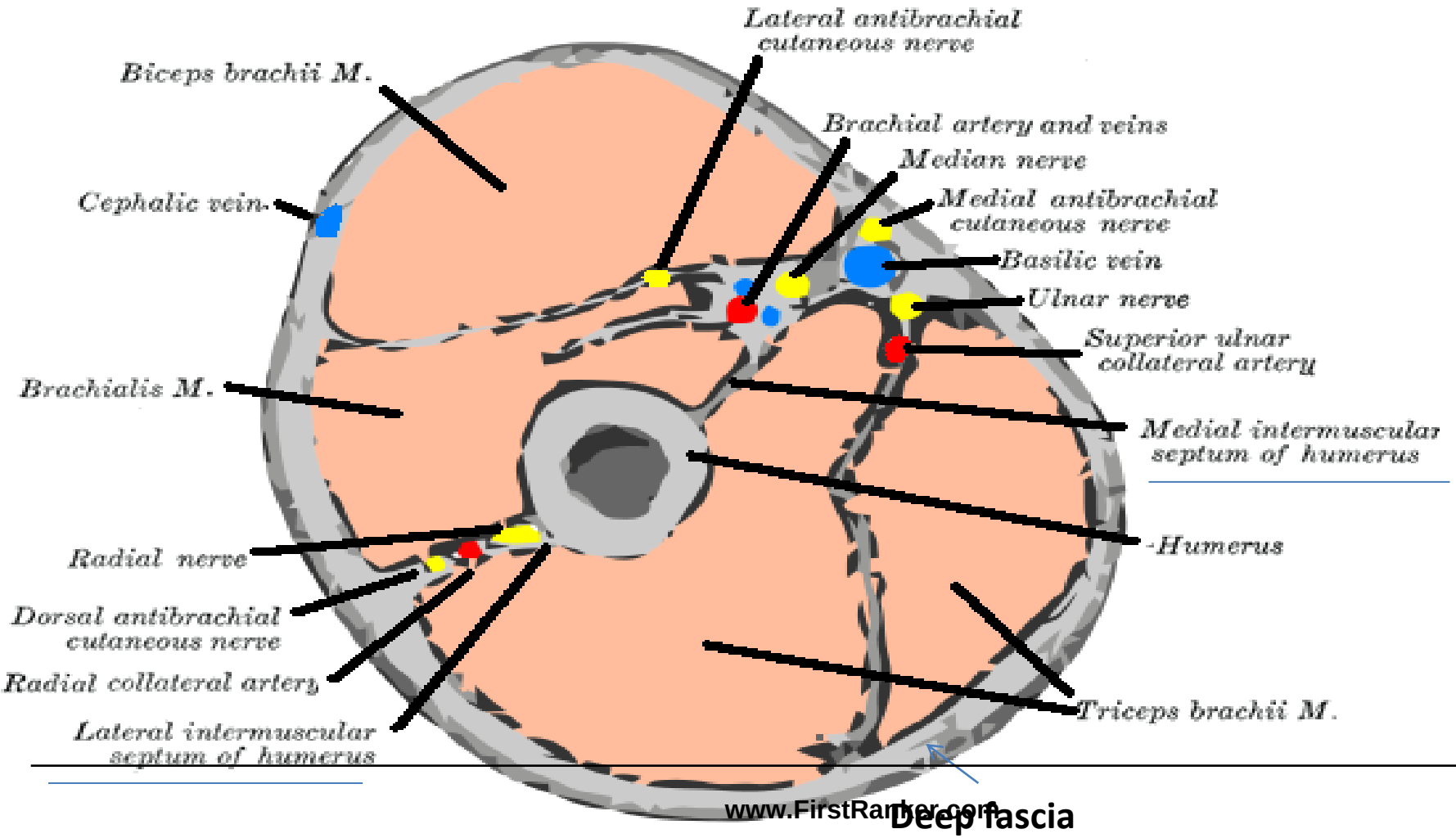
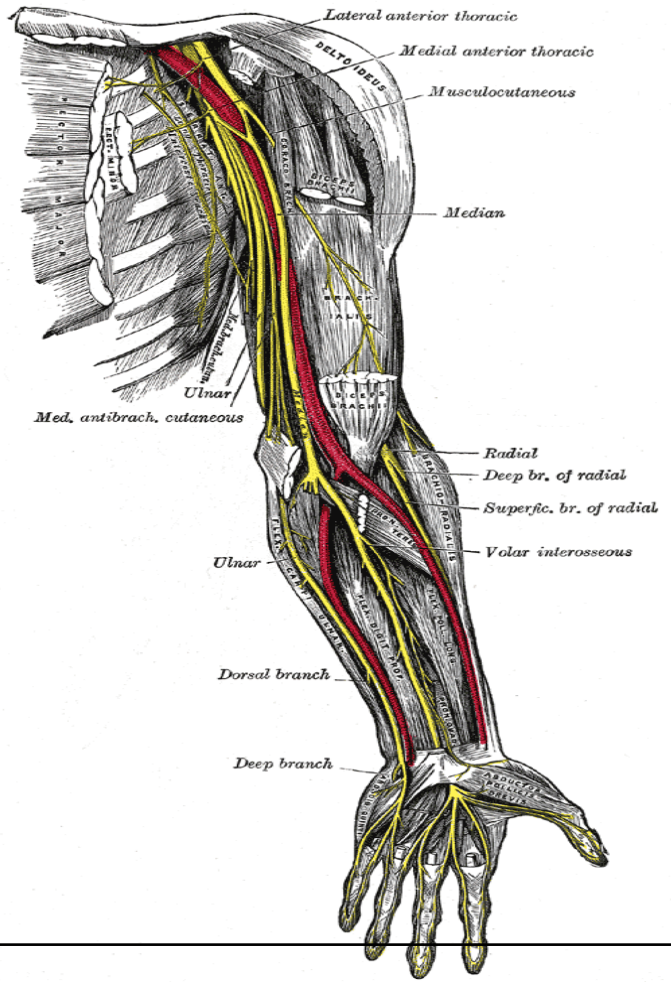
ANTERIOR COMPARTMENT OF ARM & CUBITAL FOSSA

FASCIAL COMPARTMENTS OF THE UPPER ARM

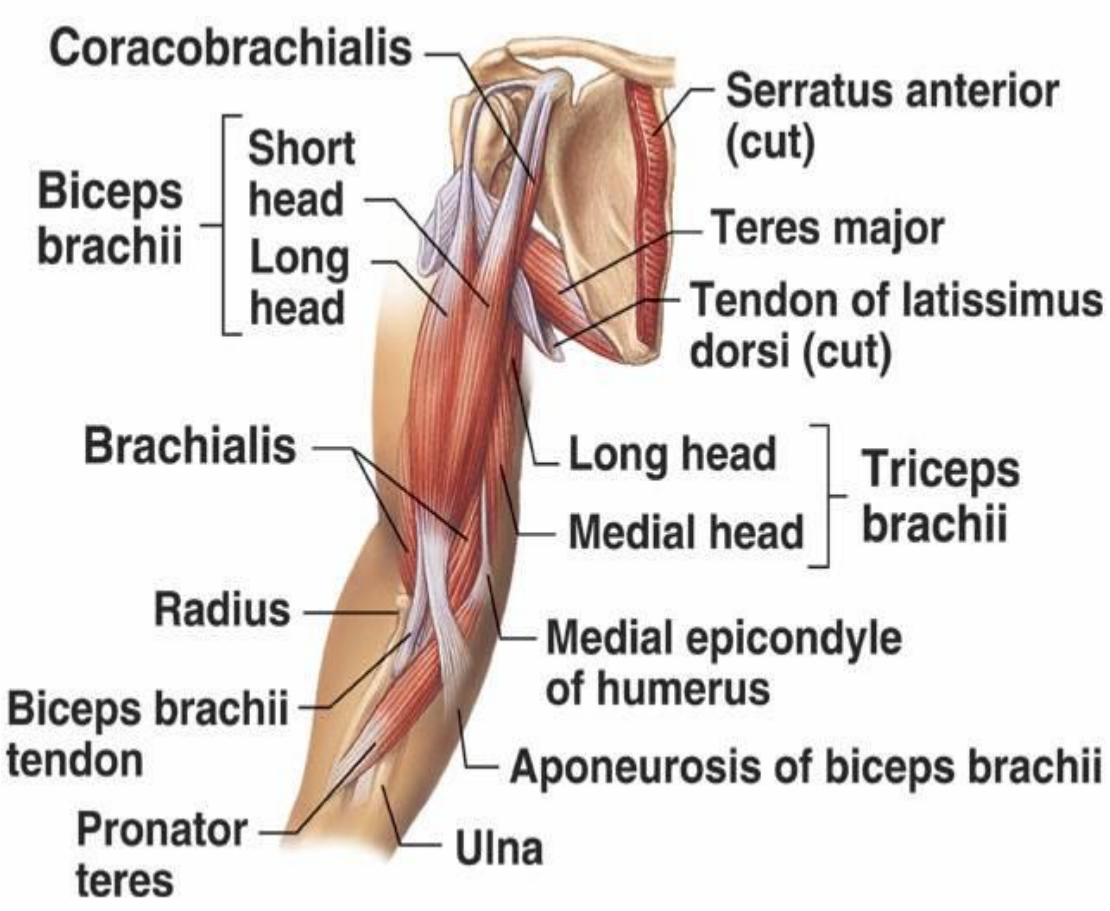


CONTENTS OF ANTERIOR FASCIAL COMPARTMENT

- Muscles
- Blood vessels
- Nerves
- Structures passing through the compartment

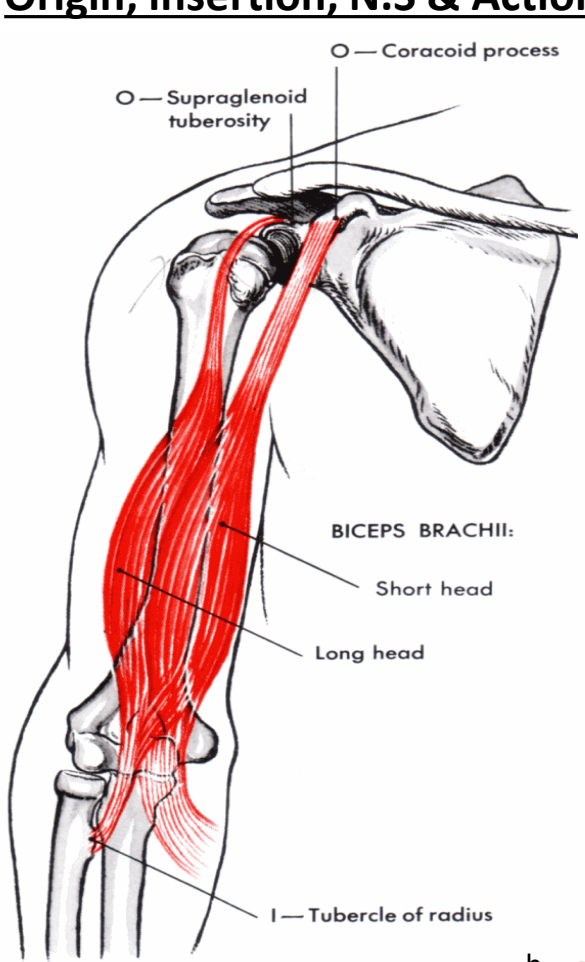


MUSCLES OF ANTERIOR COMPARTMENT

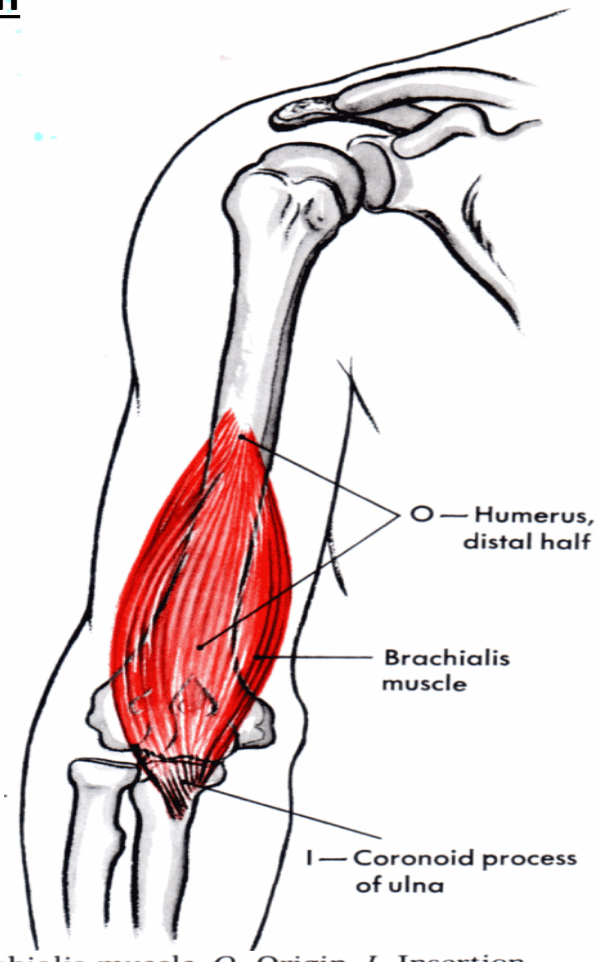


MUSCLES OF ANTERIOR COMPARTMENT

Origin, insertion, N.S & Action



Biceps brachii muscle. *O*, Origin. *I*, Insertion.



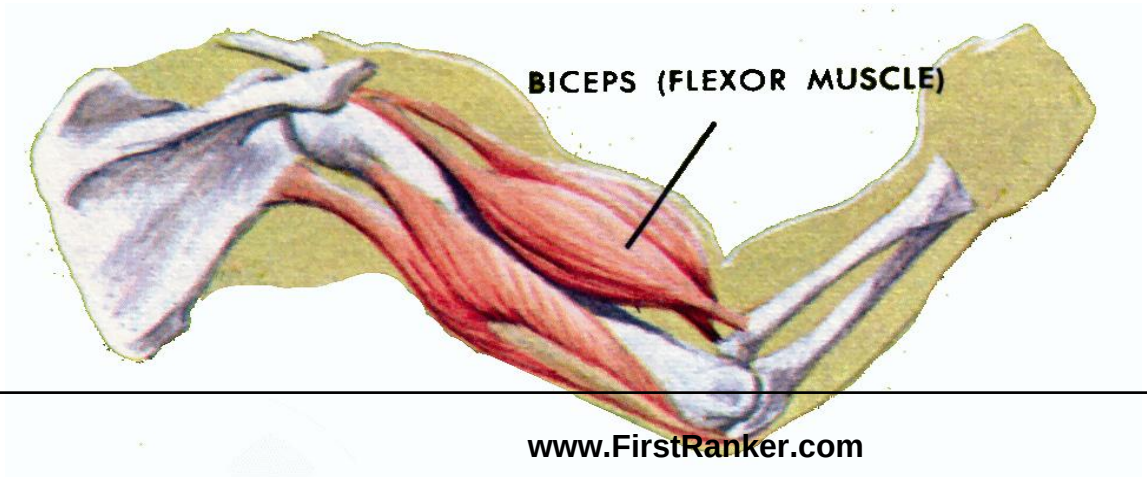
b chialis muscle. *O*, Origin. *I*, Insertion.

coracobrachialis

Dual N.S

THE BICEPS BRACHII

- The biceps functions primarily as **strong supinator** of the forearm. This action, which is aided by the supinator muscle, requires the elbow to be at least **partially flexed.**
- The biceps also functions as an **powerful flexor of elbow joint,** particularly when the forearm is supinated. Functionally, this action is performed when lifting an object, such as a bag of groceries or when performing a biceps curl.
- Both these movements are used when **opening a bottle with a corkscrew**: first biceps unscrews the cork (supination), then it pulls the cork out (flexion).
- If the elbow joint is fully extended, supination is then primarily carried out by the supinator muscle.
- **Weak flexor of shoulder joint.**



Cont....

- When the forearm is in pronation, the **brachialis, brachioradialis,** and **supinator** function to **flex the forearm**, with minimal contribution from the biceps brachii.

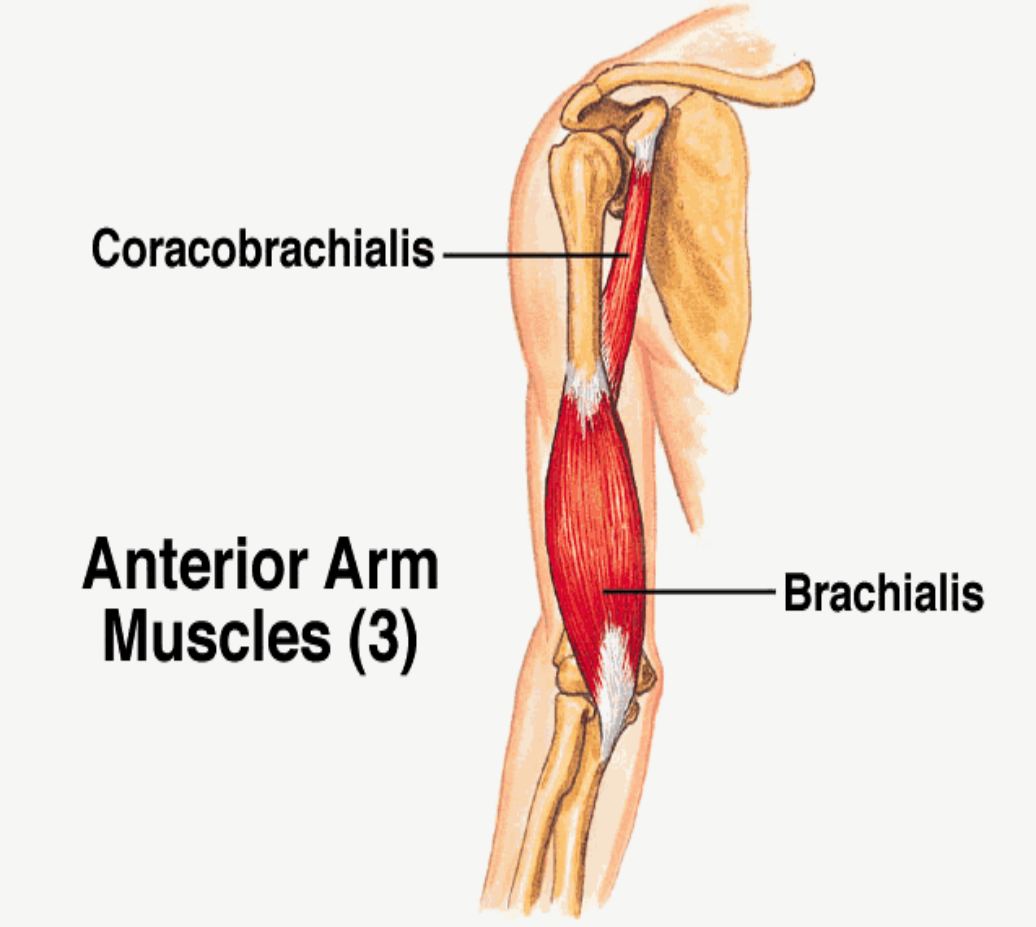
Flexed arm in the **pronated** position (left); with the biceps partially contracted and in a **supinated** position with the biceps more fully contracted, approaching minimum length (right.)

Cont....

- The **brachialis muscle** is innervated by the musculocutaneous nerve, which runs on its superficial surface, between it and the biceps brachii.
- Part of it is also innervated by the radial nerve (proprioceptive branch).
- Action: Most powerful flexor at elbow joint

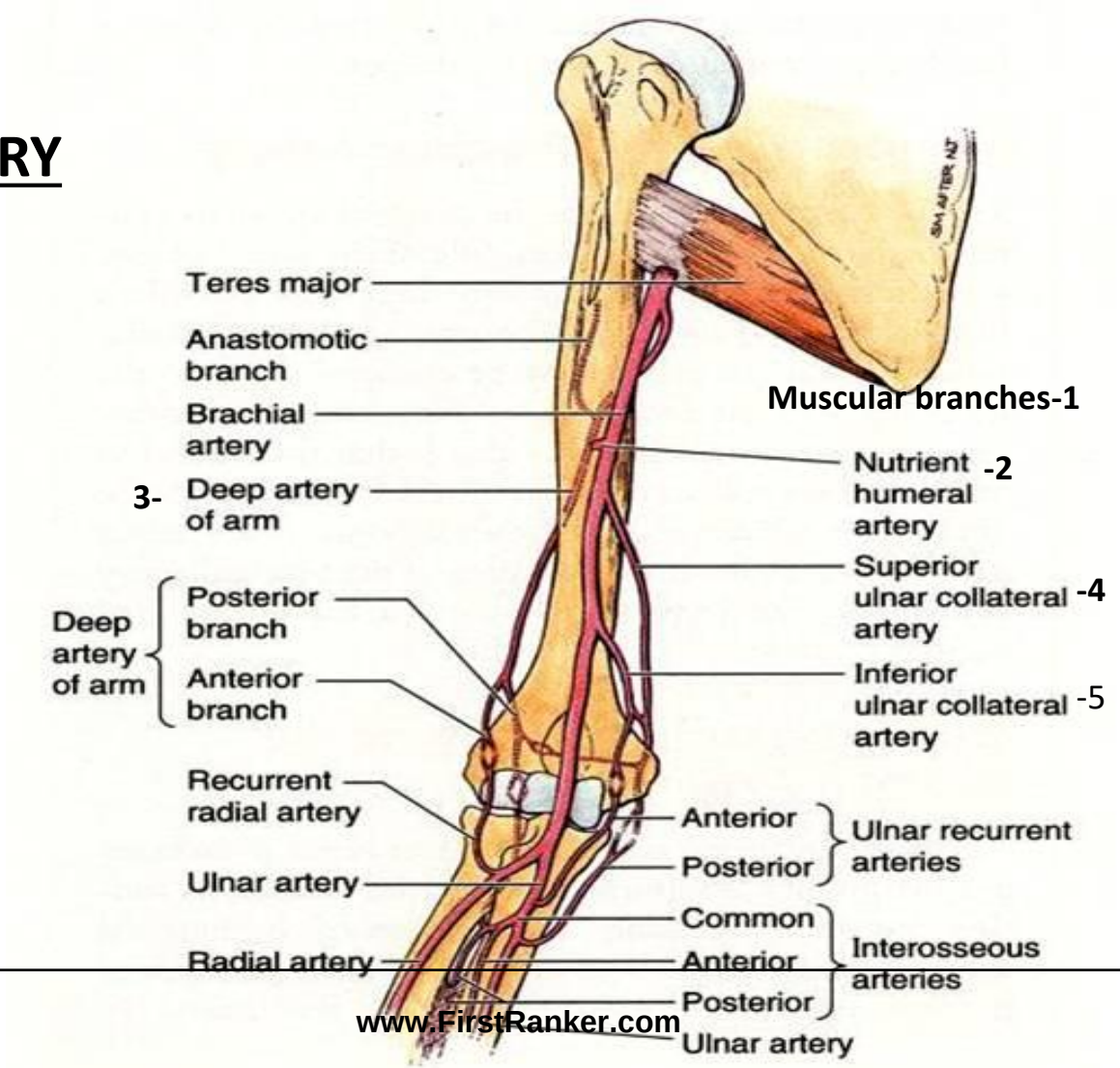
Cont....

- The **coracobrachialis** draws the humerus forward (shoulder flexion) and towards the torso (shoulder adduction).



STRUCTURES PASSING THROUGH ANTERIOR FACIAL COMPARTMENT

BRACHIAL ARTERY



RELATIONS OF BRACHIAL ARTERY

Anteriorly: Superficial in the upper part, overlapped laterally by coracobrachialis and biceps.

- Upper part; Medial cutaneous nerve of forearm
- Middle part; Median nerve
- Lower part; bicipital aponeurosis

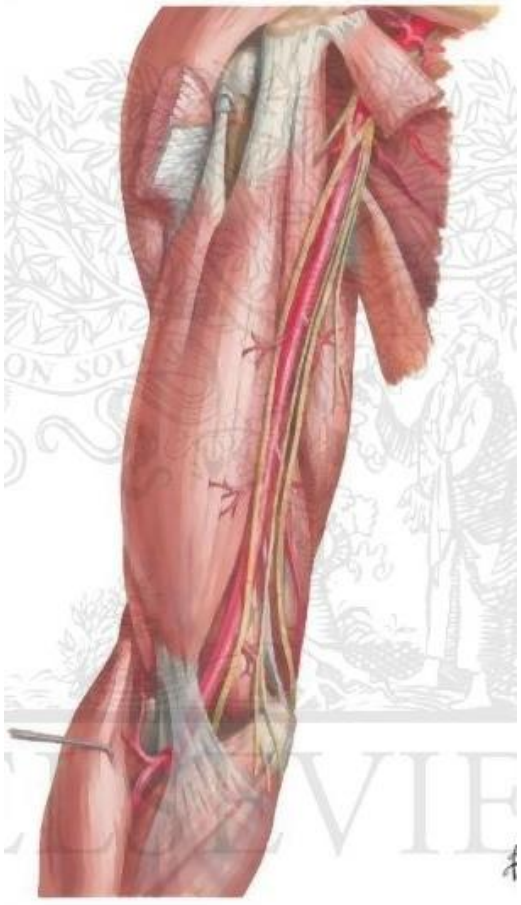
Posteriorly: Triceps, coracobrachialis, brachialis

` **Laterally:** Upper part: Median nerve, coracobrachialis and biceps.

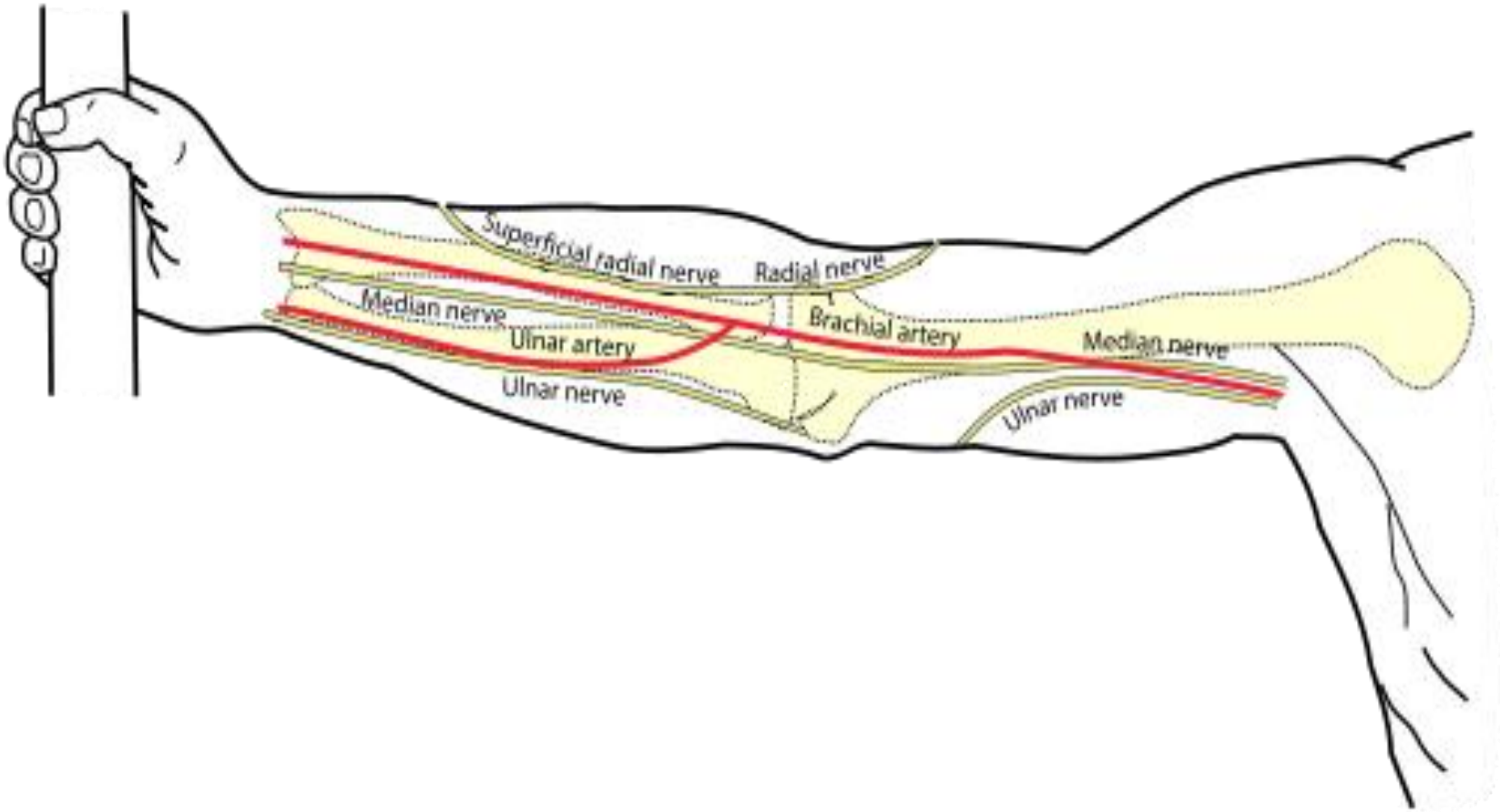
Lower part: tendon of biceps

Medially: Upper part: ulnar nerve, basilic vein

Lower part: Median nerve



NERVES OF THE ANTERIOR COMPARTMENT



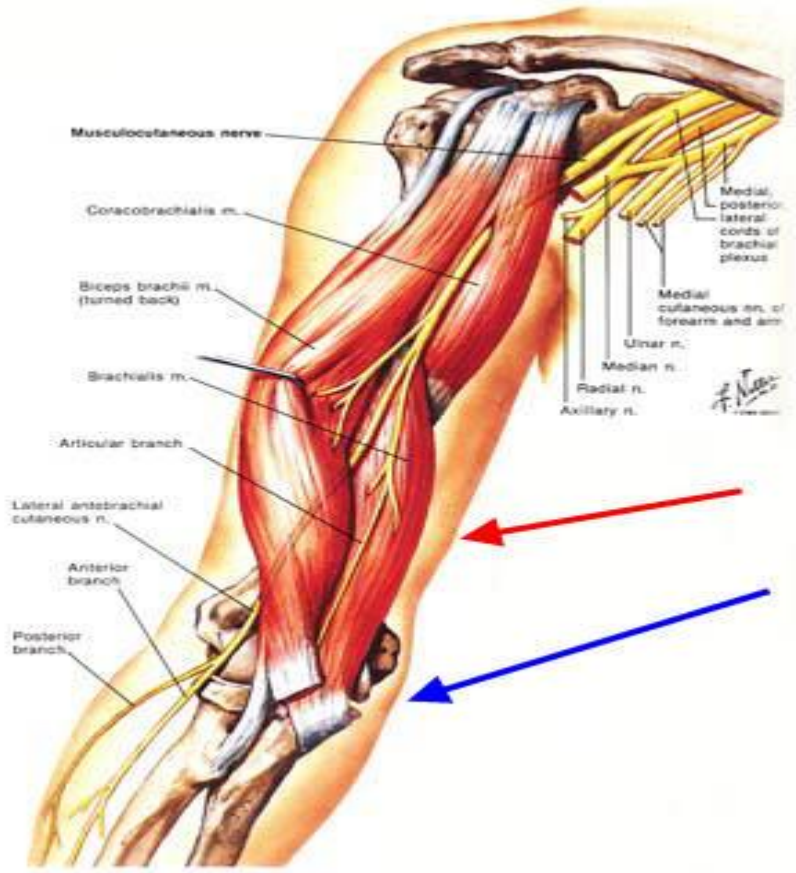
MUSCULOCUTANEOUS NERVE

Origin

Course in arm

Branches:

1. Muscular
2. Cutaneous
3. Articular



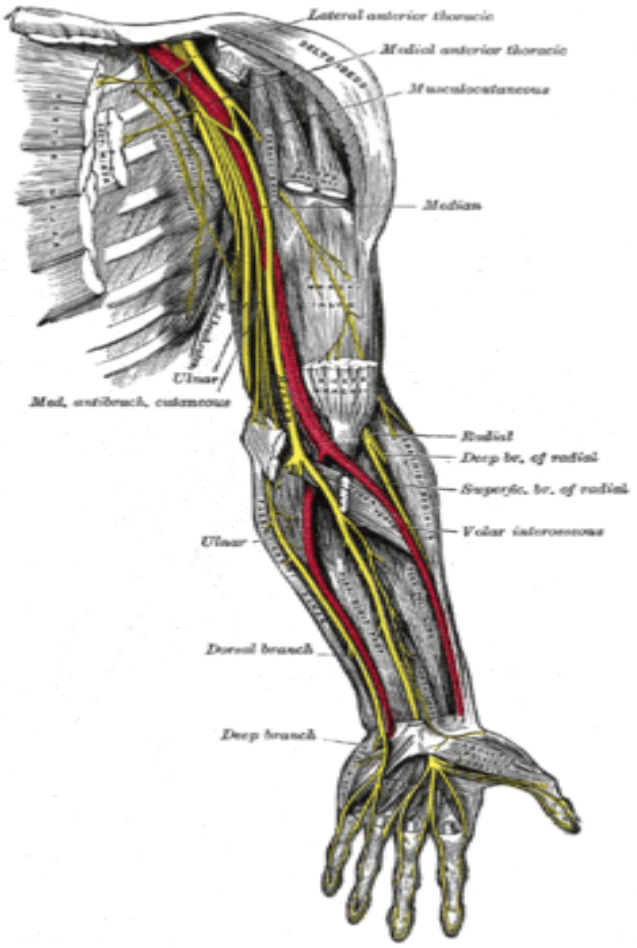
MEDIAN NERVE

Origin

Course:

Branches:

Vasomotor branches to brachial artery

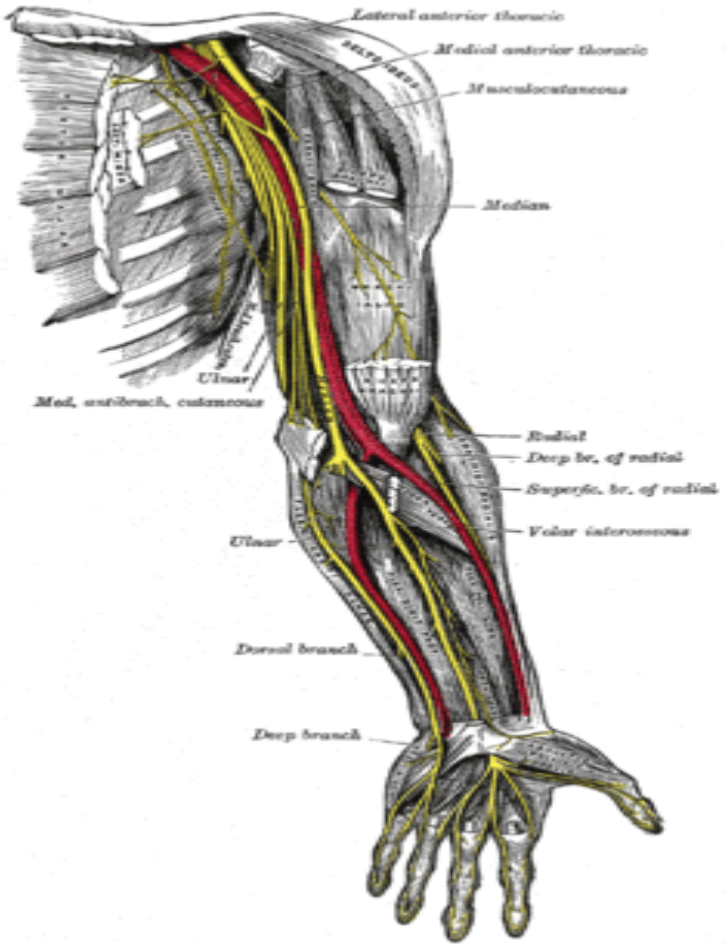


ULNAR NERVE

Origin

Course in arm: pierces the medial intermuscular septum and passes behind the medial epicondyle

Branches: None



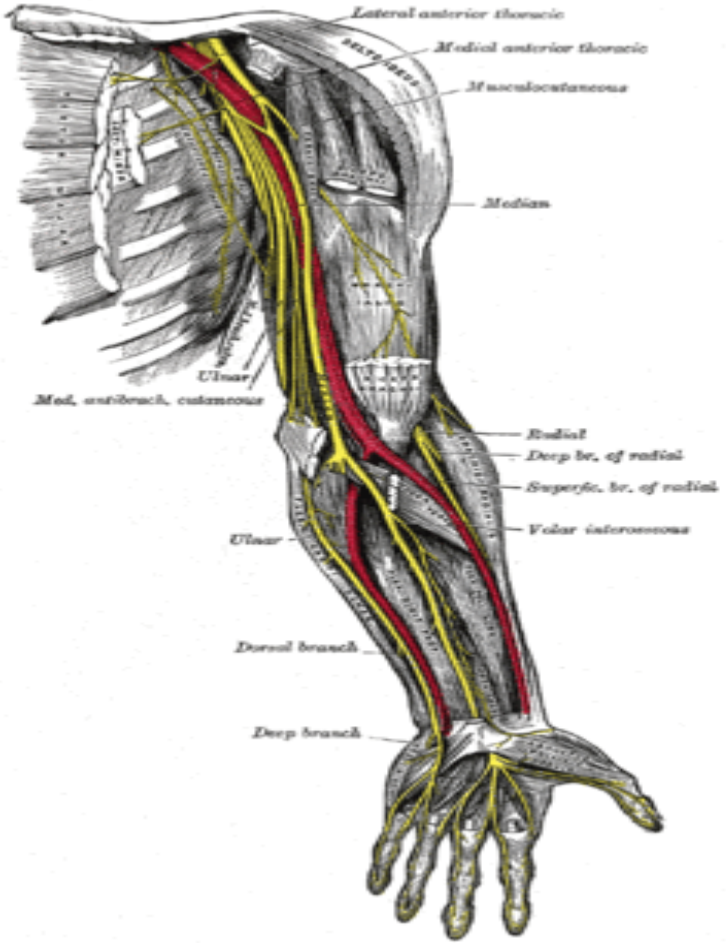
RADIAL NERVE

Origin

Course: in posterior the compartment of arm and enters the anterior compartment just above the lateral epicondyle by piercing the lateral intermuscular septum

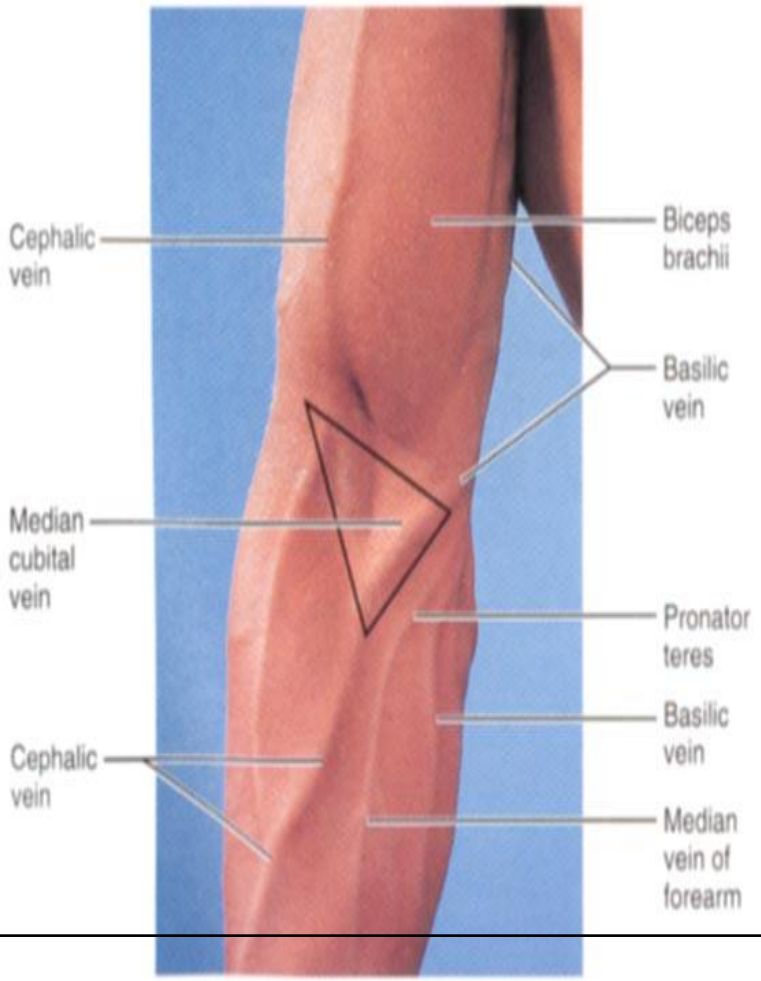
Branches:

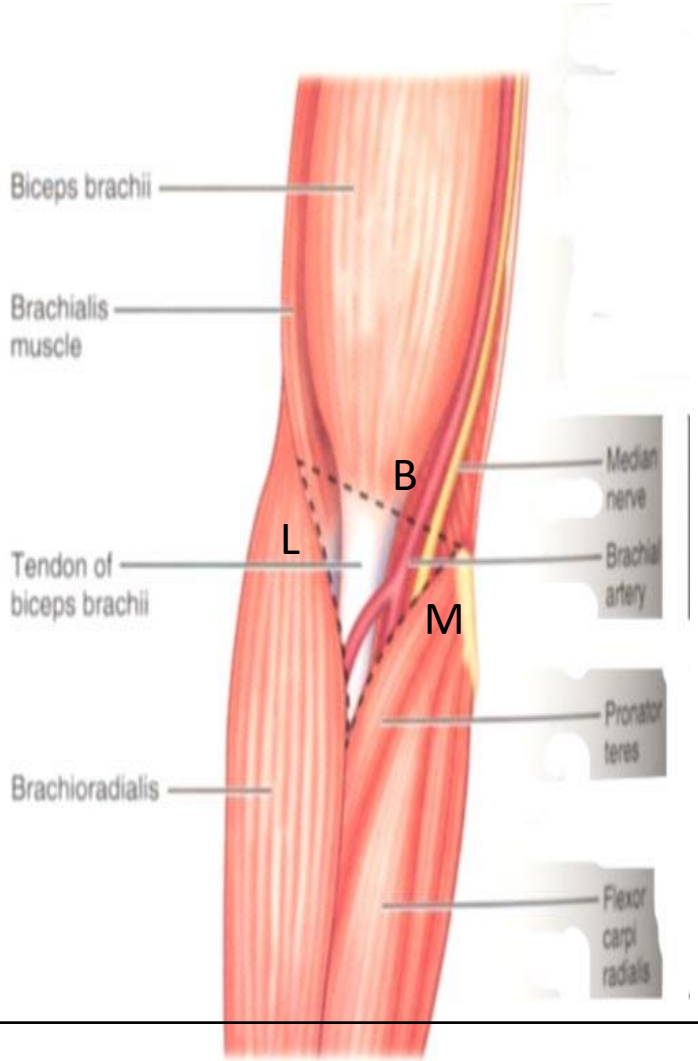
1. Muscular
2. Articular branches to elbow joint



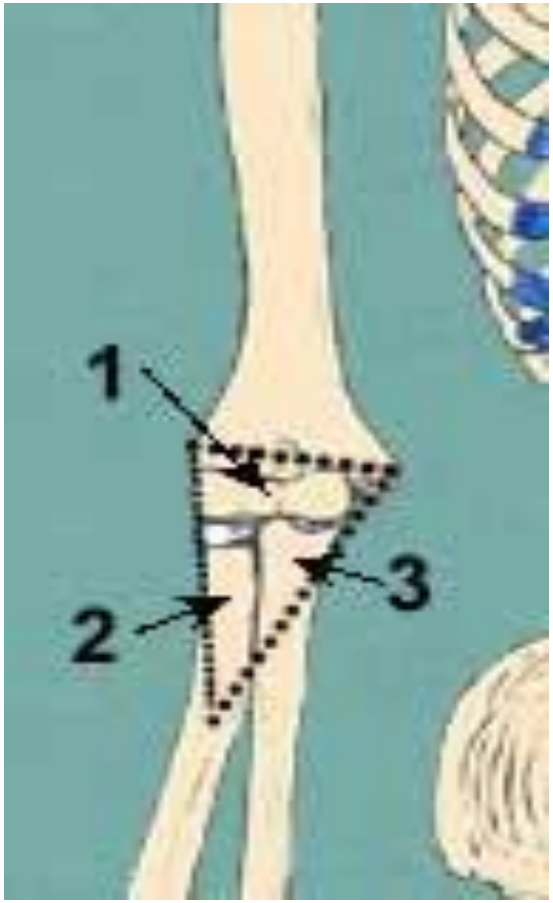
CUBITAL FOSSA

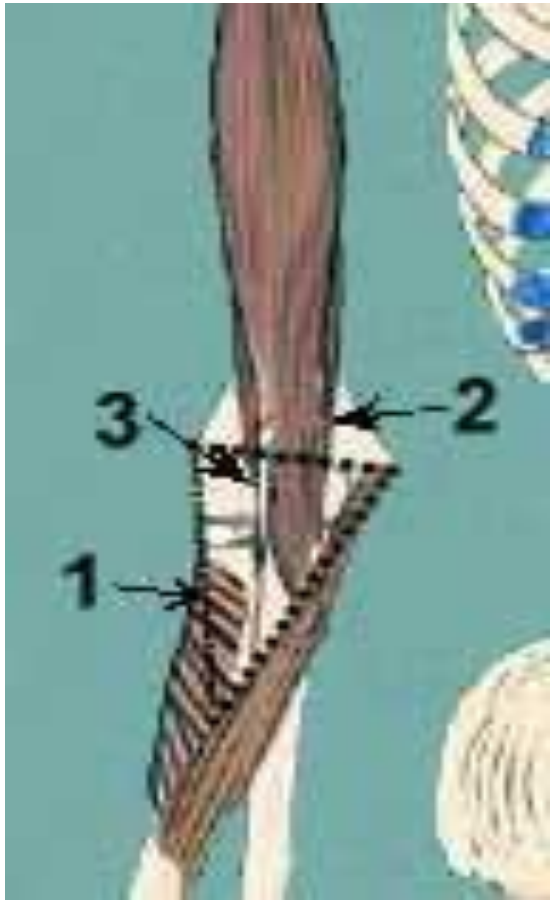
BOUNDARIES



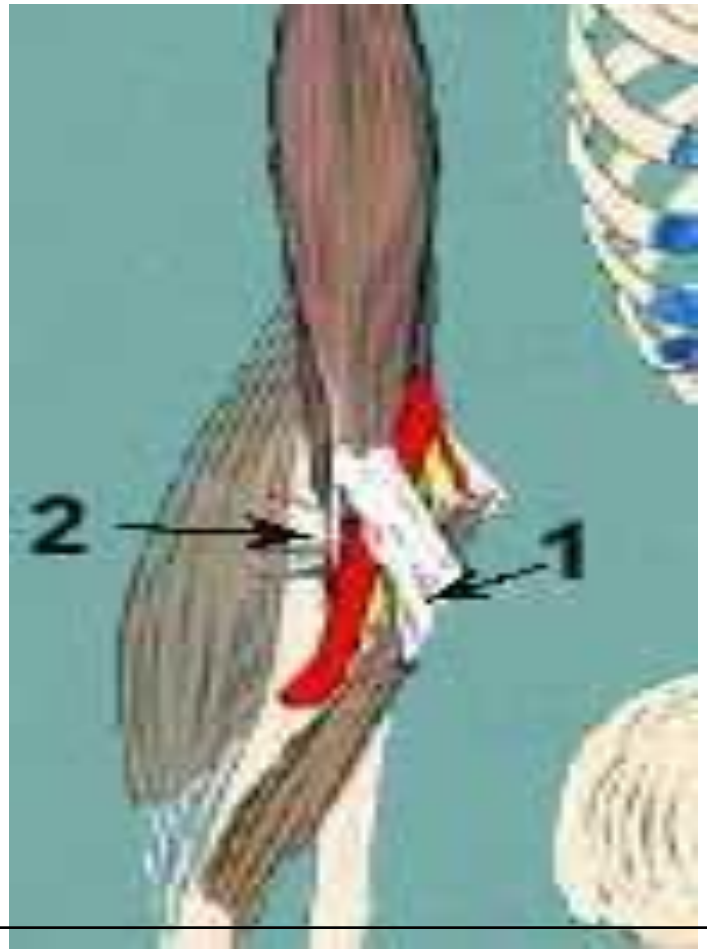


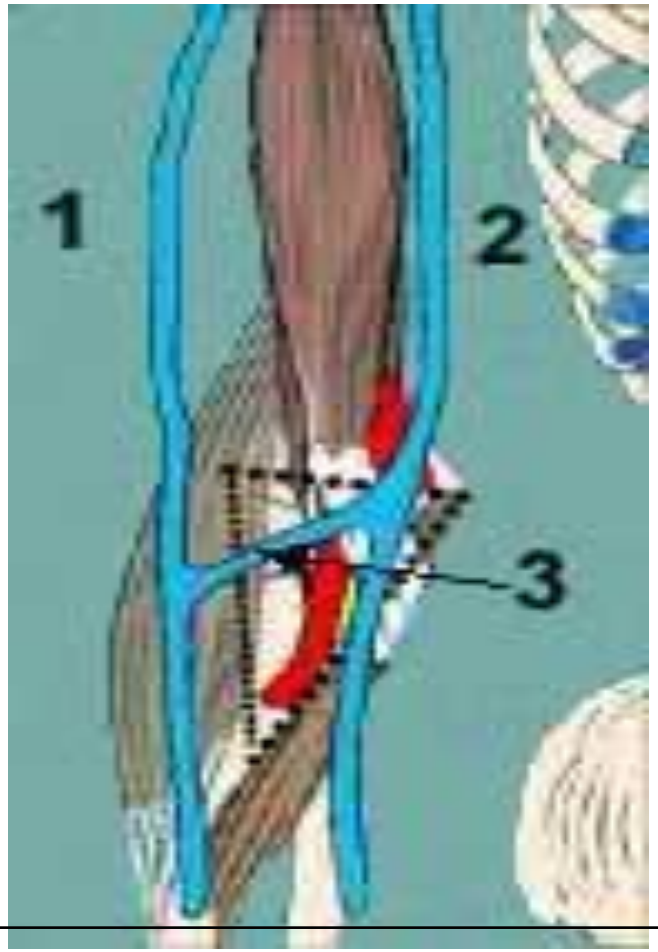
FLOOR OF CUBITAL FOSSA



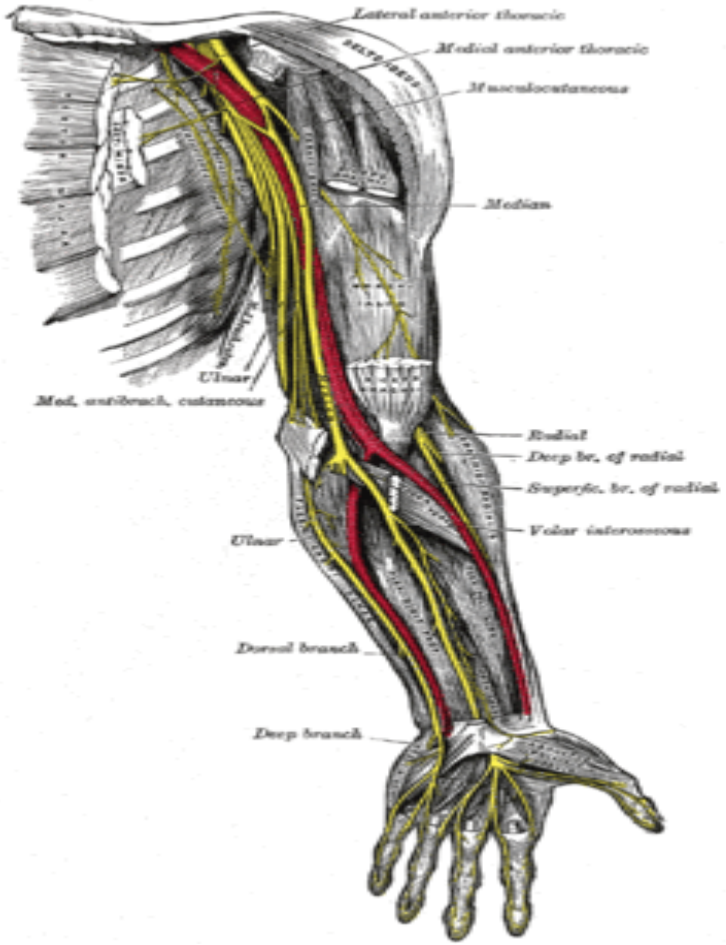


ROOF OF CUBITAL FOSSA



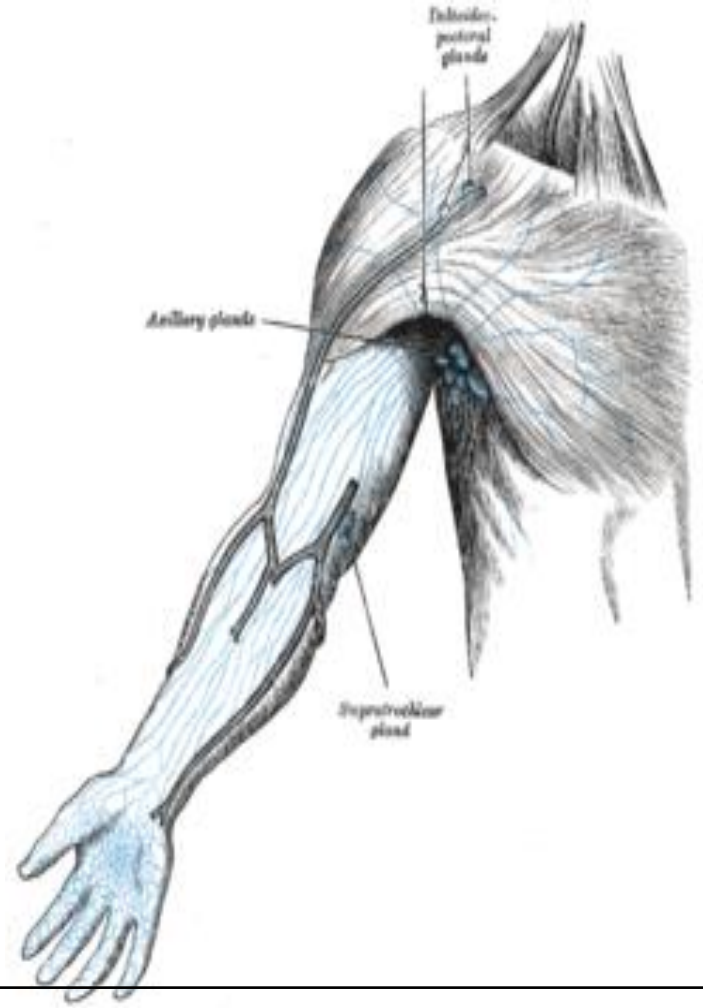


CONTENTS OF CUBITAL FOSSA



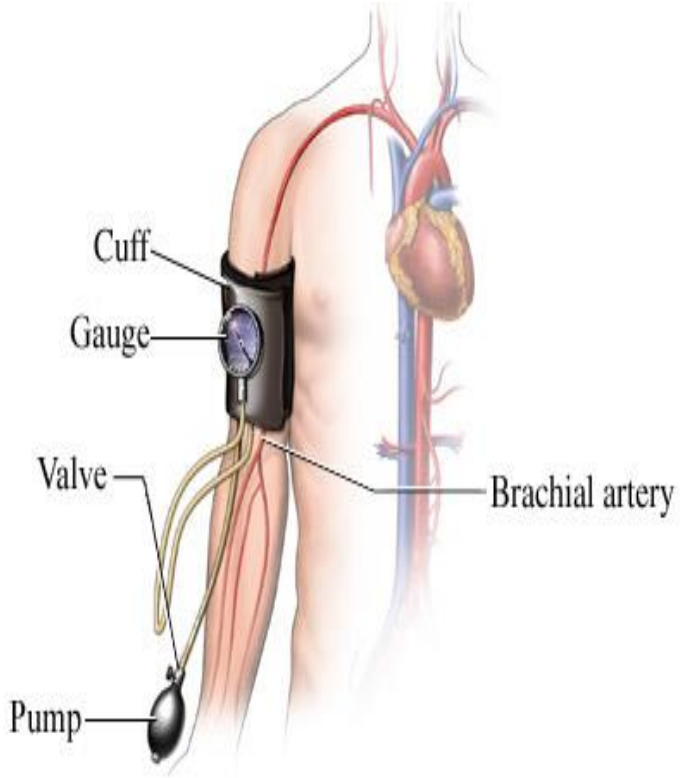
SUPRATROCHLEAR LYMPH NODES

- One or two **supratrochlear lymph nodes** lie in superficial fascia over the upper part of fascia.
- Are placed above the medial epicondyle of humerus, medial to the basilic vein.
- Their afferents drain the middle, ring, and little fingers, the medial portion of the hand, and the medial side of the forearm.
- Their efferents enter the lateral axillary lymph nodes



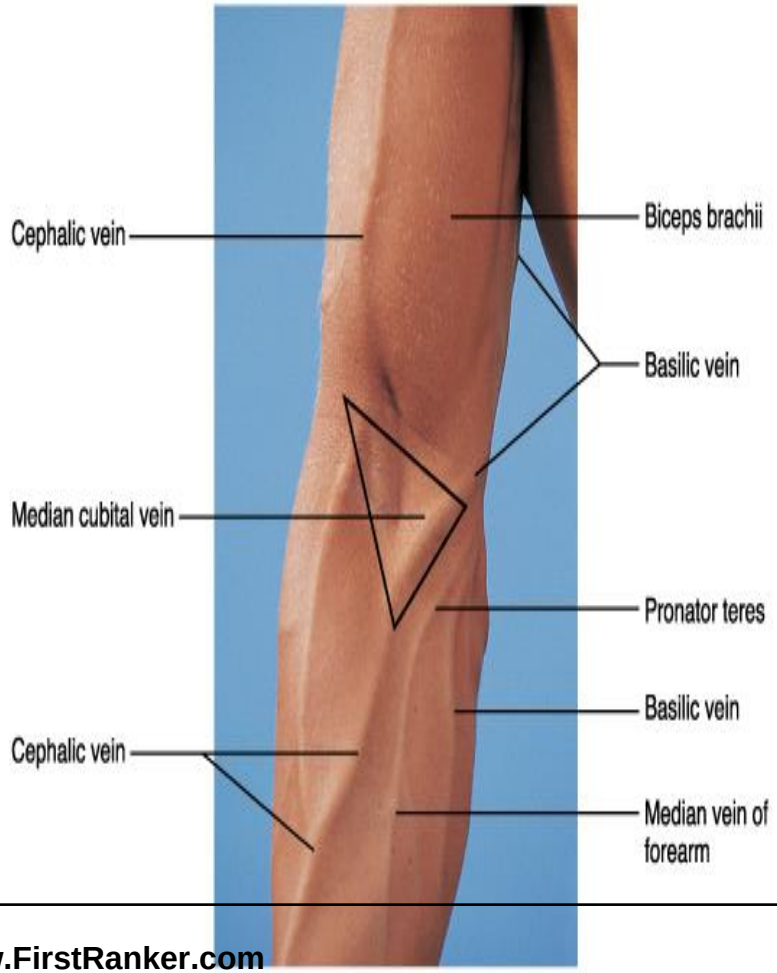
CLINICAL CORRELATES

- During blood pressure measurements, the stethoscope is placed **over the brachial artery** in the cubital fossa.
- The brachial pulse may be palpated in the cubital fossa also just medial to the tendon.



Cont…

- The area just superficial to the cubital fossa is often used for obtaining intravenous access for the purpose of intravenous therapy or for blood sampling.



THANK YOU