar branch, which arises just above the wrist enters the palm of the hand,
  - ❑ and frequently joins the ulnar artery to form the **superficial palmar arch**

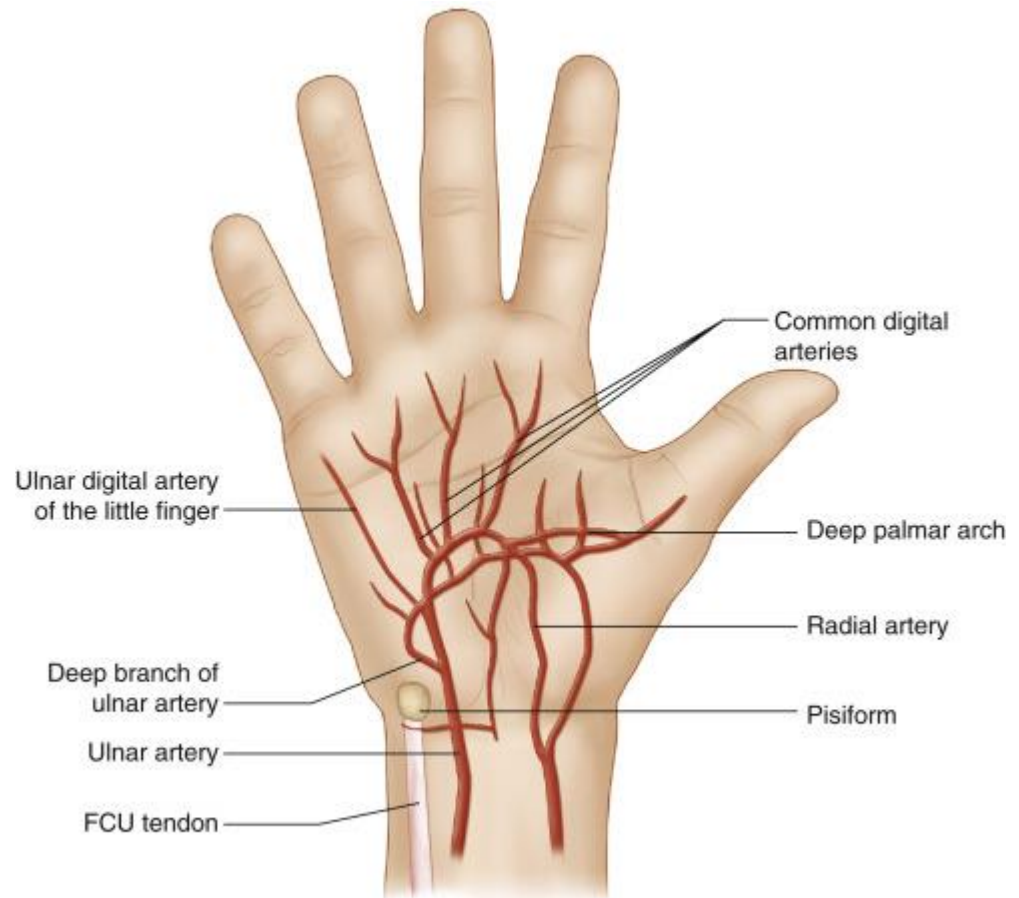


## Radial Artery

❑ The **deep palmar arch** is a **direct continuation of the radial artery**

❑ The arch is completed on the medial side by the deep branch of the ulnar artery.

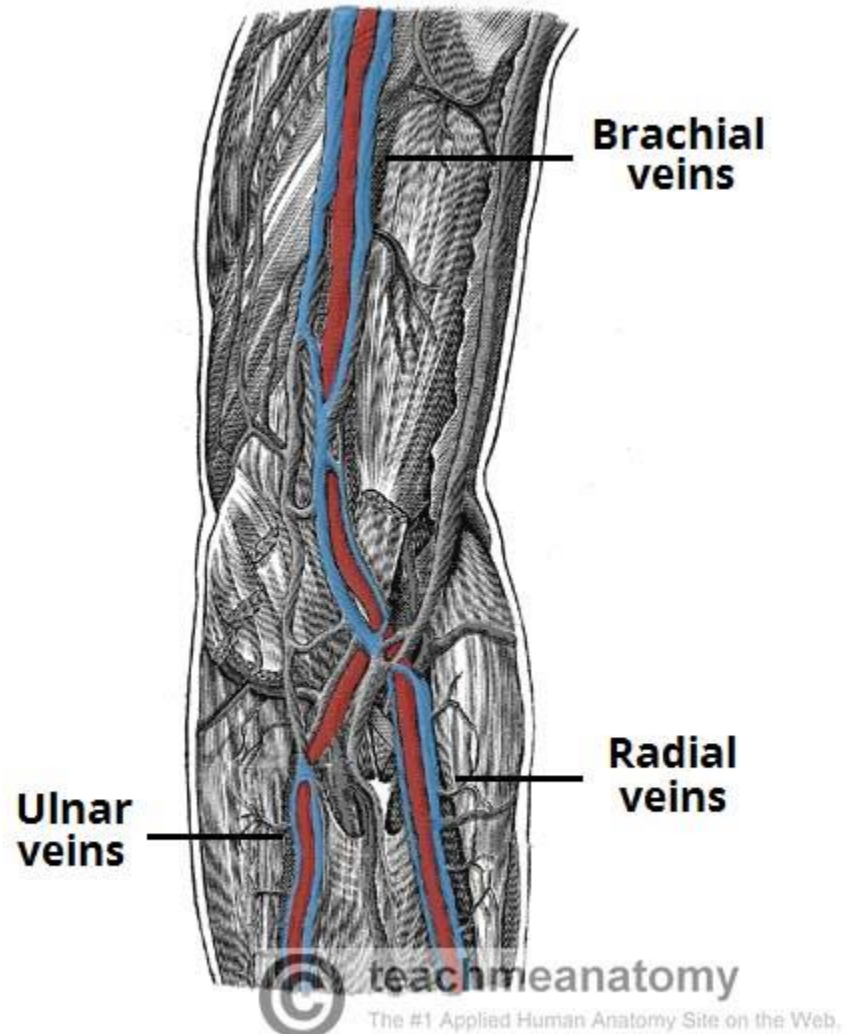
❑ The curve of the arch lies at a level with the proximal border of the extended thumb.



The radial artery mainly forms the deep palmar arch, while the ulnar artery mainly forms the superficial palmar arch

## UPPER LIMB'S Veins

- ❑ The veins of the upper limb can be divided into two groups: superficial and deep.
- ❑ The **DEEP VEINS** comprise the venae comitantes, which accompany all the large arteries, usually in pairs, and the axillary vein.
- ❑ Superficial and deep palmar arterial arches are accompanied by superficial and deep palmar venous arches, receiving corresponding tributaries.



## SUPERFICIAL VEIN

❑ The network of superficial veins can be seen on the dorsum of the hand

❑ The network drains upward into

The:

➤ LATERAL CEPHALIC VEIN

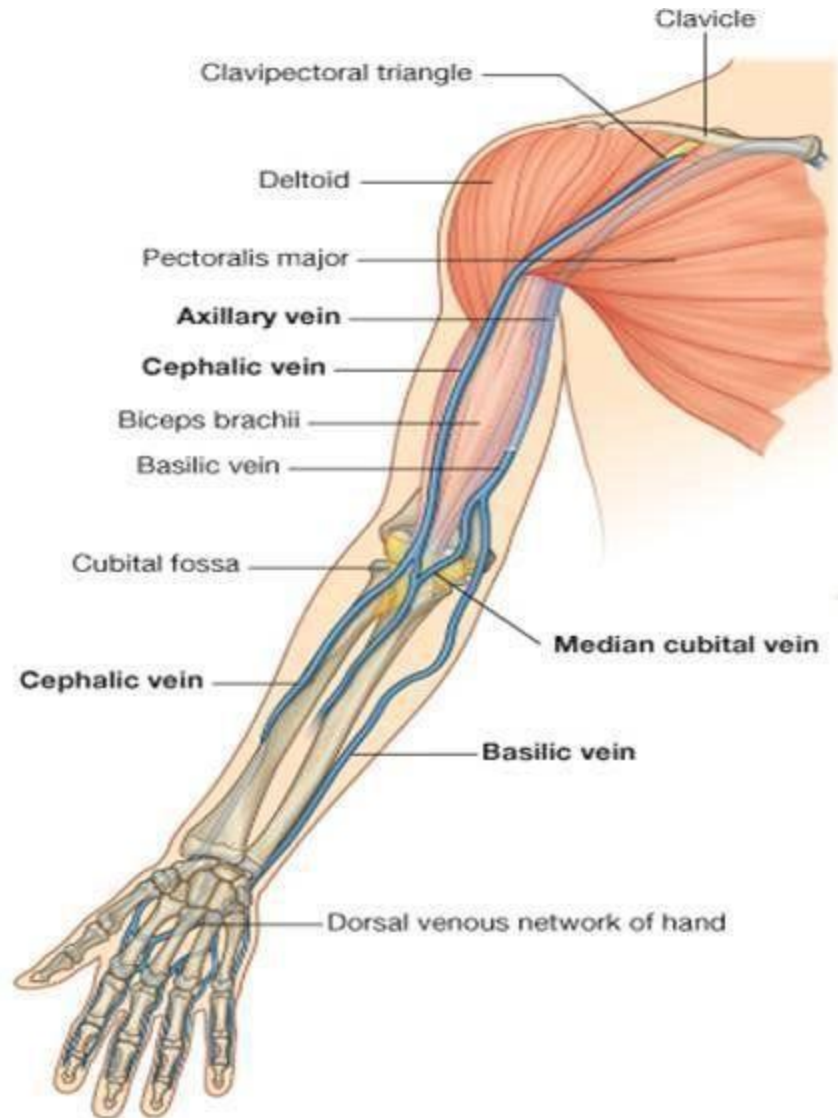
➤ and a MEDIAL BASILIC VEIN.

❑ The **cephalic vein crosses the anatomic snuffbox**

❑ It ascends into the arm and runs along the lateral border of the biceps.

❑ It ends by piercing the deep fascia in the **deltopectoral triangle** and enters the **axillary vein**.

Repeatedly clench and relax the fist. By this means, the veins become distended with blood.



## SUPERFICIAL VEIN

- The **basilic vein** can be traced from the **dorsum of the hand** around the **medial side** of the forearm
- IT reaches the anterior aspect just below the elbow
- It pierces the deep fascia at about the middle of the arm.

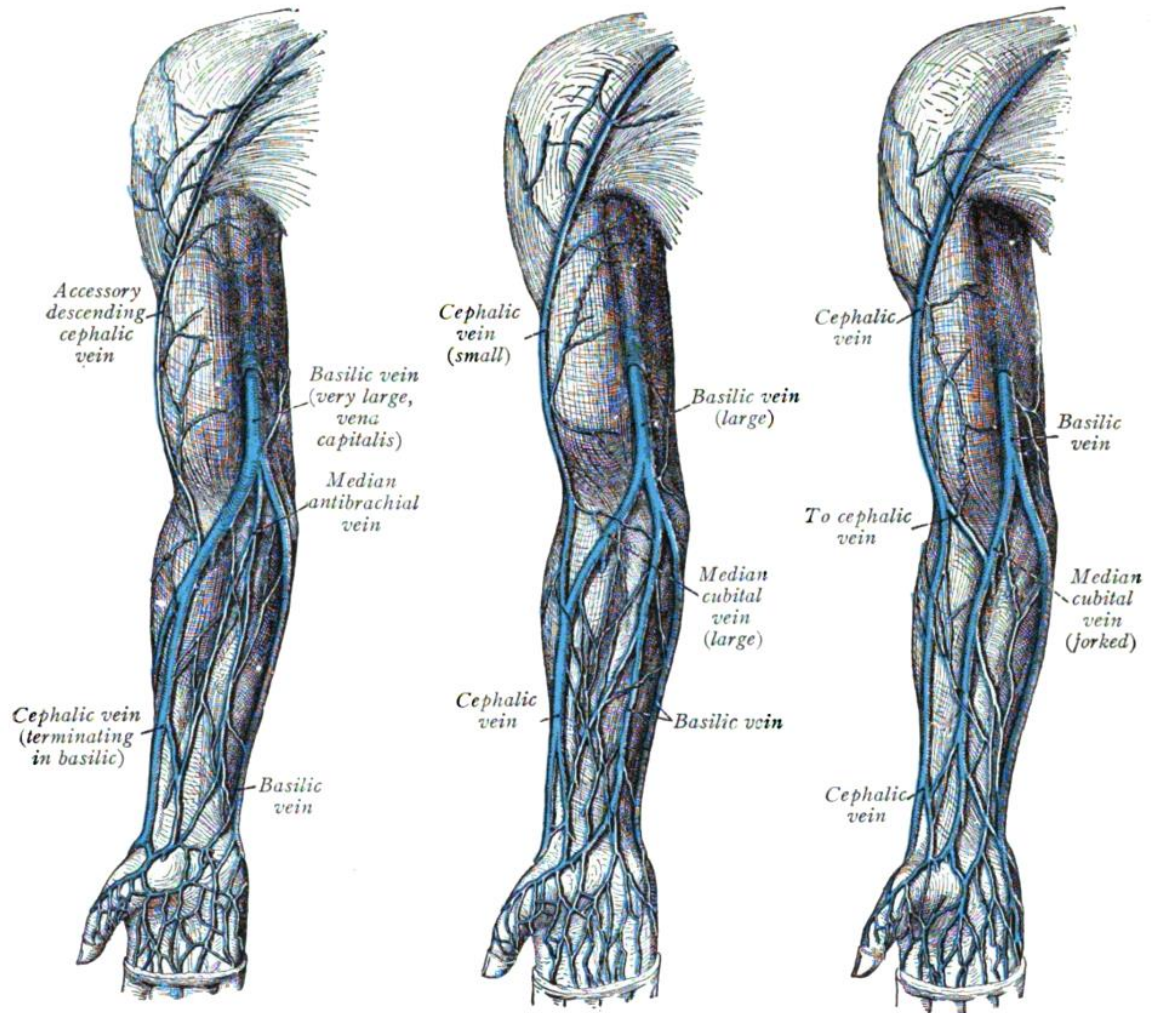
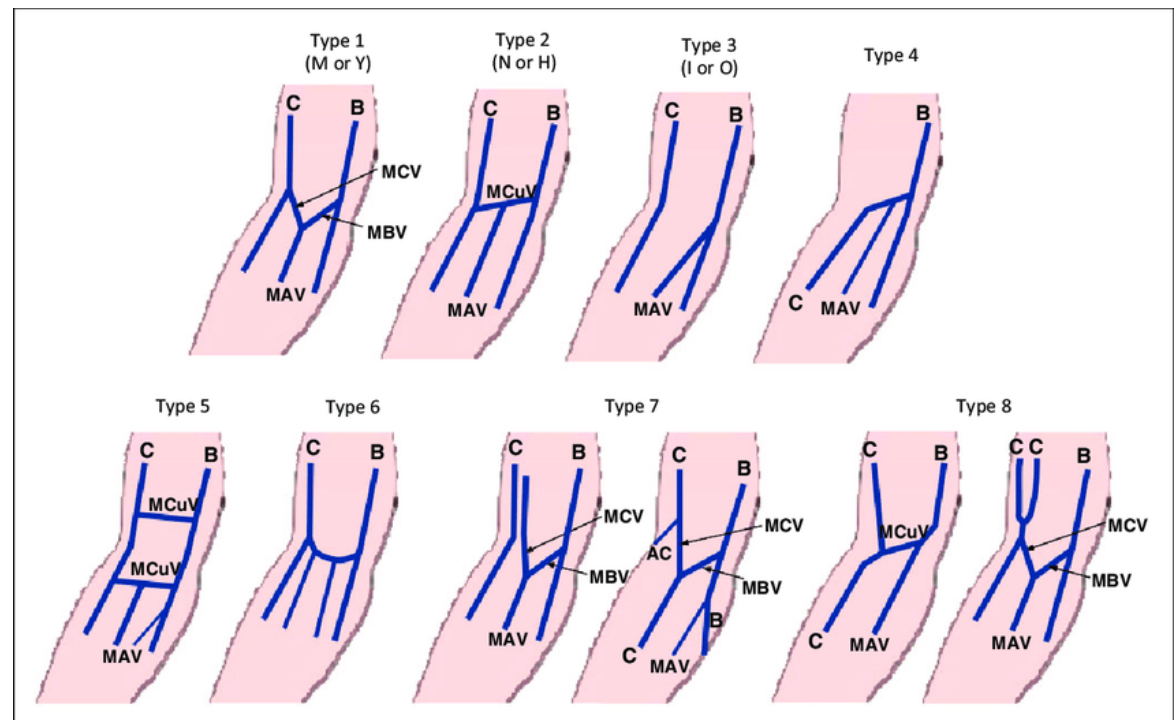
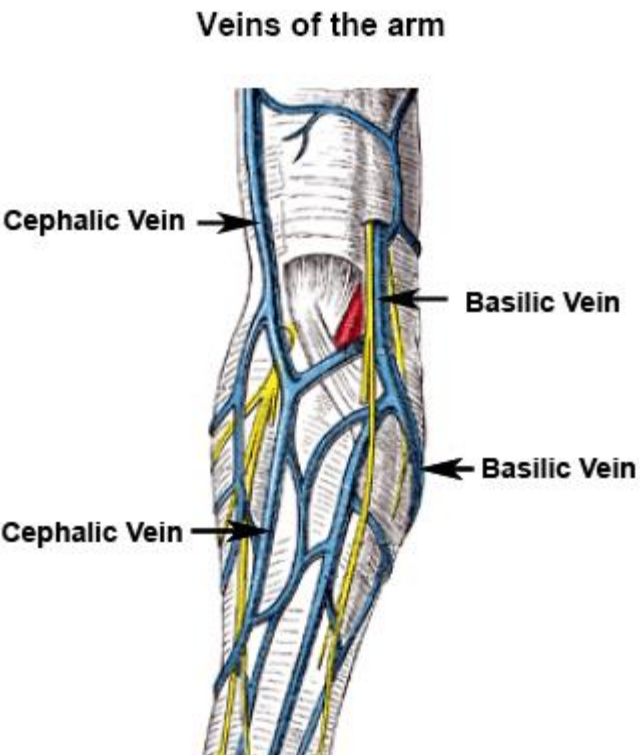


FIG. 597.—The most frequent variations in the veins of the forearm (schematic).

## THE MEDIAN CUBITAL VEIN

- ❑ The **median Cubital vein (or median cephalic and median basilic veins)** **LINKS** the cephalic and basilic veins in the cubital fossa
- ❑ (a branch of the cephalic vein in the Cubital fossa, runs upward and medially and joins the basilic vein.
- ❑ In the Cubital fossa, the median Cubital vein ***crosses in front*** of the brachial artery and the median nerve, but it is ***separated from*** them by the bicipital aponeurosis.



تَعَلَّمَ الإِتْمَامَ..

أَنْ تُتِمَّ مَا بَدَأْتَ، وَتُنْجِزَ مَا خَطَّوْتَ، وَتُكْمَلَ مَا خَطَّطْتَ لَهُ! لَا تَكُنْ مَبْتَوْرًا، مَنقُوصًا، أَشْتَاتًا هُنَا وَهَنَا، فِي الطَّرِيقِ سَتَخْتَلِفُ الرُّؤْيُ، سَتَتَغَيَّرُ الأَحْدَاثُ، قَدْ تَتْرَكَ أَمْرًا وَتَأْخُذُ آخَرَ، لَا تَنْسَ؛ بَعْضُ التَّرِكِ إِتْمَامٌ، لَكِنْ أَدْرِكُ مَتَى تَتْرَكَ، وَمَتَى تُمَسِّكُ، مَتَى تُكْمَلُ وَمَتَى تَقْفُ.

- قِصِي عَاصِمِ العَسِيلِي