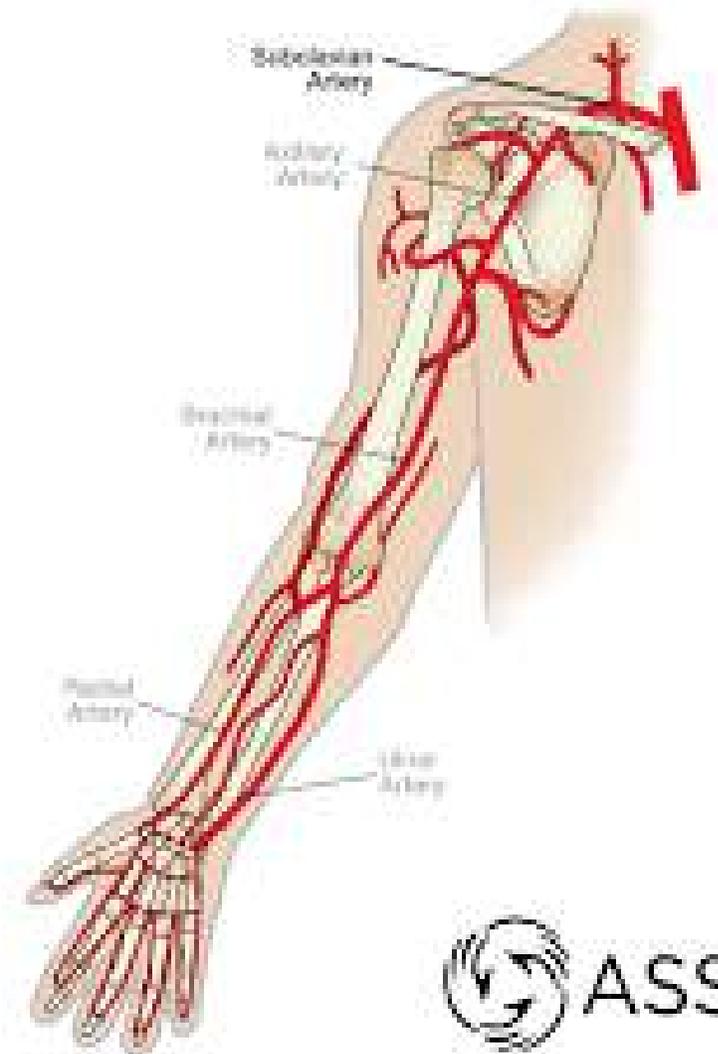


GREAT BLOOD VESSELS of the upper limb

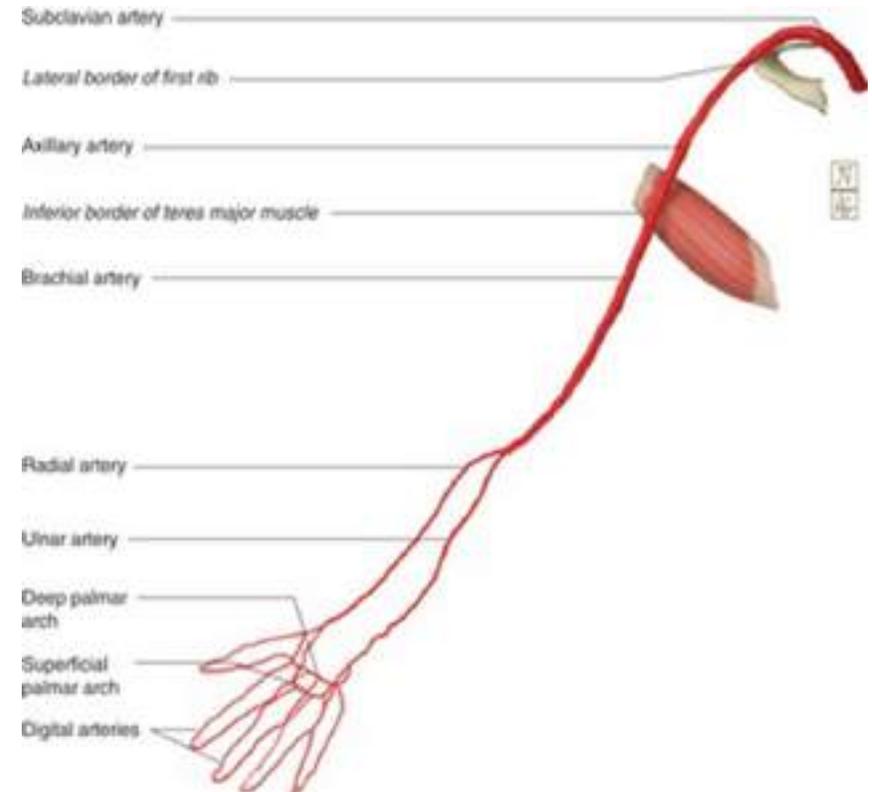
ARTERIES OVERVIEW

- ❖ The main arterial stem of the upper limb passes through the root of the neck, the axilla and the arm before dividing into two in the forearm.
- Subclavian artery
- Axillary artery
- Brachial artery
- Radial artery
- Ulnar artery



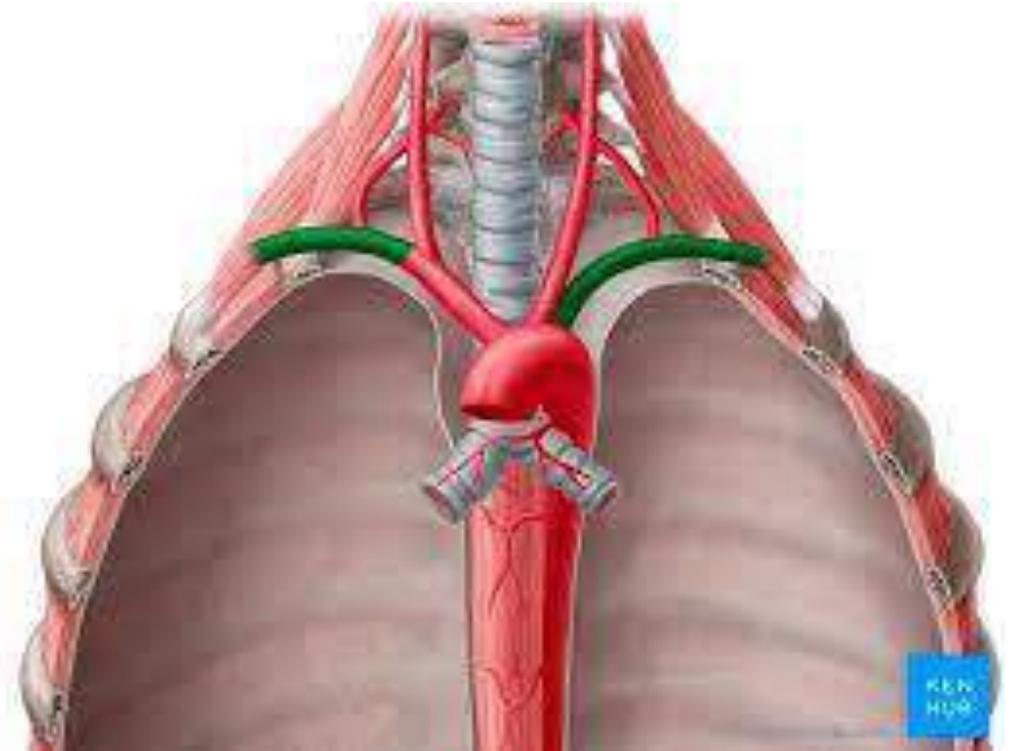
ARTERIES OVERVIEW

- ❖ THE ARTERY changes its name in each of the regions as it crosses particular bony or muscular landmarks
- ❖ The subclavian artery becomes the axillary artery after crossing the 1st rib
- ❖ The axillary artery becomes the brachial artery at the distal border of the tendon of teres major. The brachial artery divides just distal to the elbow into the radial and ulnar arteries.



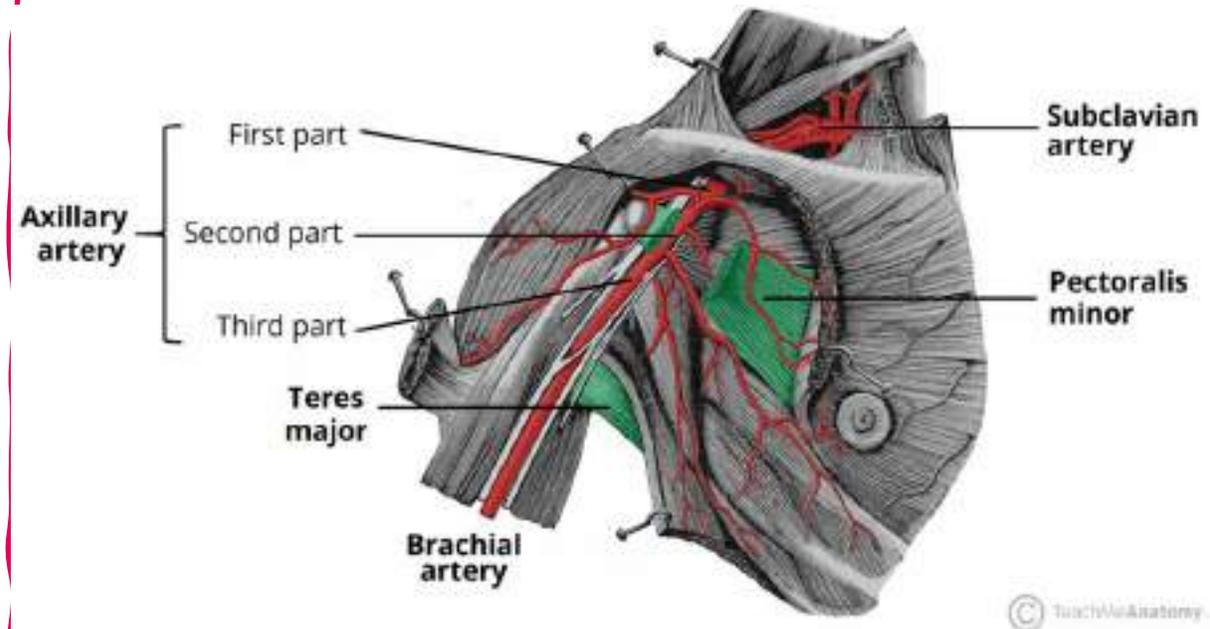
Subclavian Artery

- ❖ The arterial supply to the upper limb begins as the **subclavian artery**.
RIGHT : from the brachiocephalic trunk.
LEFT: directly from the arch of aorta.
- ❖ The subclavian artery travels laterally towards the axilla.
- ❖ At the lateral border of the first rib, the subclavian artery enters the axilla – and is renamed the **axillary artery**.



AXILLARY ARTERY

- ❖ **BEGINS:** at the lateral border of the 1st rib as a continuation of the subclavian
- ❖ Is enclosed in the axillary sheath
- ❖ The artery can be divided into three parts based on its position relative to the **PECTORALIS MINOR** muscle:
 - **First part** – proximal to pectoralis minor
 - **Second part** – posterior to pectoralis minor
 - **Third part** – distal to pectoralis minor
- ❖ **ENDS:** at the lower border of the **TERES MAJOR** muscle.



Branches of the Axillary Artery

From the first part (1 branch):

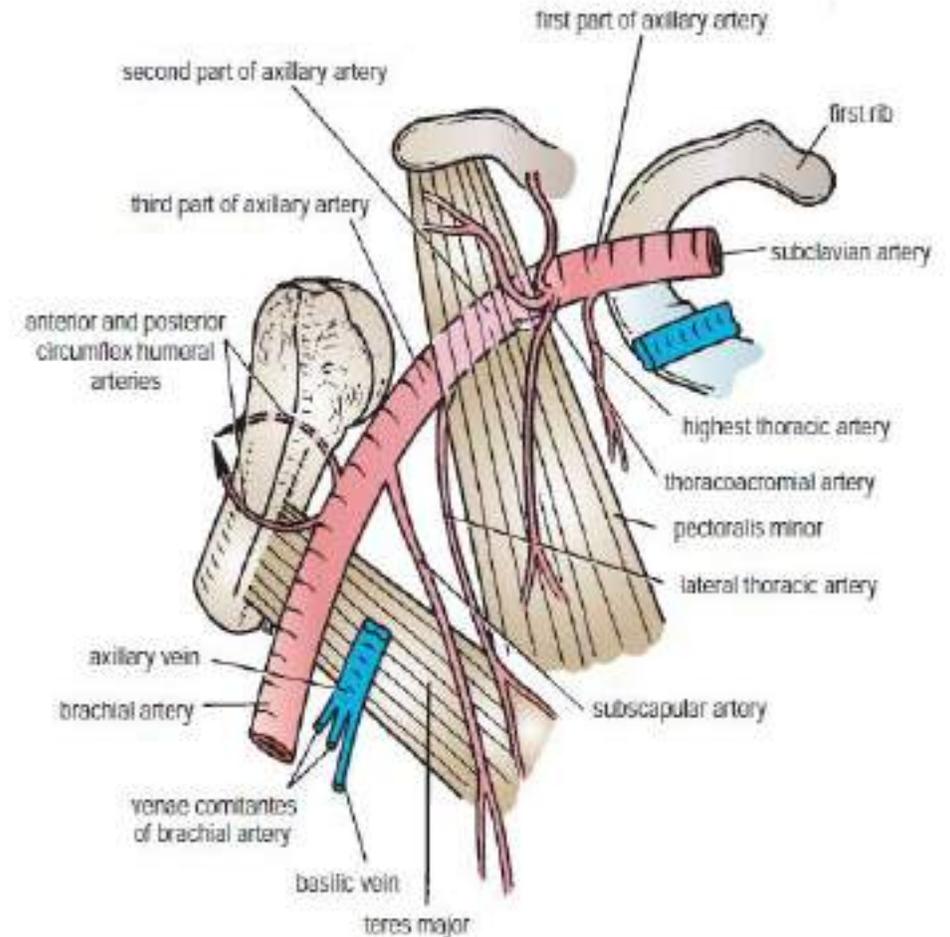
- The **superior (highest) thoracic artery**

From the second part (2 branches):

- The **thoracoacromial artery**
- The **lateral thoracic artery**

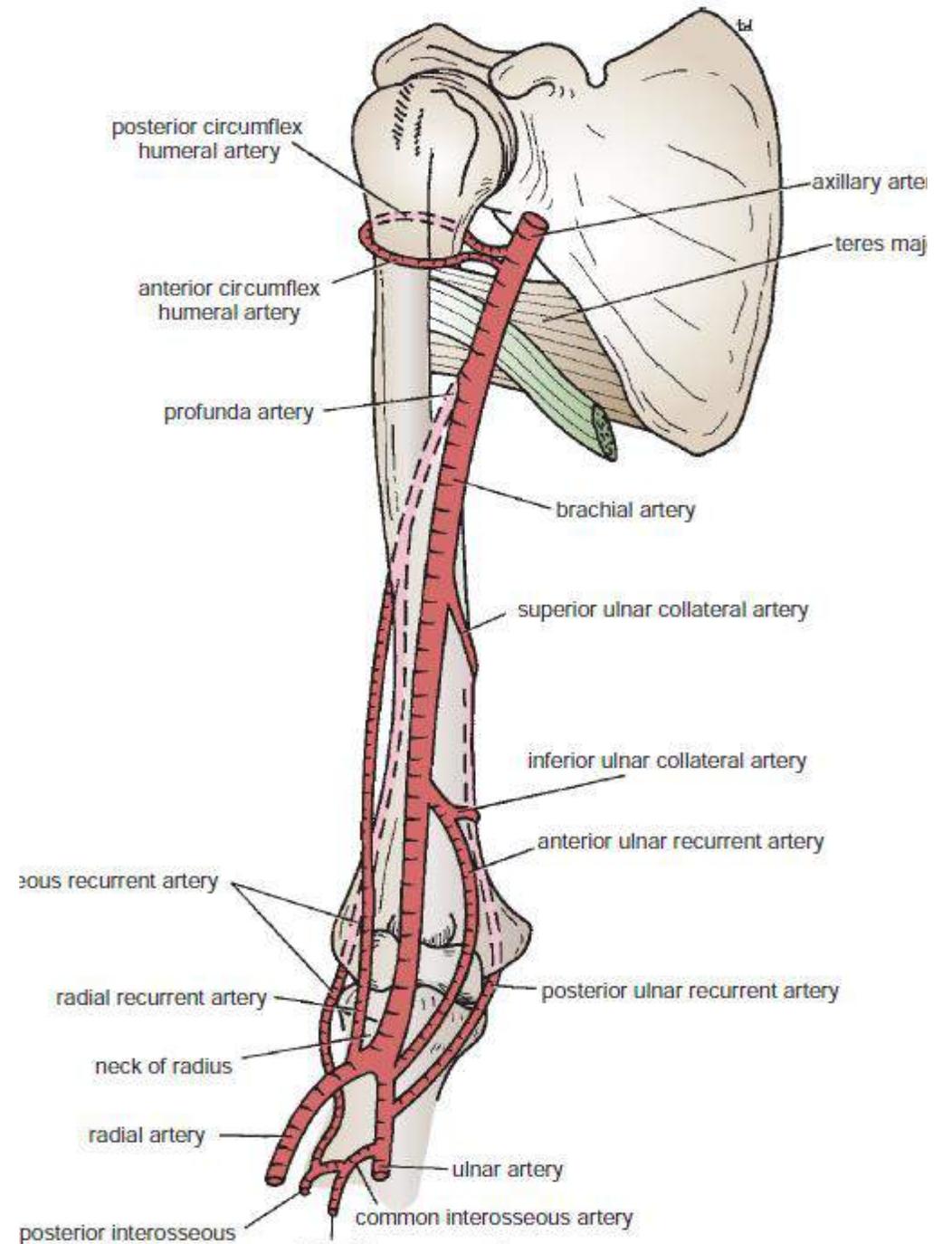
From the third part (3 branches):

- The **subscapular artery**
- The **anterior and posterior circumflex humeral arteries**



Brachial artery

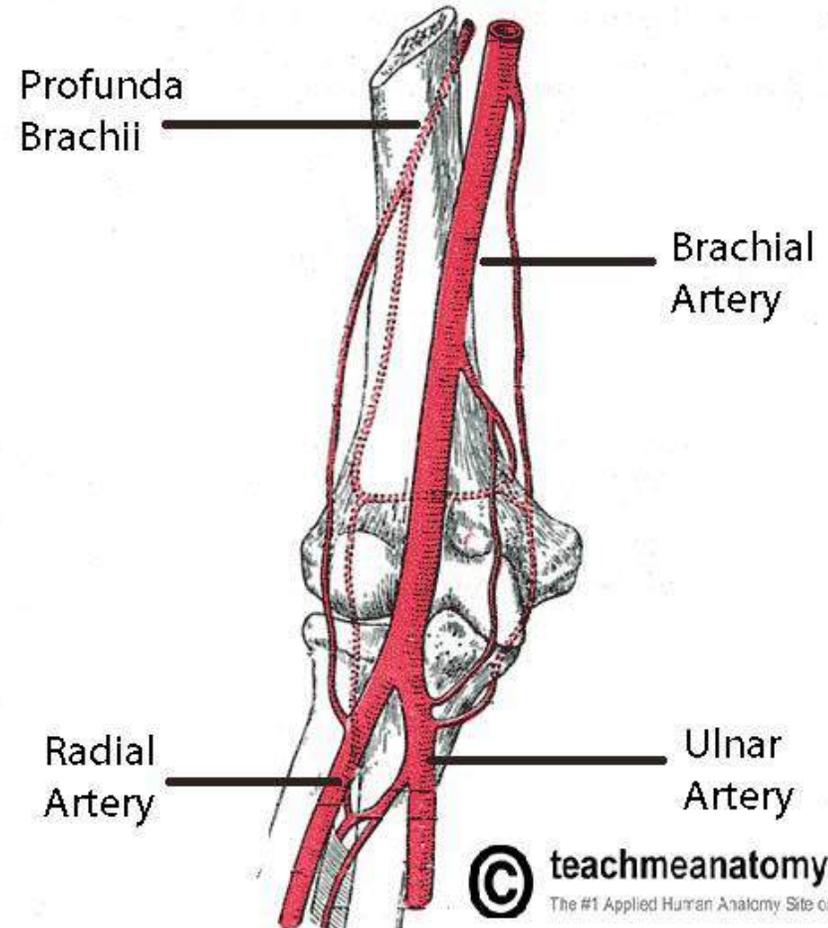
- ❖ **Begins**: at the distal border of the tendon of teres major
- ❖ **Ends**: about 1 cm distal to the elbow joint
- ❖ terminates by dividing into radial and ulnar arteries.
- ❖ **Brachial artery is the site of auscultation of blood pressure**



Brachial artery

Branches :

- Profunda brachii artery
- Nutrient artery of humerus
- Superior ulnar collateral artery
- Middle ulnar collateral artery (if present)
- Inferior ulnar collateral artery
- Muscular branches



Radial artery

- ❖ **BEGINS:** from the brachial artery near the neck of the radius
- ❖ **Course:**
 - passes deep to brachioradialis
 - At the wrist it passes in the anatomical Radial (snuff) box
- ❖ **ENDS:** in the hand by anastomosis with the **DEEP branch** of the ulnar artery, completing the **deep palmar arch**

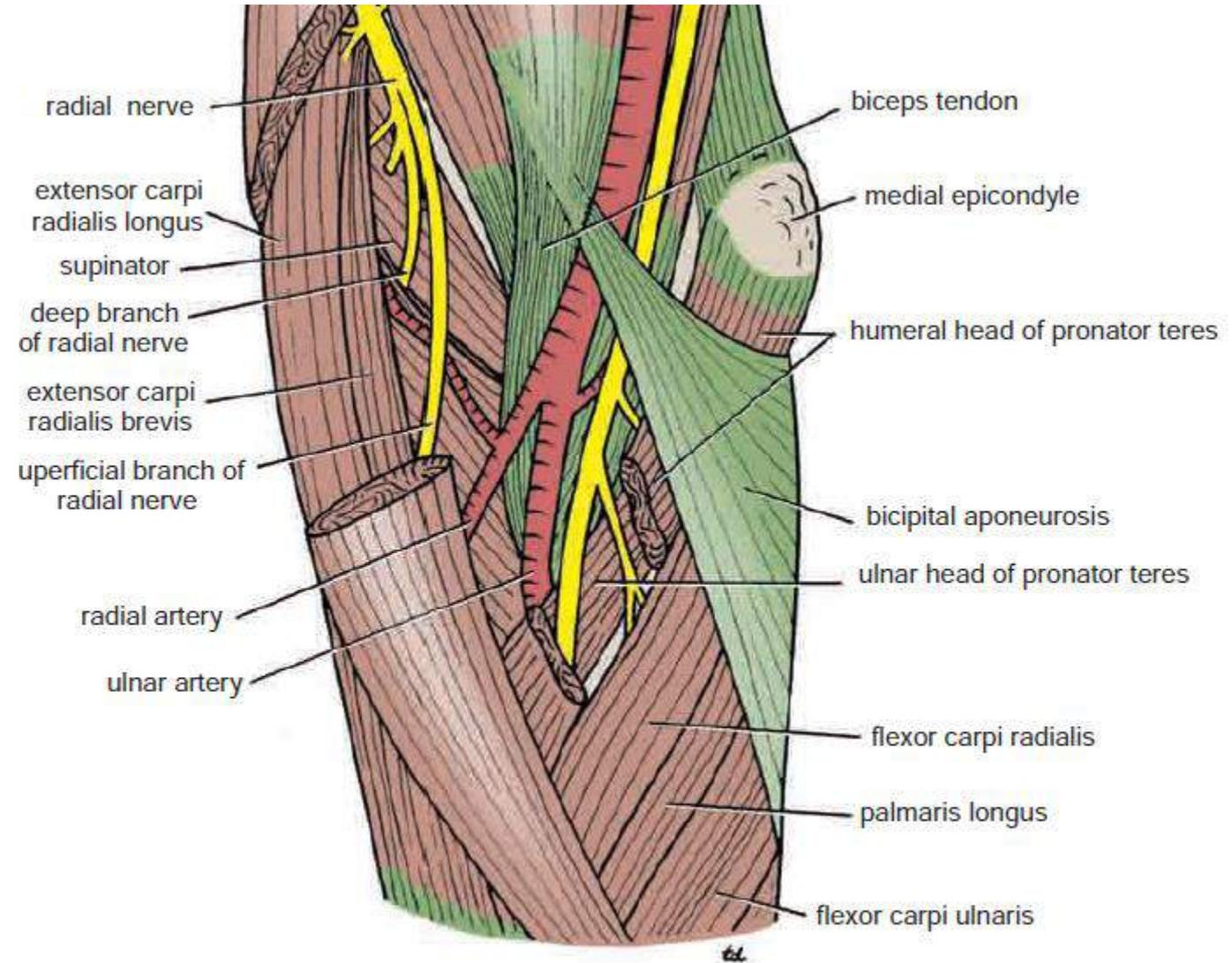
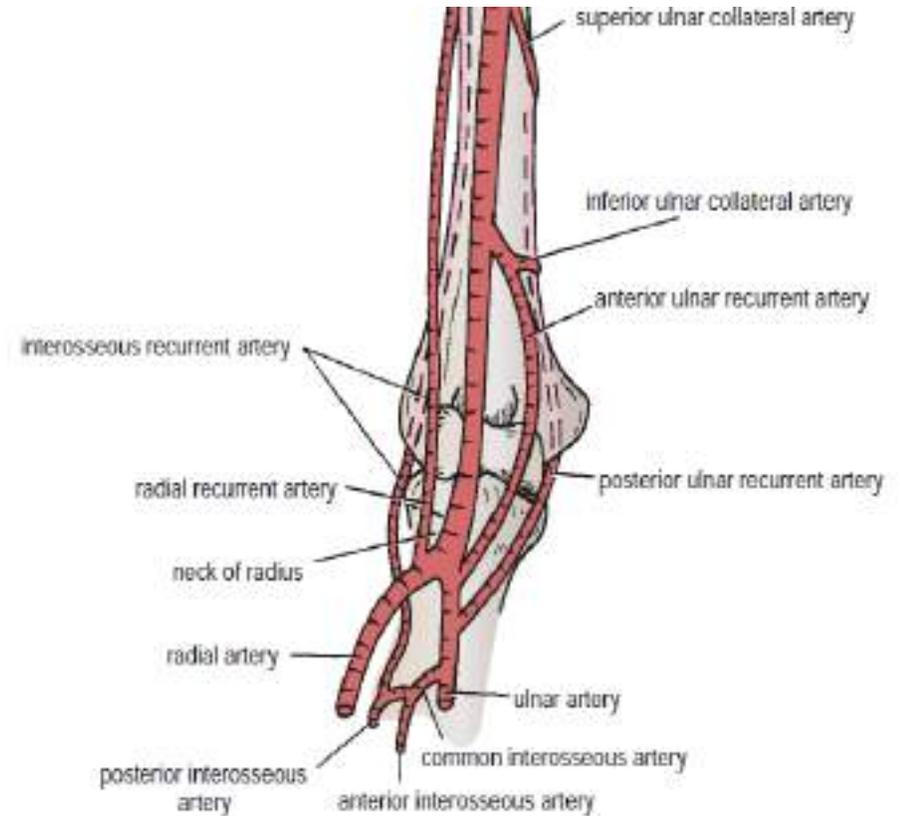


FIGURE 9.47 Right cubital fossa.

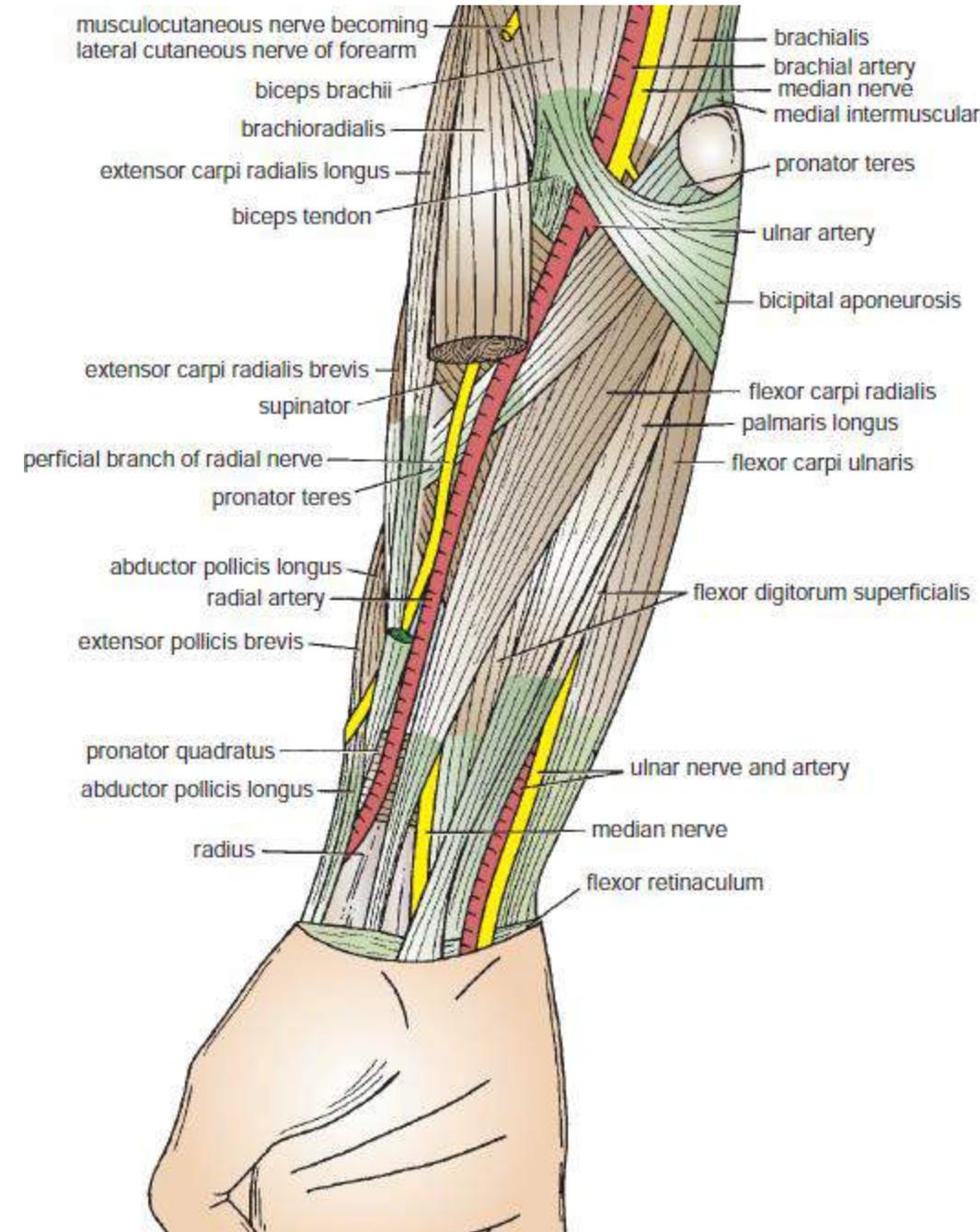
Branches of the Radial artery

- Radial recurrent artery
- Radial collateral (anastomoses with the radial collateral branch of the profunda brachii)
- Muscular branches
- Cutaneous branches



Ulnar artery

- ❖ **BEGINS** from the brachial artery near the neck of the radius
- ❖ Course:
 - passes **DEEP** to pronator teres, flexor carpi radialis, palmaris longus and flexor digitorum superficialis
 - The ulnar head of pronator teres separates it from the median nerve
 - **ENDS** in the hand by anastomosis with the superficial palmar branch of the radial artery, completing the superficial palmar arch.



Ulnar artery

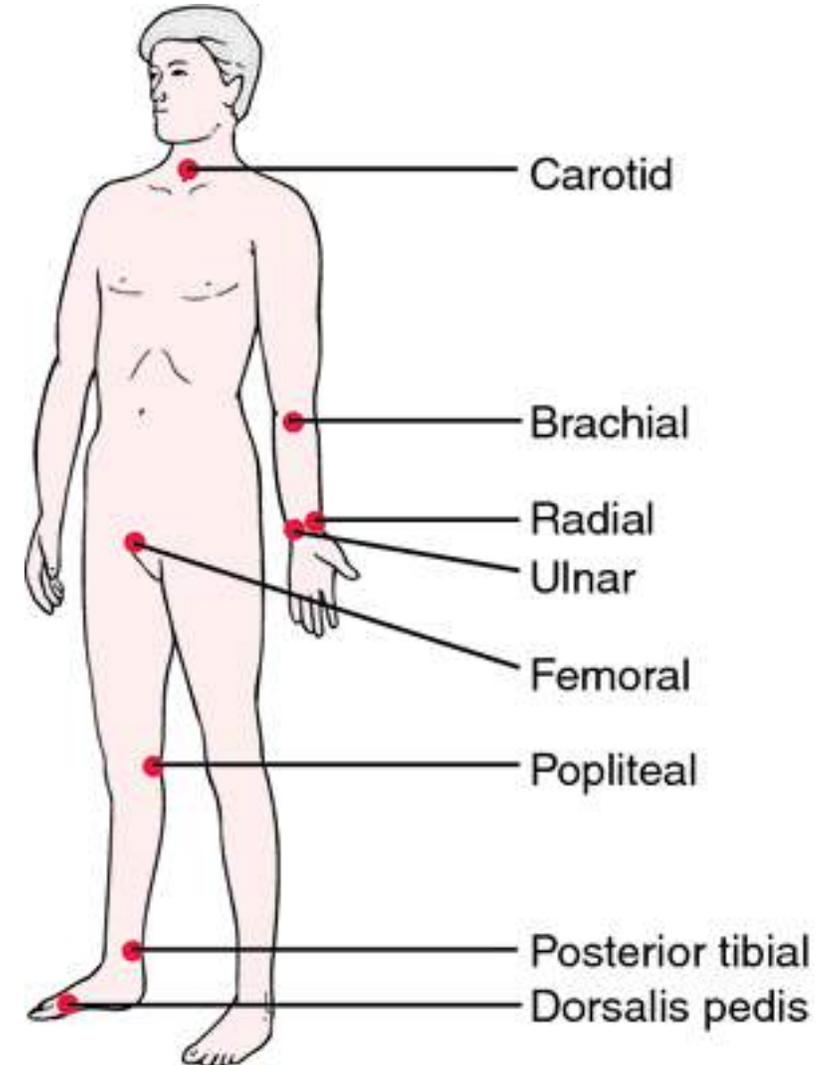
Branches

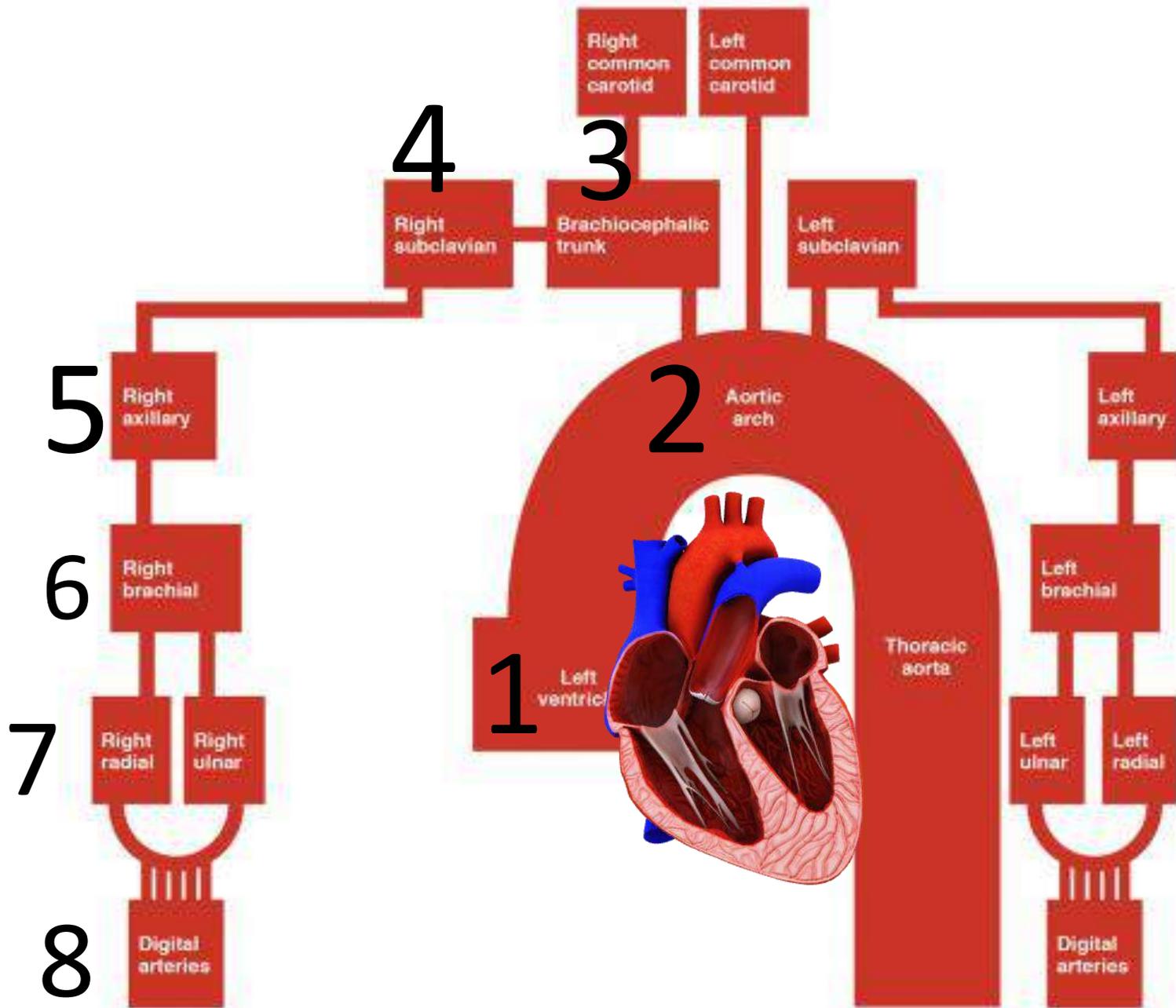
- Anterior ulnar recurrent
- Posterior ulnar recurrent
- Common interosseous artery, which divides into anterior interosseous and posterior interosseous artery (which gives rise to the posterior interosseous recurrent artery)
- Muscular branches
- Cutaneous branches along the septum between flexor carpi ulnaris and flexor digitorum superficialis.



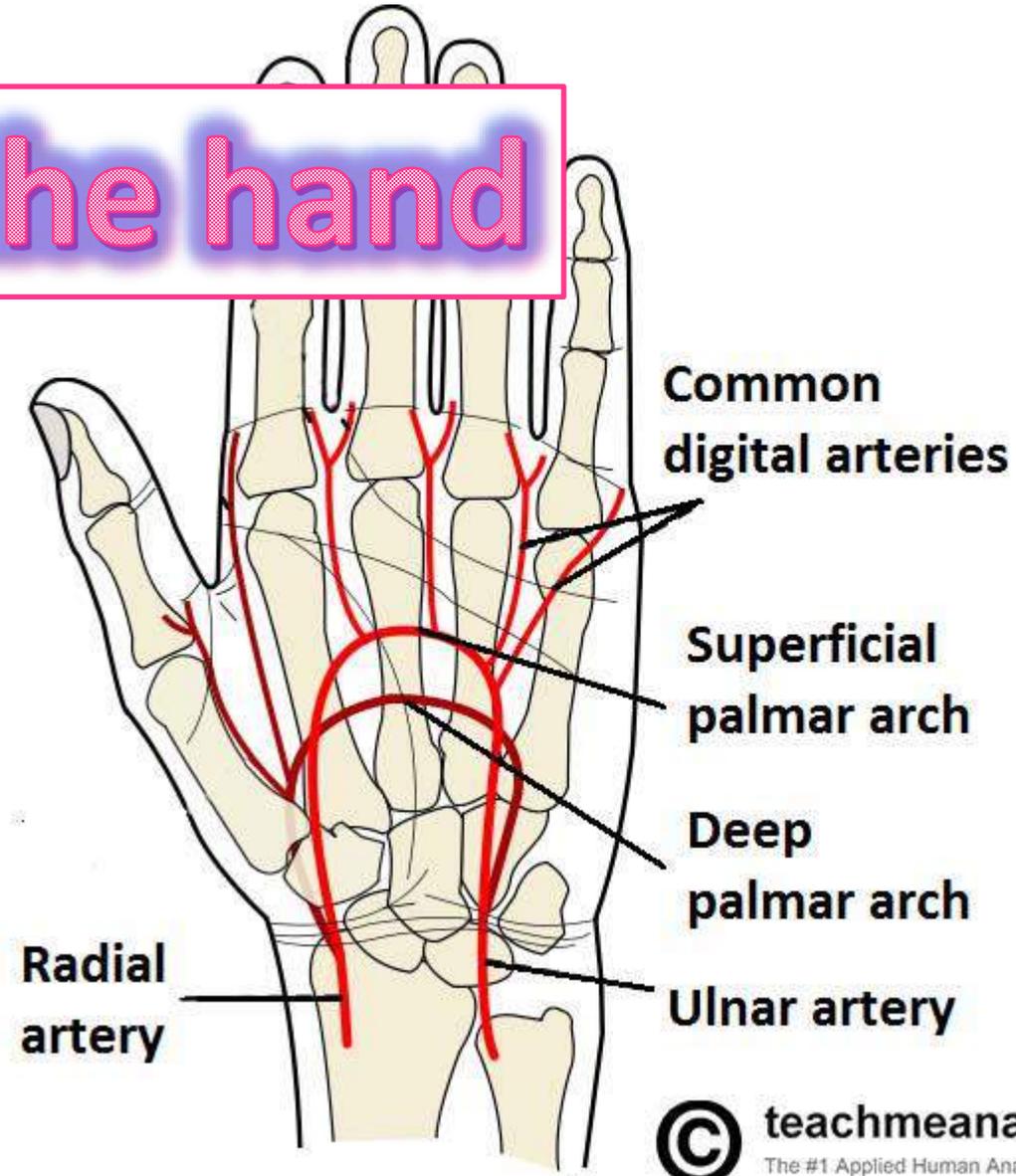
pulsation

- Pulsations of the brachial artery, radial artery, and ulnar artery are palpable because some parts of these arteries are not covered by the muscles and are close to the skin.





Arteries in the hand



teachmeanatomy

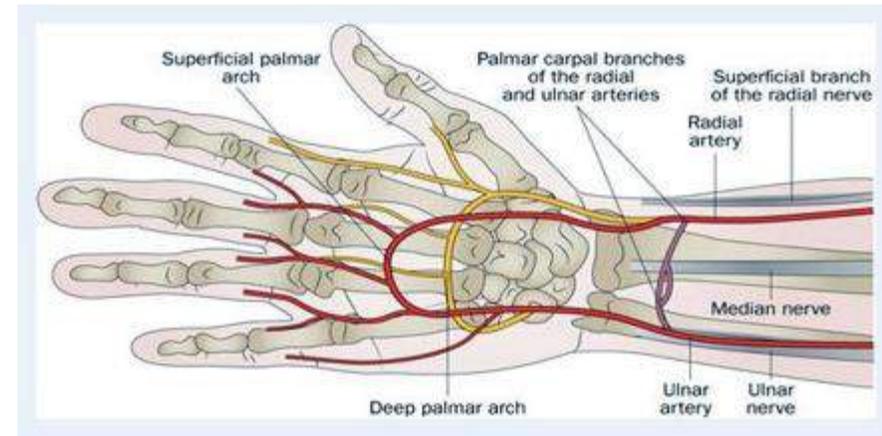
The #1 Applied Human Anatomy Site on the Web.

- ❖ The blood supply to the hand is provided by the radial and ulnar arteries
- ❖ radial and ulnar arteries give rise to a superficial and a deep palmar arch and to smaller tributaries as they travel distally to the tips of the fingers.



ULNAR ARTERY

- ❖ The ulnar artery, with the ulnar nerve, enters the hand lateral to the pisiform and anterior to the flexor retinaculum.
- ❖ The artery divides into two terminal branches, the superficial palmar arch and the deep palmar branch



RADIAL ARTERY

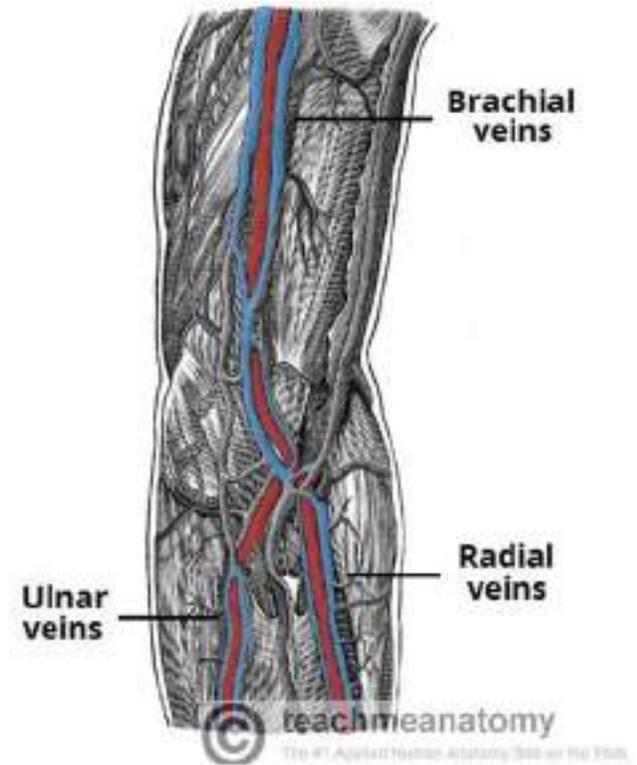
- ❖ The **radial artery** curves dorsally around the scaphoid and trapezium and crosses the floor of the *anatomical snuff box (RADIAL box)*
- ❖ The radial artery ends by anastomosing with the **deep branch of the ulnar artery** to form the **DEEP PALMAR ARCH**, which is formed mainly by the radial artery.



VEINS/ recap

The venous drainage of the upper limb is composed of

- superficial and deep vessels.
- The deep veins accompany the arteries.
- The superficial veins starts on the back of the hand as a dorsal arch.
- The cephalic vein begins at the radial extremity of the arch.
- axillary vein just distal to the clavicle.
- The basilic vein passes along the medial aspect of the forearm,
- The median cubital vein links the cephalic and basilic veins in front of the elbow.



Common variation of superficial vein seen in elbow area

