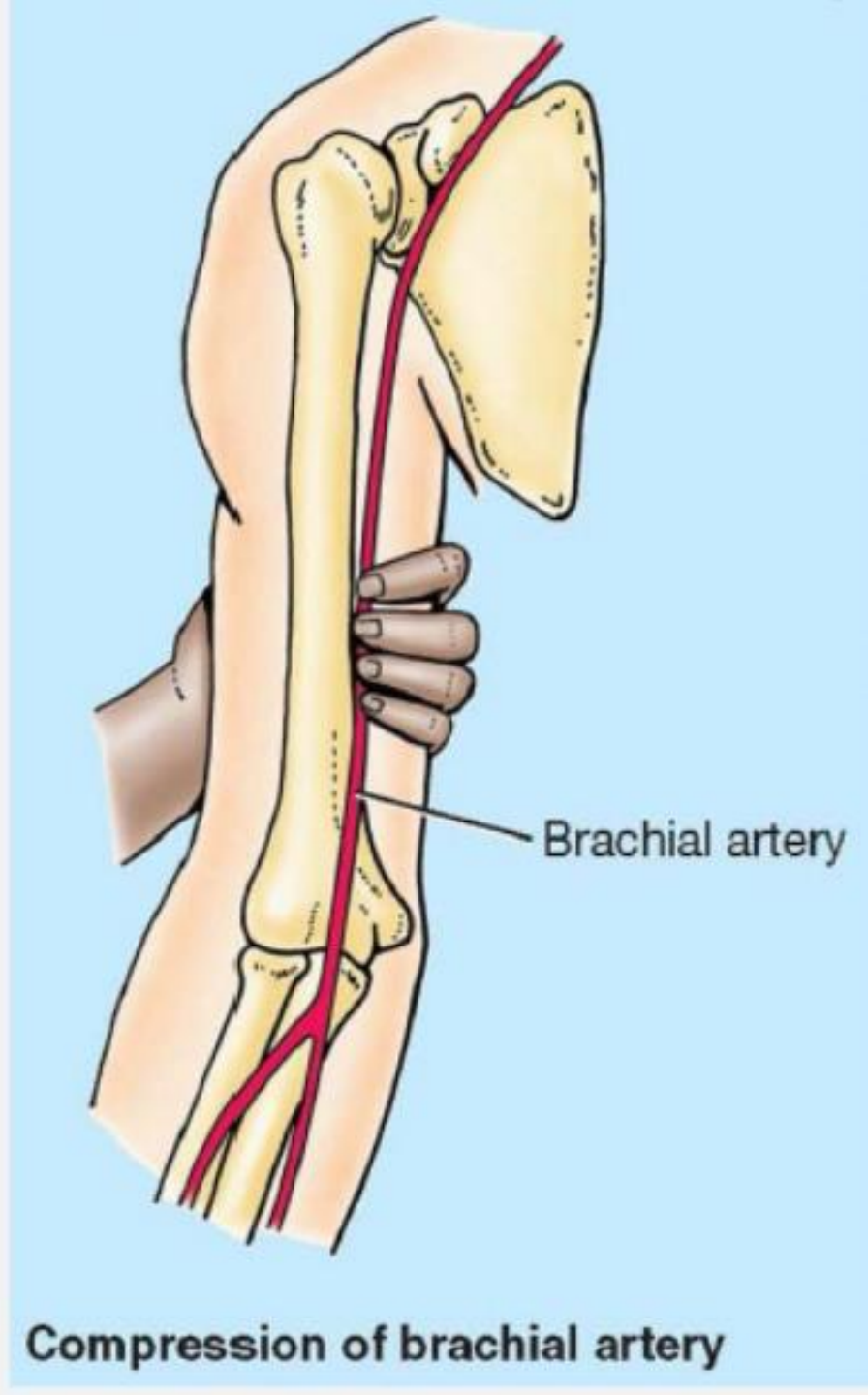



Compression of brachial artery

# CUBITAL FOSSA

WHY DO NEED IT?

DID YOU KNOW SIMILAR FOSSA IN YOUR BODY?

Dr. Amjad Shatarat

# CUBITAL FOSSA

forms a triangular depression in the middle of the upper part of the anterior aspect of the forearm

**BOUNDARIES:**

***Base:***

**an imaginary line between the 2 Epicondyles of humerus**

***Laterally:***

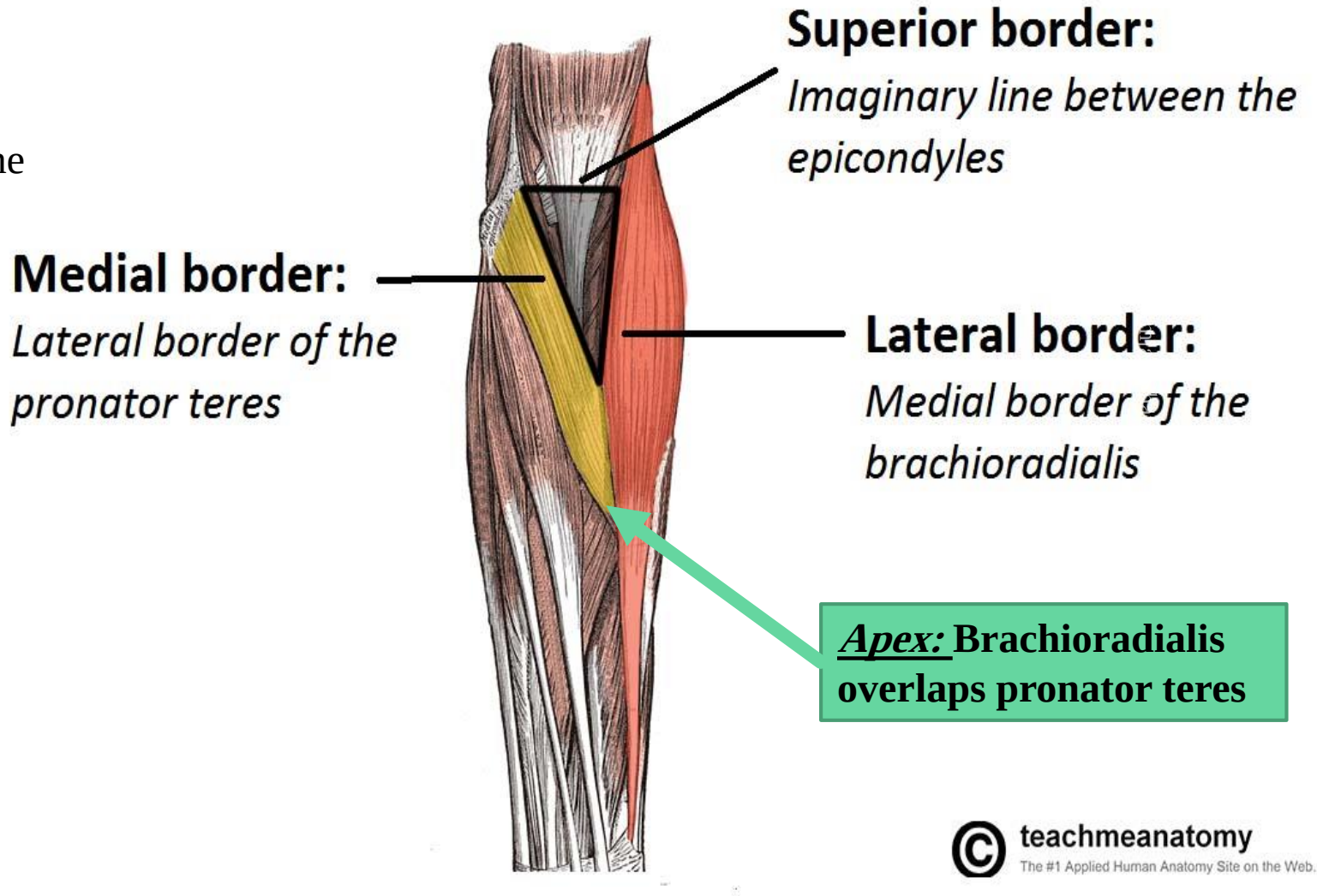
**Medial border of Brachioradialis**

***Medially:***

**Lateral border of pronator teres**

***Apex:***

**brachioradialis overlaps pronator tere**



# CUBITAL FOSSA

- **ROOF:**

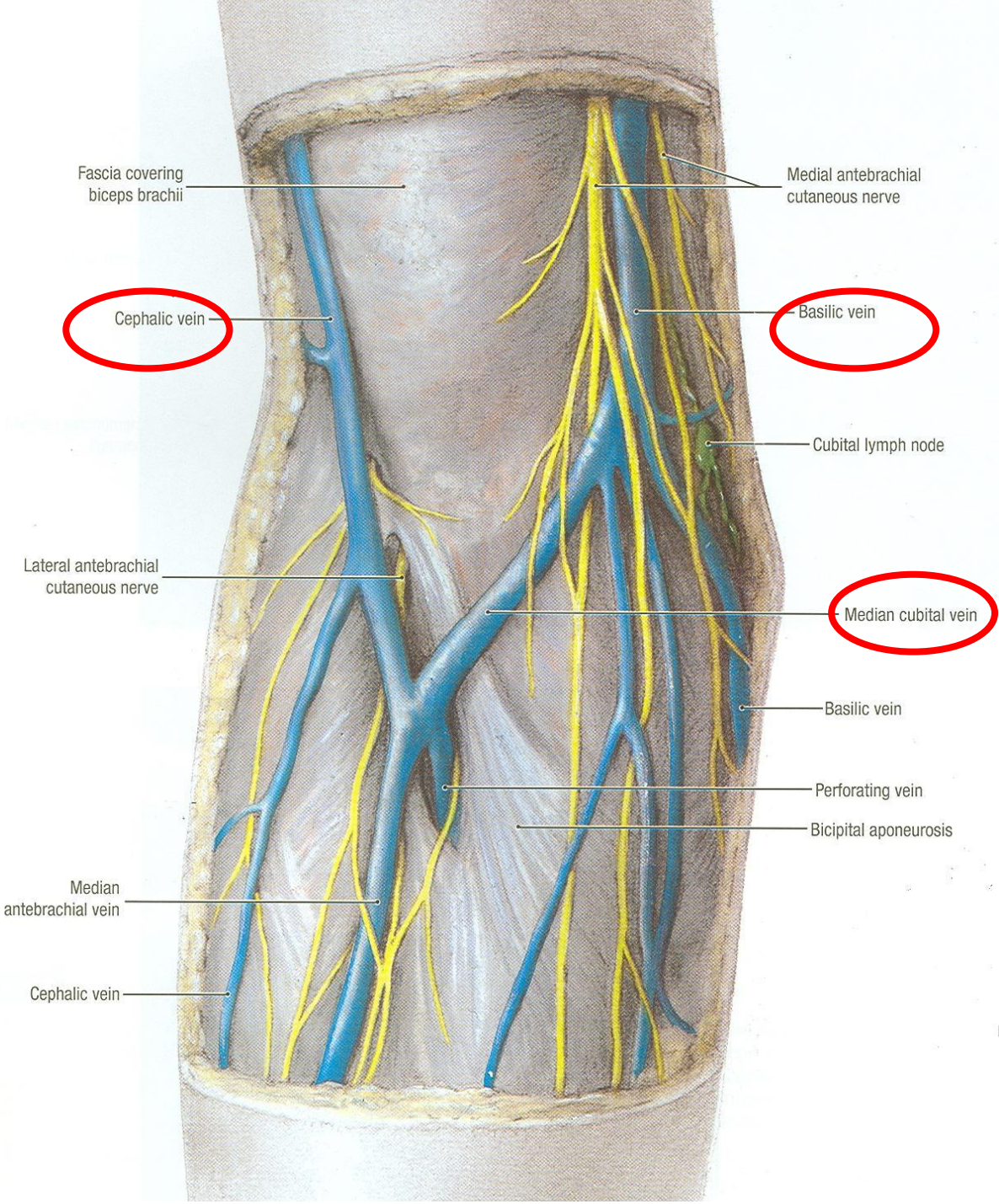
**1.Skin**

**2.Superficial fascia containing:**

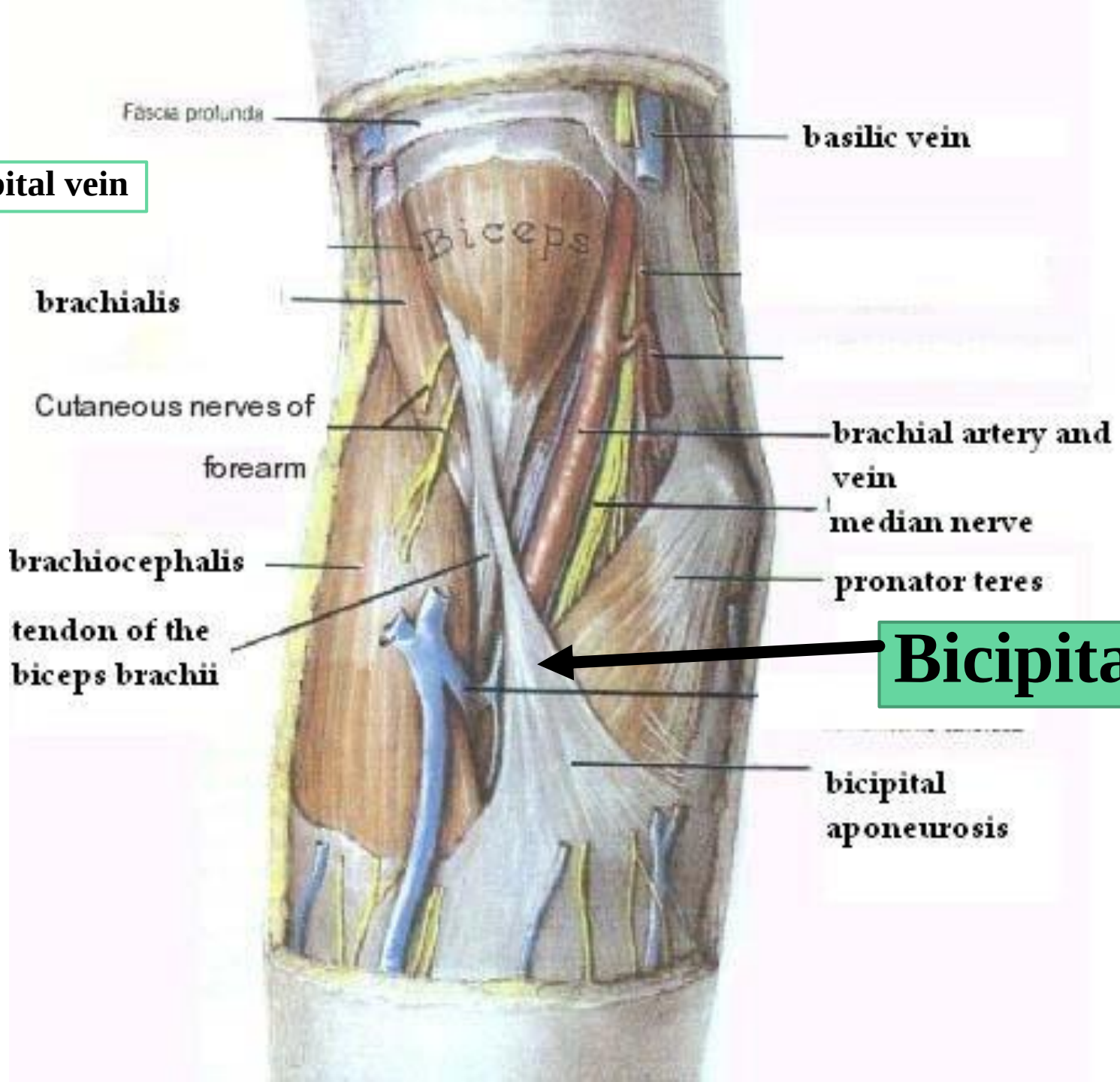
- **Cephalic vein**
- **lateral cutaneous nerve of forearm**
- **basilic vein**
- **medial cutaneous nerve of forearm**
- **Median cubital vein**

**3. Deep fascia**

**Supported by the Bicipital aponeurosis**



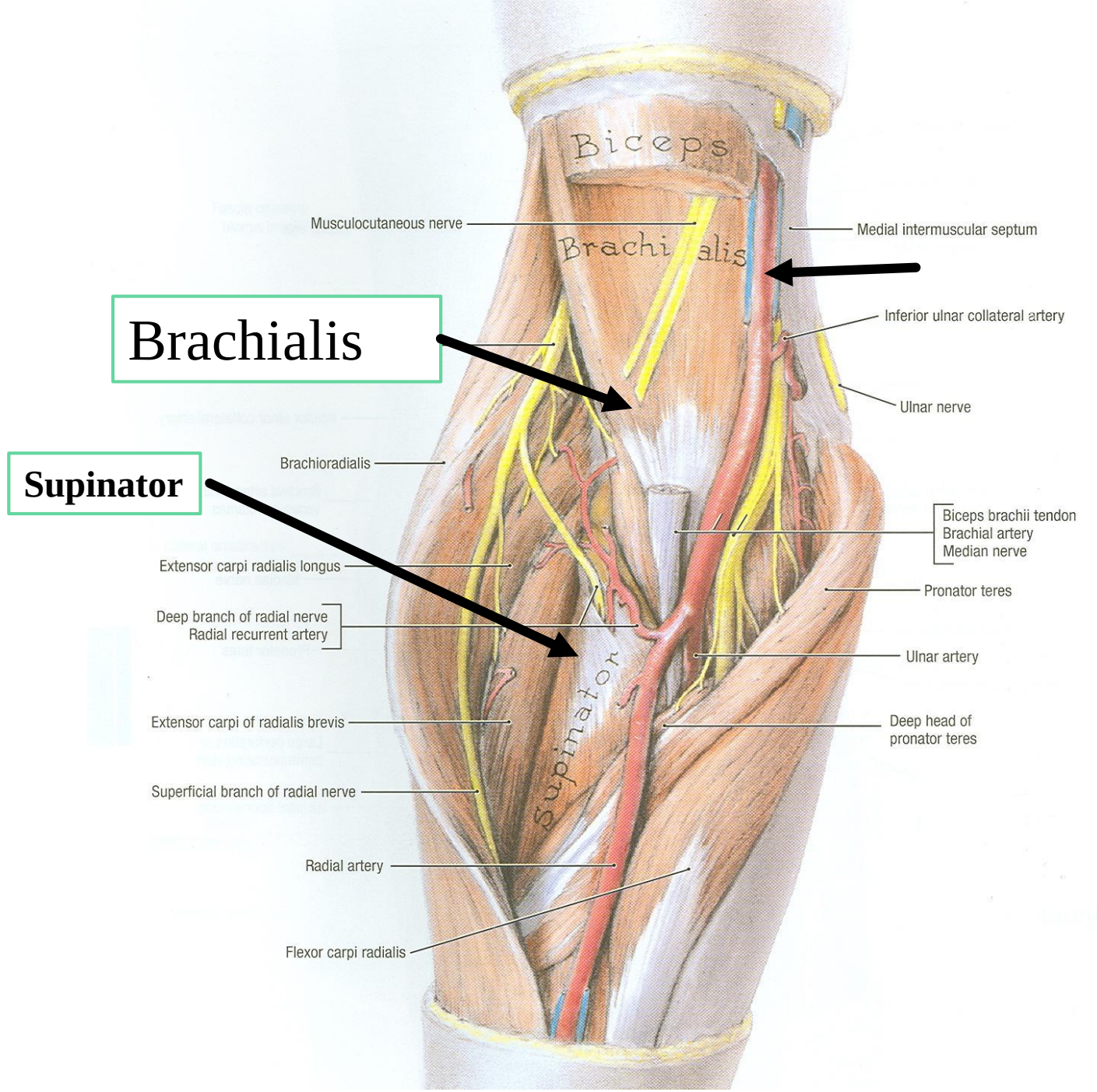
➢**Median cubital vein**




**Bicipital aponeurosis**

- **FLOOR:**

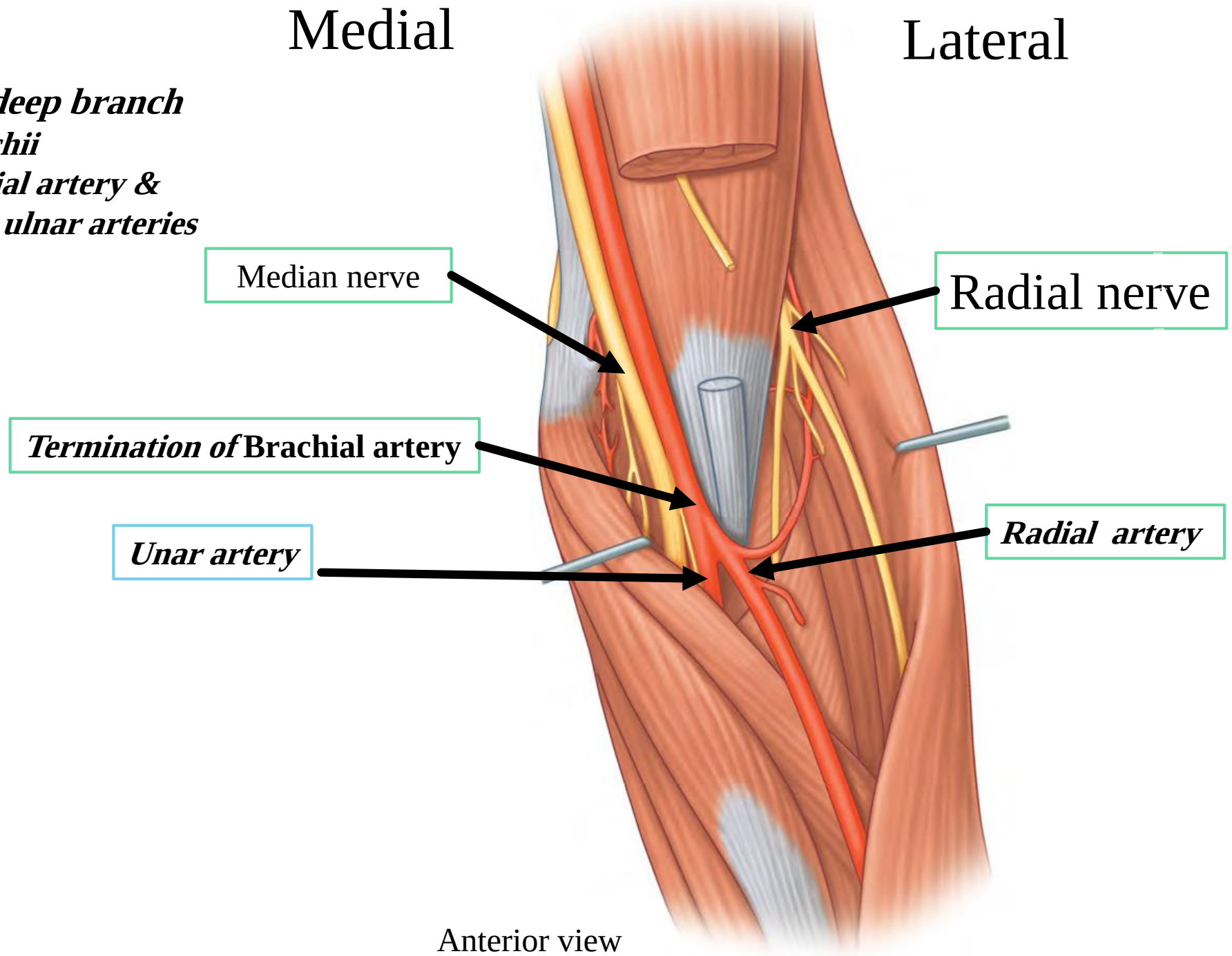
1. **Brachialis (medially)**
2. **Supinator (laterally)**



**CONTENTS:**

***From lateral to medial:***

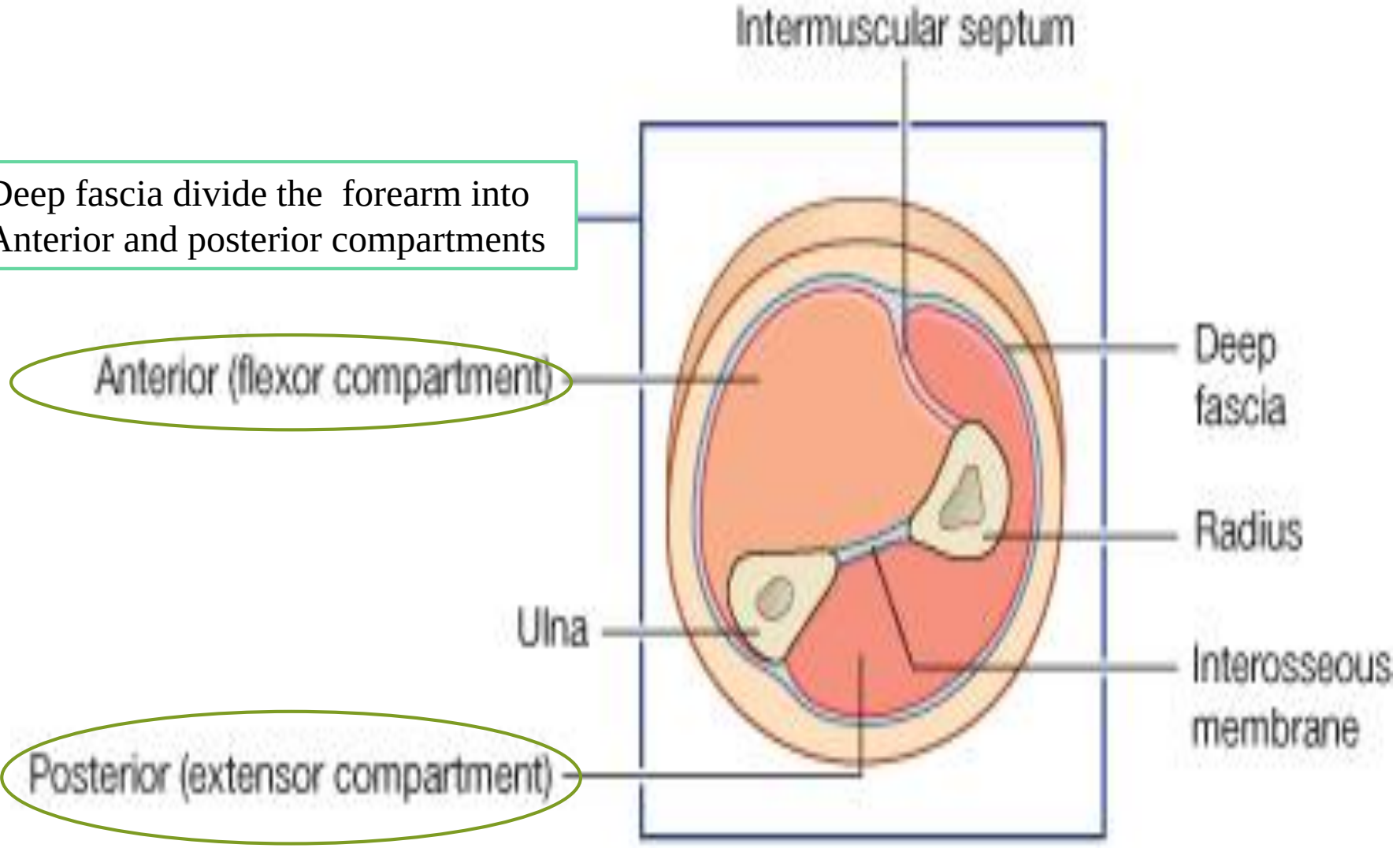
1. ***Radial nerve & its deep branch***
2. ***Tendon of biceps brachii***
3. ***Termination of brachial artery & beginning of radial & ulnar arteries***
4. ***Median nerve***



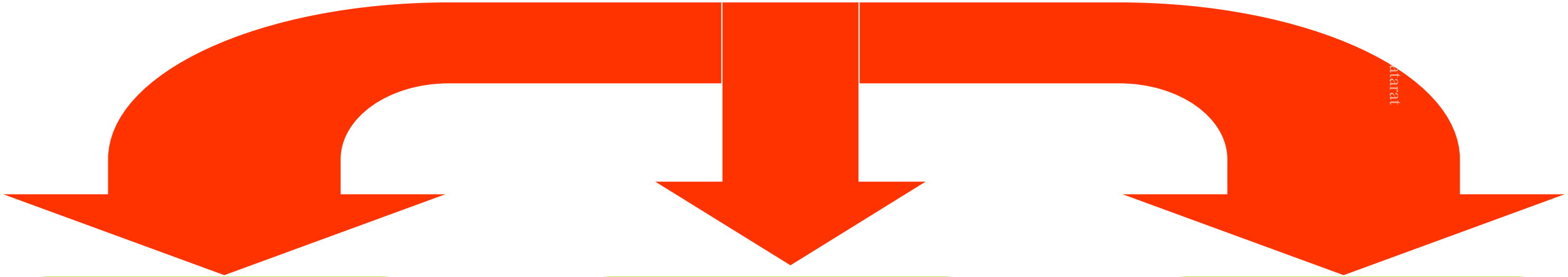

Anterior view

# Anterior Compartments of the Forearm

Deep fascia divide the forearm into Anterior and posterior compartments



# ANTERIOR COMPARTMENT

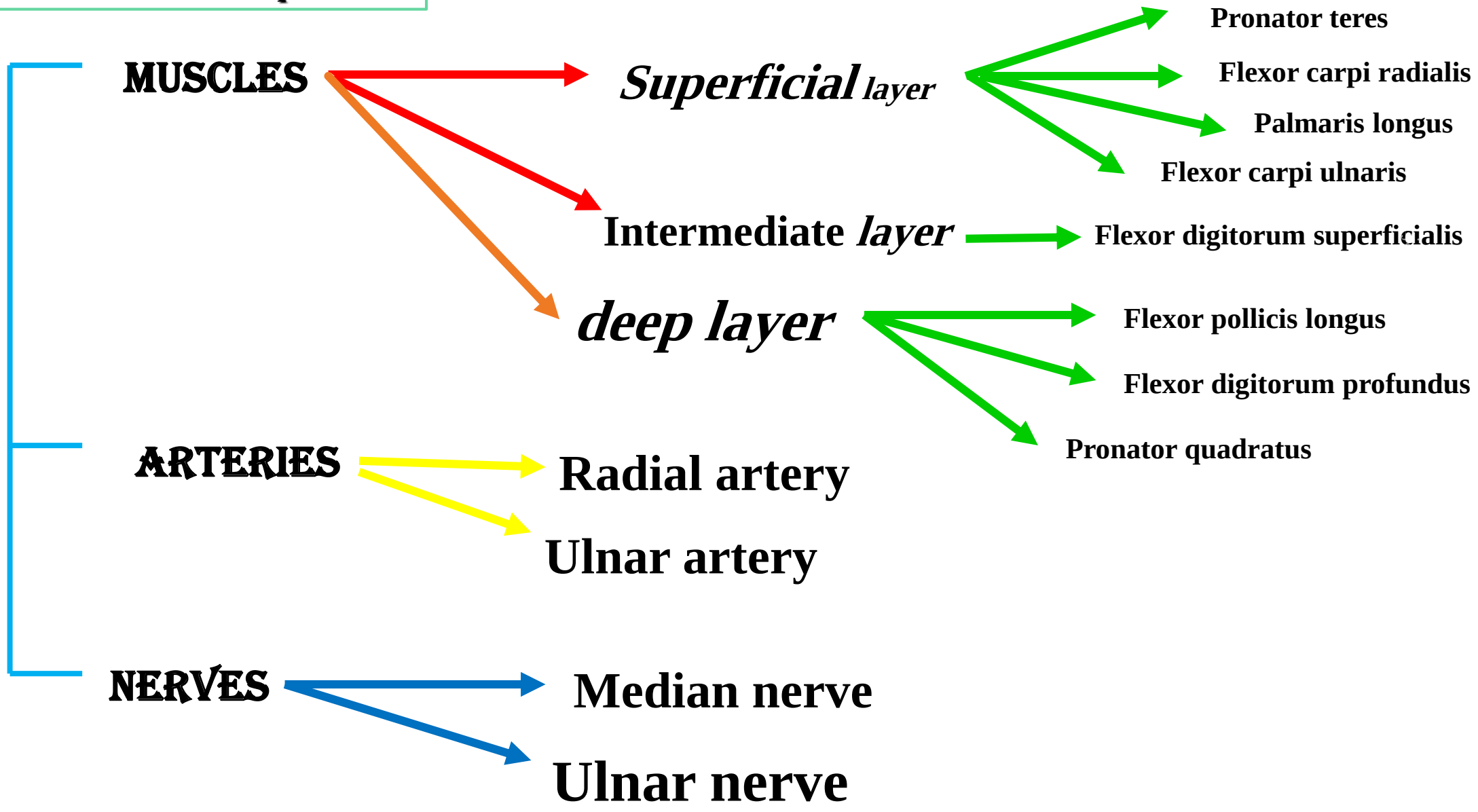


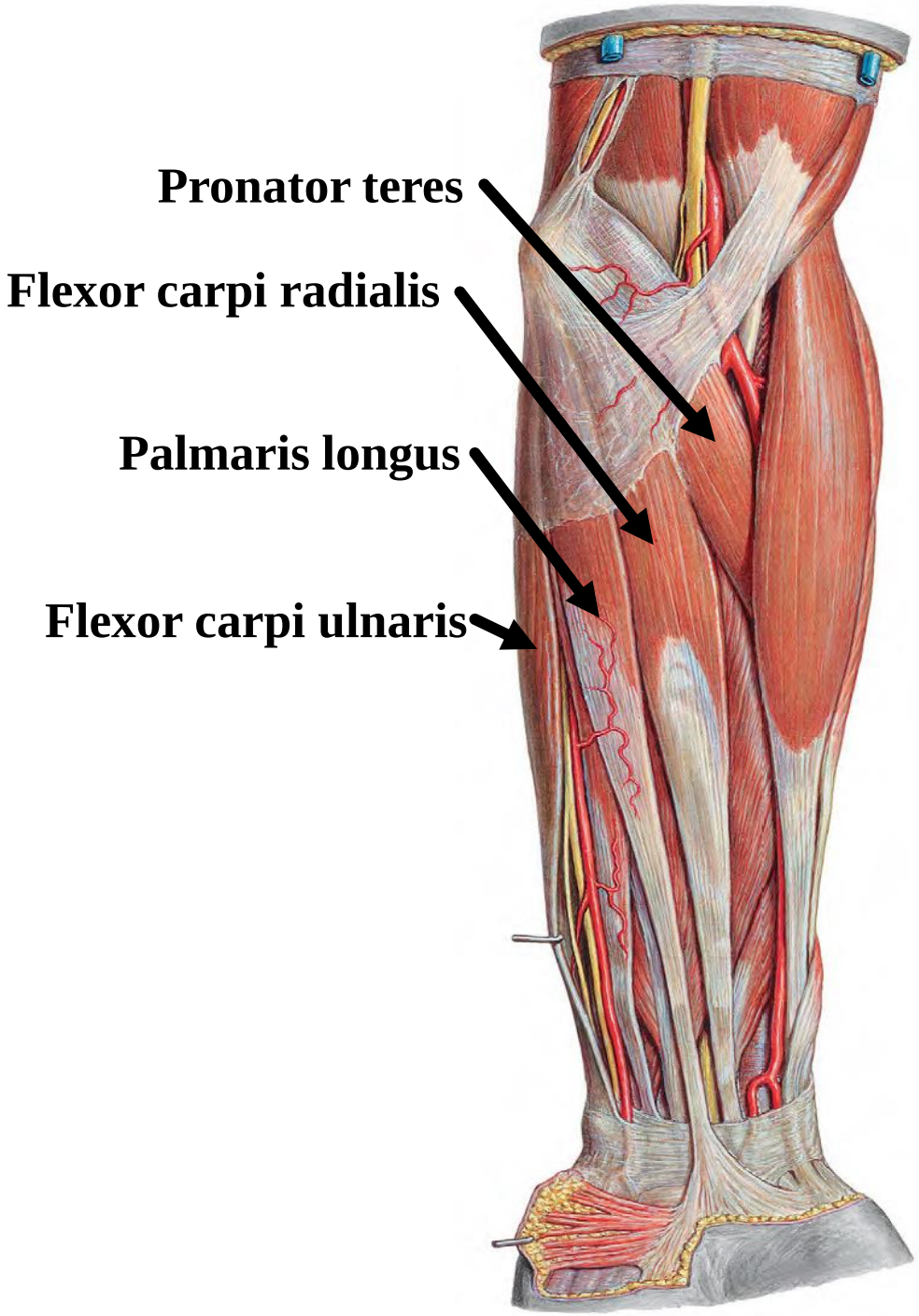
**Muscles**

**Vessels**

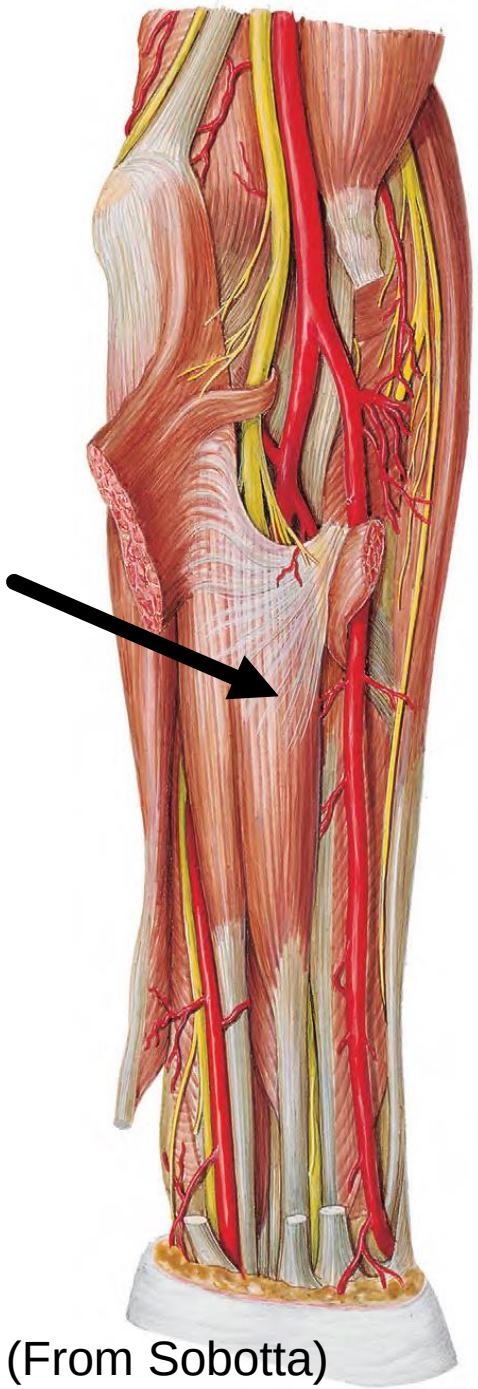
**Nerves**

# Contents of the anterior compartment




Pronator teres
Flexor carpi radialis
Palmaris longus
Flexor carpi ulnaris

FLEXOR DIGITORUM SUPERFICIALIS



The deep flexor muscles of the left forearm. (From Sobotta)

# The superficial group of the muscles of the front of forearm

# Pronator teres muscle

- **Origin:**

Medial epicondyle (common flexion origin, CFO)

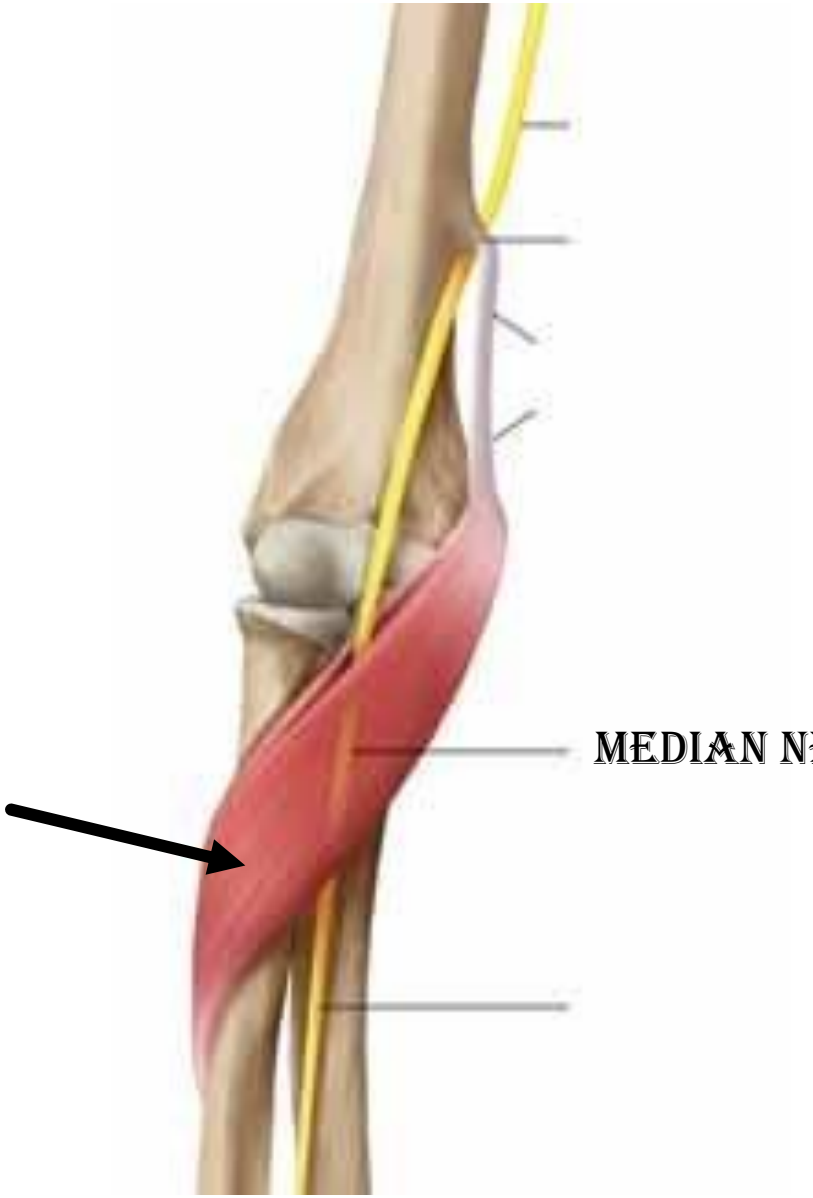
- **Insertion:**
  - **Into the lateral surface of the shaft of the radius.**
- **Nerve Supply:**

**From the median nerve.**

- **Action:**

1. **Pronation of the forearm**
2. **Flexion of the forearm**.

# The median nerve passes through pronator teres muscle



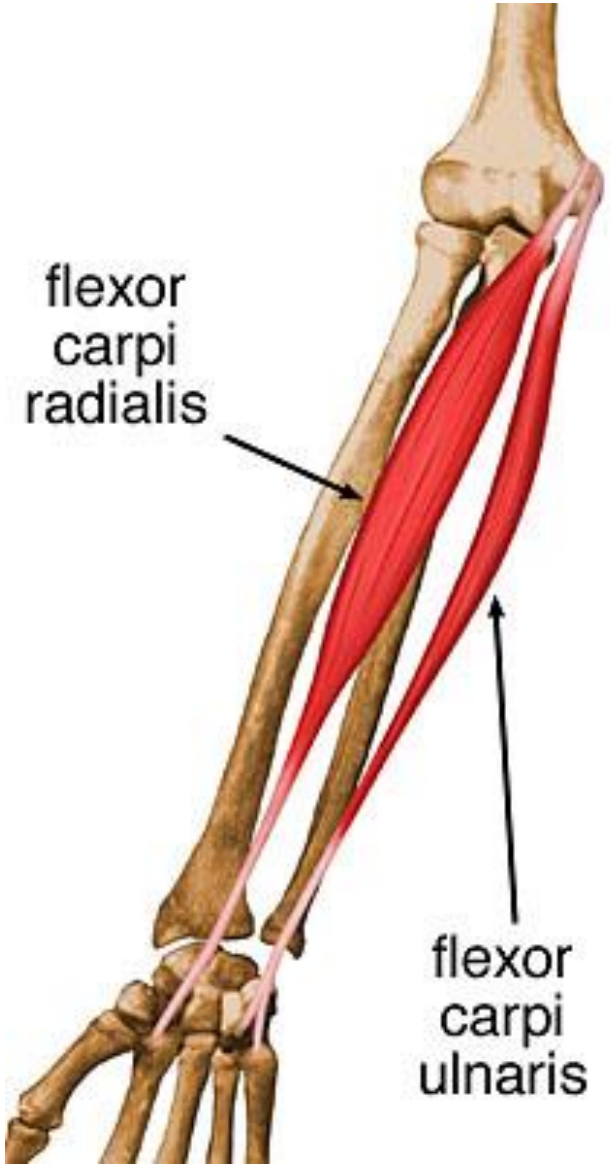
# The superficial group of the muscles of the front of forearm

## Flexor carpi radialis

- **Origin:**
  - From the medial epicondyle of the humerus (CFO)
- **Insertion:**
  - Into the bases of the 2nd and 3rd metacarpal bones.
- **Nerve Supply:**

From the median nerve.

- **Action:**
  1. Flexion of the hand at the wrist joint.
  2. Abduction of the hand at the wrist joint.



# The superficial group of the muscles of the front of forearm

## Palmaris longus

- **Origin:**
  - From the medial epicondyle of the humerus (CFO)
- **Insertion:**
  - Into the palmar aponeurosis and flexor retinaculum.
- **Nerve Supply:**
  - From the median nerve.
- **Action:**
  - Flexion of the hand at the wrist joint.

# The superficial group of the muscles of the front of forearm

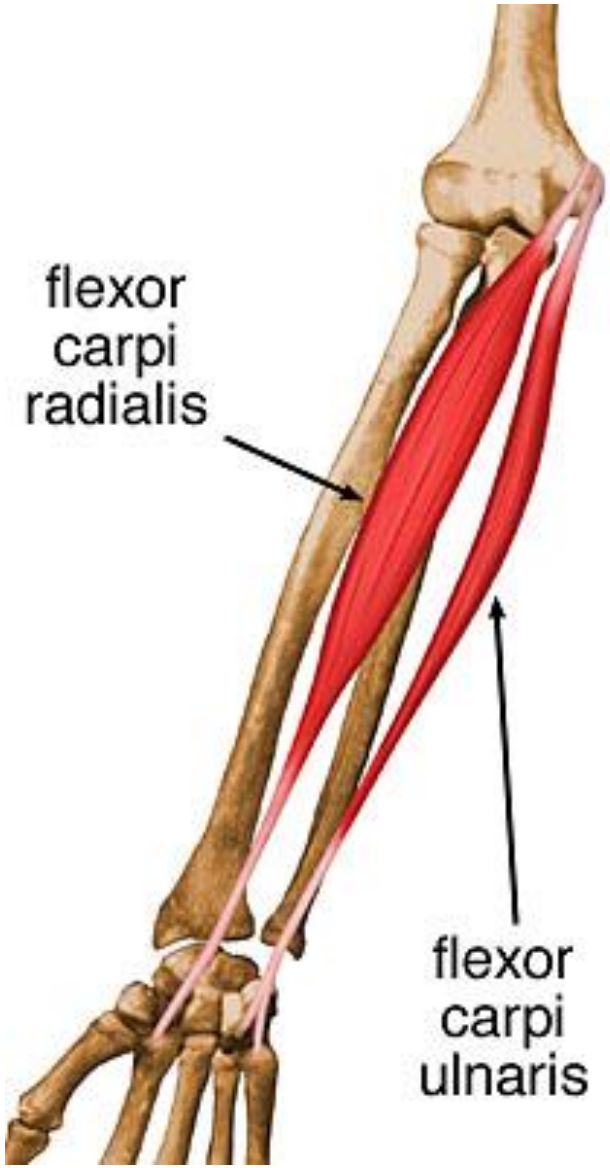
## Flexor carpi ulnaris

- **Origin:**

  Medial epicondyle(CFO)

- **Insertion:**
  - **Into the pisiform bone, hook of hamate and base of the 5th metacarpal bone.**
- **Nerve Supply:**
  - **From the ULNAR nerve**
  - **Action:**

1. **Flexion of the hand at the wrist joint.**
2. **Adduction of the hand at the wrist joint.**



# The intermediate layer of the muscles of the front of forearm

## Flexor digitorum superficialis

- **Origin:**

  Take origin from three bone
  CFO +radius + ulna

- **Insertion:**
  - **into the middle phalanges of the medial 4 fingers.**
- **Nerve Supply:**
  - **From the median nerve.**
- **Action:**

  **Flexes middle phalanx of fingers and assists in flexing proximal phalanx and hand.**

# The deep layer of the muscles of the front of forearm

## Flexor pollicis longus

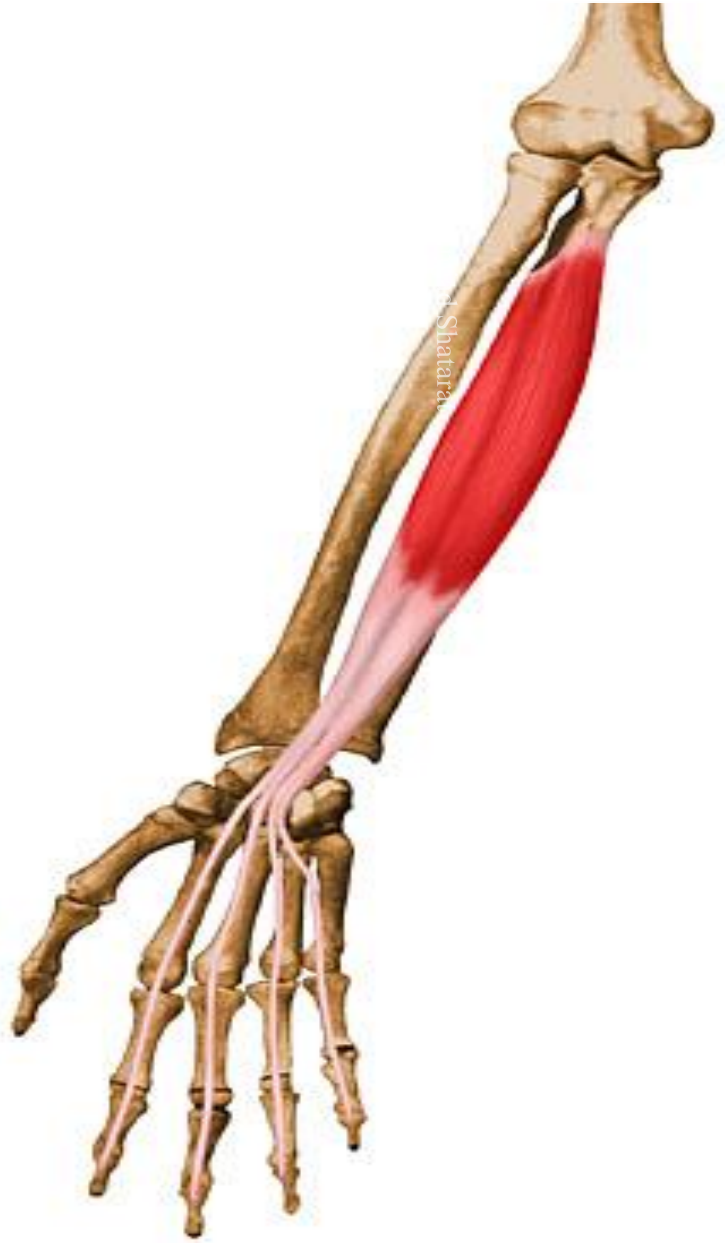
- **Origin:**
  - From the anterior surface of the shaft of the radius and radial half of the interosseus membrane.
- **Insertion:**
  - distal phalanx of the thumb.
- **Nerve Supply:**
  - From the anterior **interosseus nerve** (branch of the median nerve).
- **Action:**
  - Flexes distal phalanx of thumb.

# The deep layer of the muscles of the front of forearm

## Flexor digitorum profundus

- **Origin:**
  - From the anterior and medial surface of the shaft of the ulna and and anterior medial half of the interosseus membrane.
- **Insertion:**
  - inserted into the distal phalanges of the medial 4 fingers.
- **Nerve Supply:**
  - Its lateral half: from ***the anterior interosseus nerve*** (branch of the median nerve).
  - It medial half: from **the ulnar nerve**
  - **Action:**

1. Flexes distal phalanx of fingers;
2. assists in flexion of middle and proximal phalanges
3. Helps of flexion of the hand at the wrist joint.



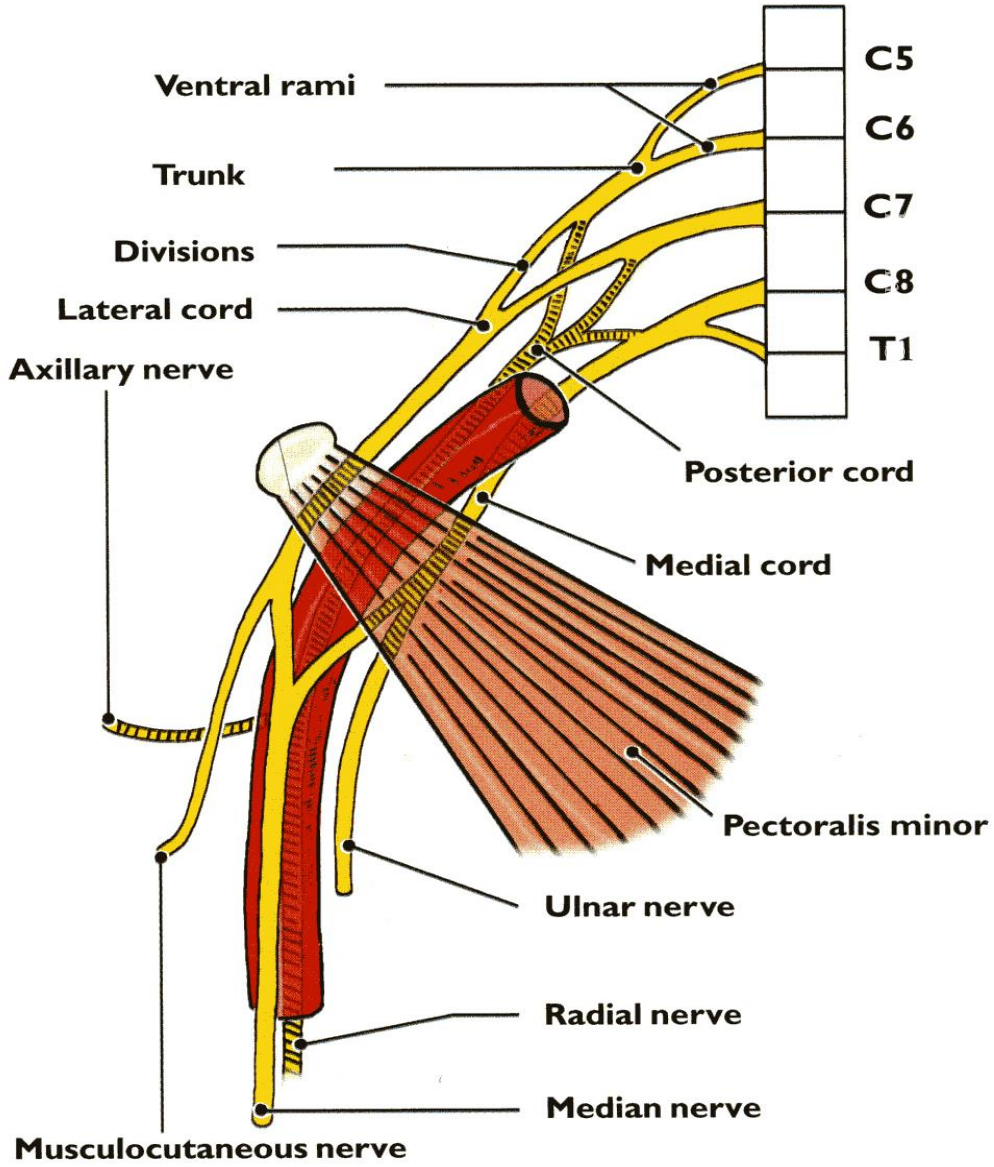
# The deep layer of the muscles of the front of forearm

## Pronator quadratus

- **Origin:**
  - **From the anterior surface of the shaft of the ulna.**
- **Insertion:**
  - **Into the anterior surface of the shaft of the radius.**
- **Nerve Supply:**
  - **From the anterior interosseus nerve (branch of the median nerve).**
- **Action:**
  - **Pronation of the forearm at the radio-ulnar joints.**

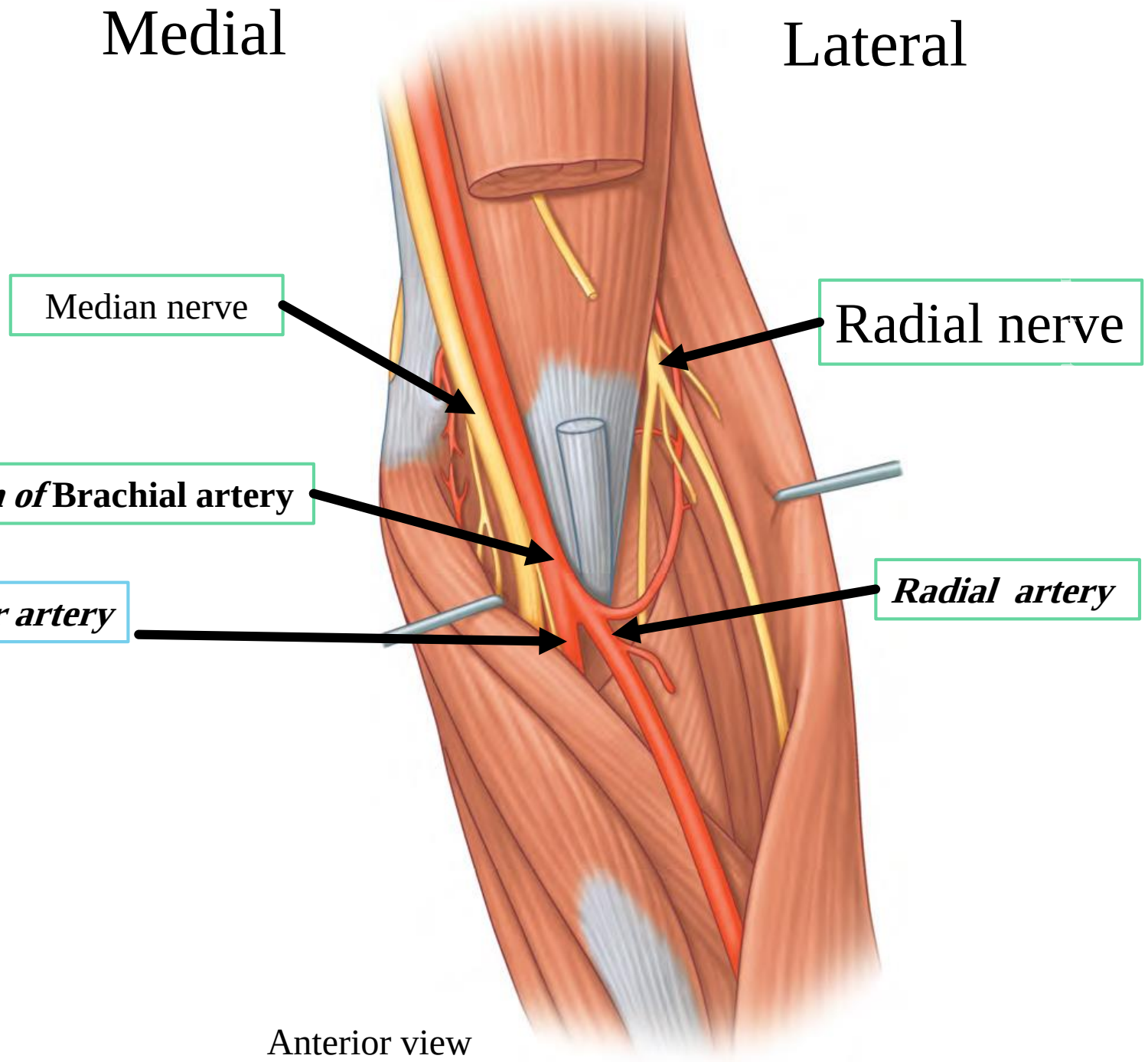
# MEDIAN NERVE C6,7,8 &T1

- **Origin:**
- By 2 roots



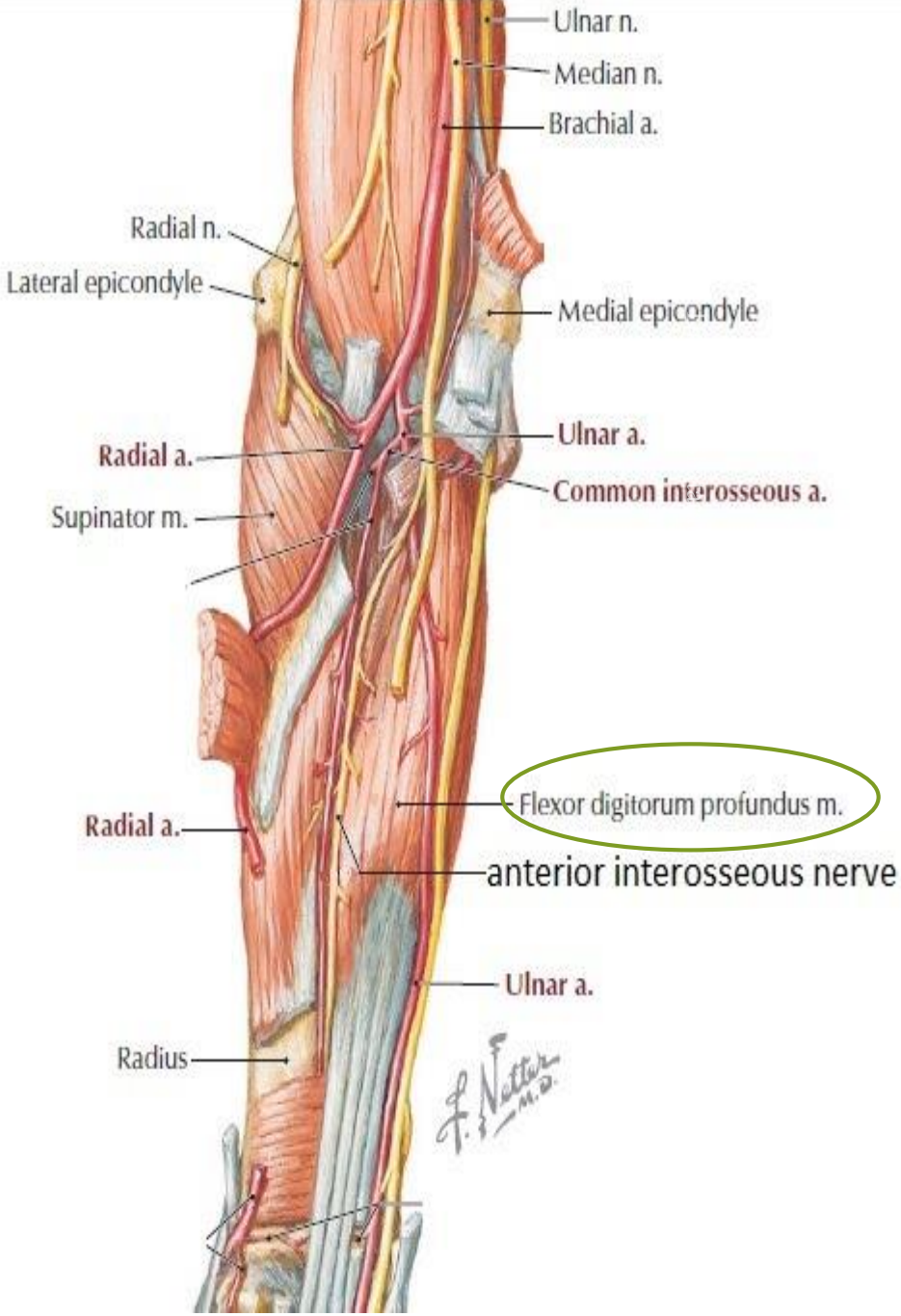
•***At the elbow, it & it is crossed by the <u>bicipital aponeurosis.</u>***

- **In the cubital fossa**
- **it lies deep to the bicipital aponeurosis.**
- ***It lies <u>medial to</u> the <u>tendon of biceps</u>***
- **it runs on the medial side of the brachial artery.**

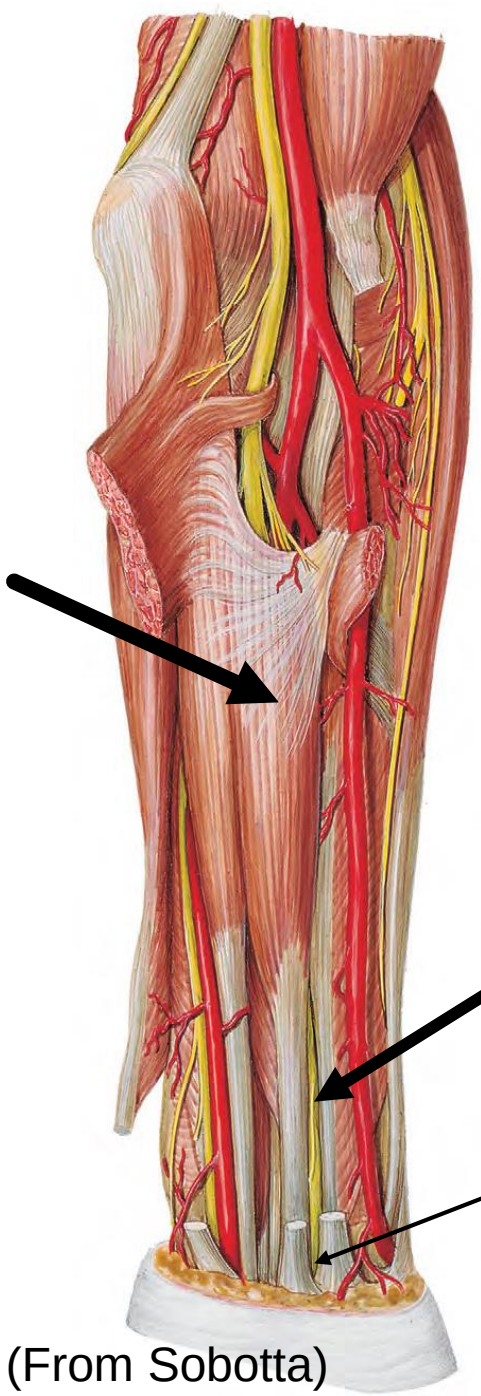



Anterior view

- **It then descends through pronator teres and runs between flexor digitorum superficialis and profundus.**



FLEXOR DIGITORUM SUPERFICIALIS



- **The median nerve then emerges from the lateral side of the flexor digitorum superficialis and becomes superficial (or covered by palmaris longus tendon).**
- **It enters the hand deep to the flexor retinaculum.**

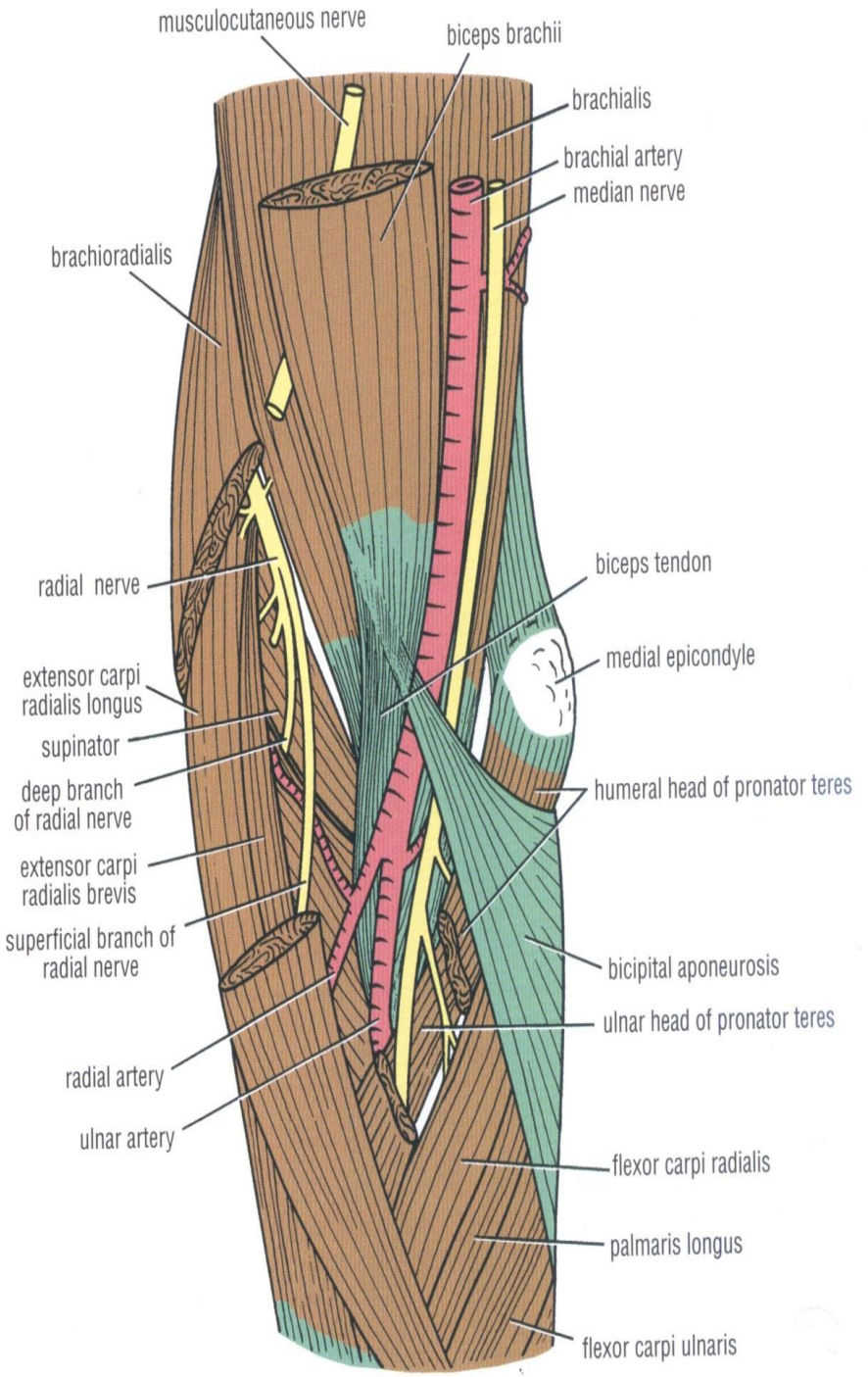
The deep flexor muscles of the left forearm. (From Sobotta)

# Branches of median nerve

1. ***Muscular branches:*** **to pronator teres, flexor carpi radialis, palmaris longus and flexor digitorum superficialis.**
2. ***Articular branches:*** **to the elbow joint.**

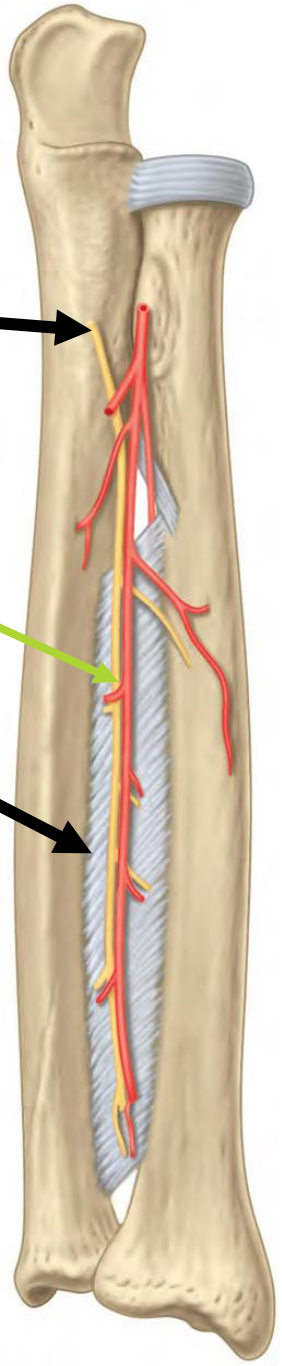
## 3. *Anterior interosseus nerve.*

4. ***Palmar cutaneous branches:*** **passes superficial to the flexor retinaculum and supplies skin of the lateral 2/3 of the palm.**



# Anterior interosseous nerve

- It is a branch from the median nerve
- Runs with the anterior interosseous artery and they both descend anterior to the interosseous membrane



Anterior view

- It then runs between and deep to flexor pollicis longus and flexor digitorum profundus.
- It supplies flexor pollicis longus and the lateral part of flexor digitorum profundus (which sends tendons to the index and middle finger).
- Terminally, it  lies posterior to pronator quadratus, which it supplies.