

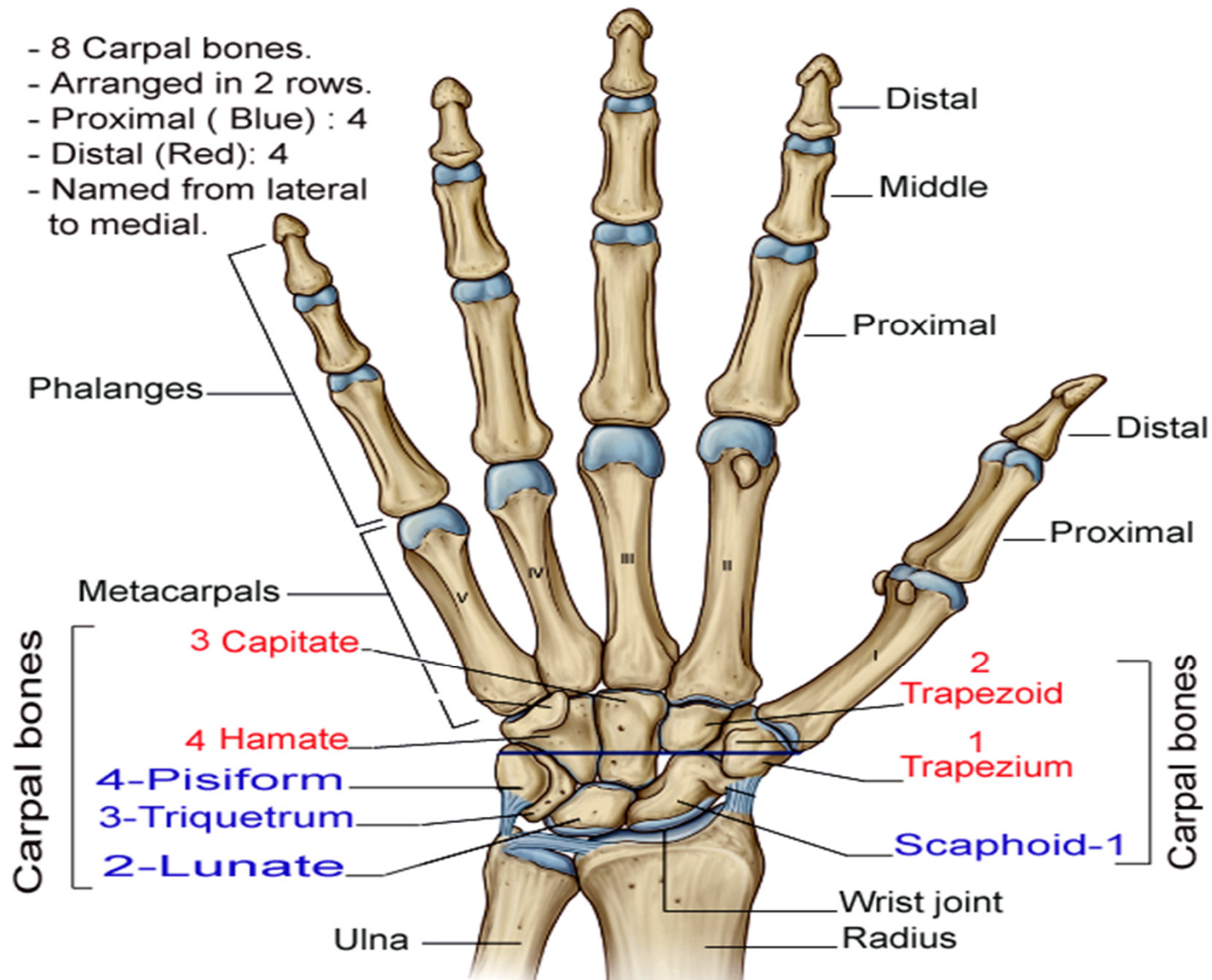


Upper Limb

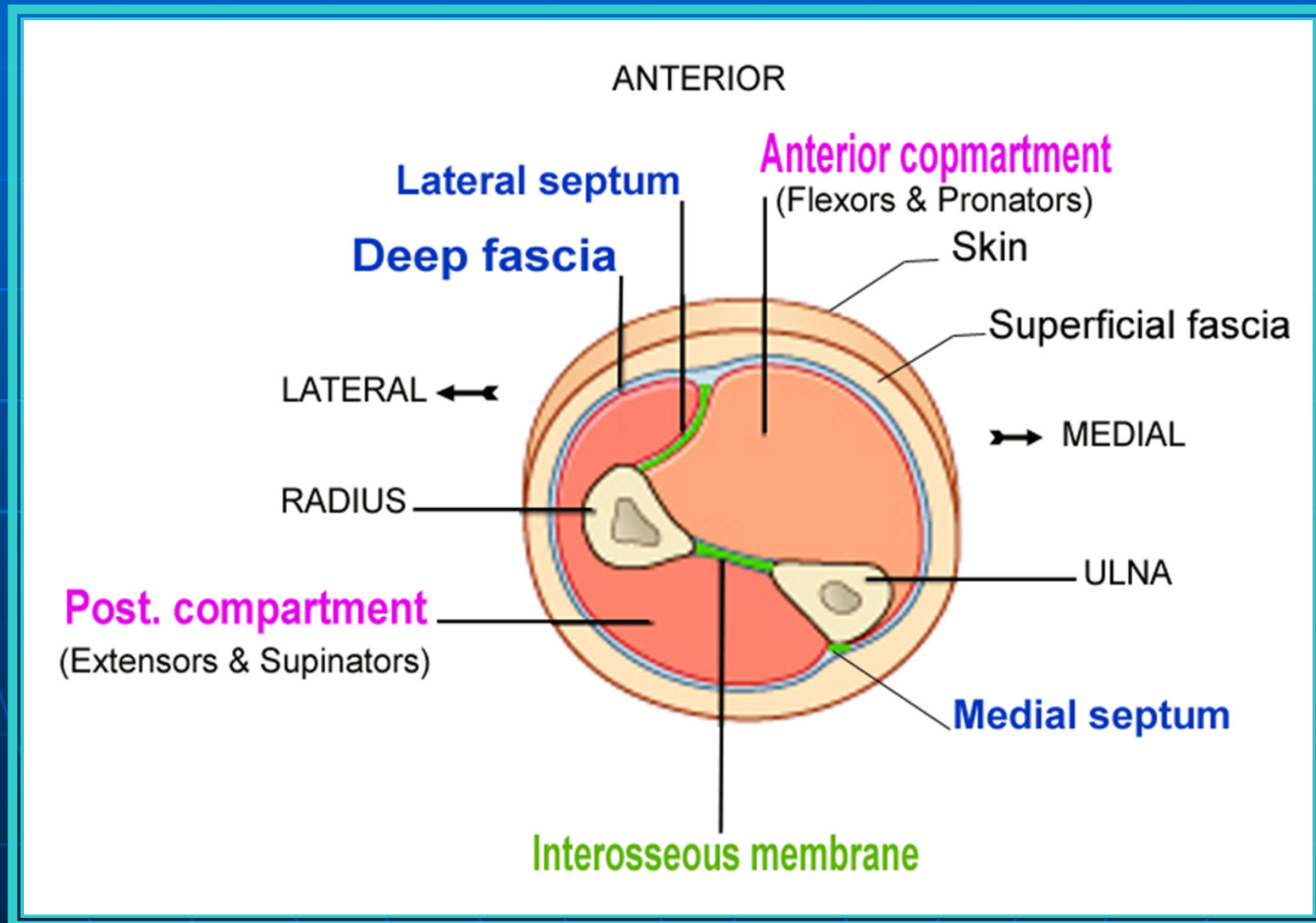
Lecture 6

Anterior compartment of the Forearm

- 8 Carpal bones.
- Arranged in 2 rows.
- Proximal (Blue) : 4
- Distal (Red): 4
- Named from lateral to medial.



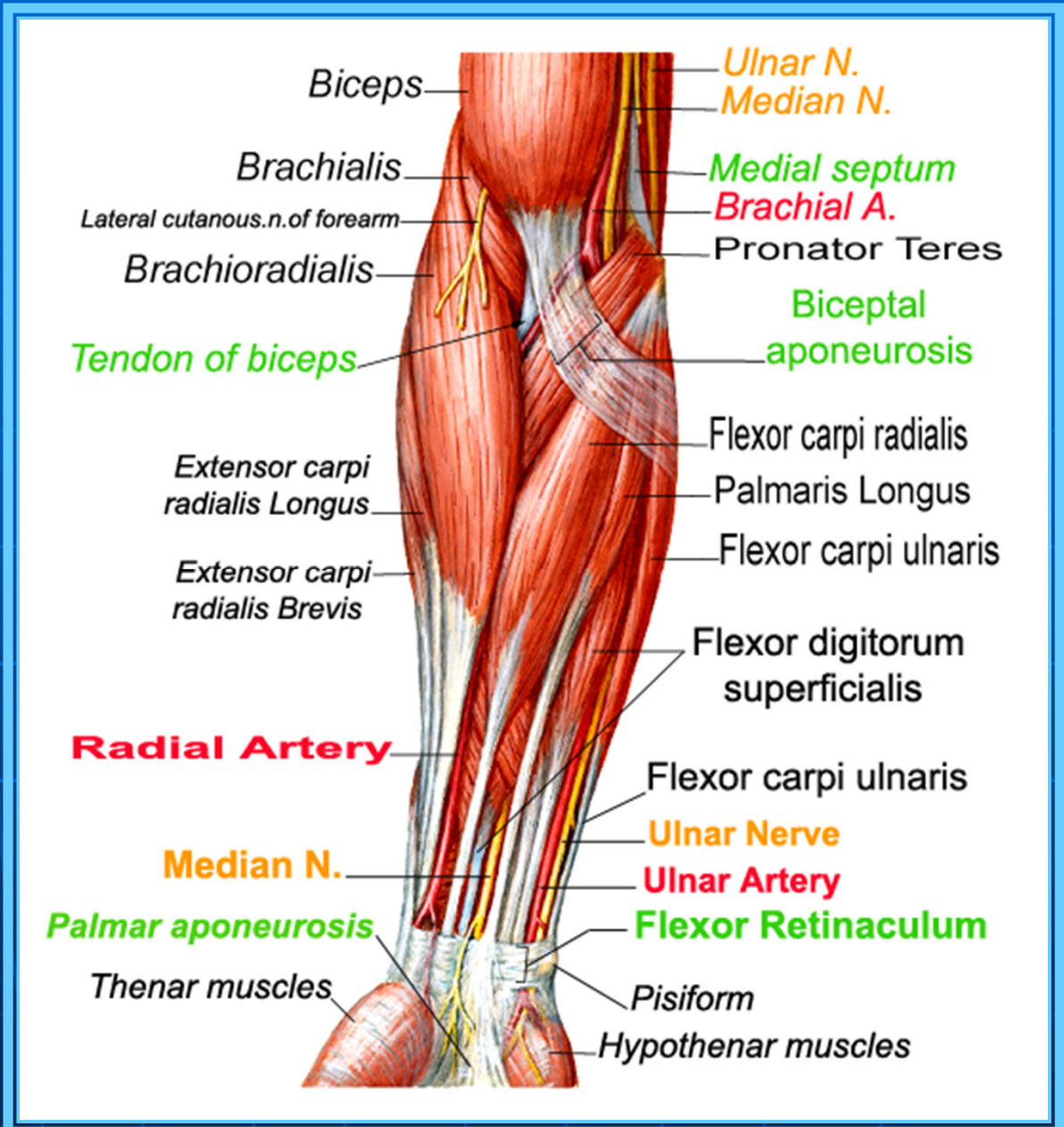
Compartments of the forearm



Forearm

Layers:

1. Skin
2. Superficial fascia.
3. Deep fascia, thickened distal to form flexor retinaculum.



Cubital Fossa

Triangular space
anterior to the elbow.

Borders:

- Base → Line
- Lat → Brachioradialis
- Med → Pronator Teres

Floor: 2Ms

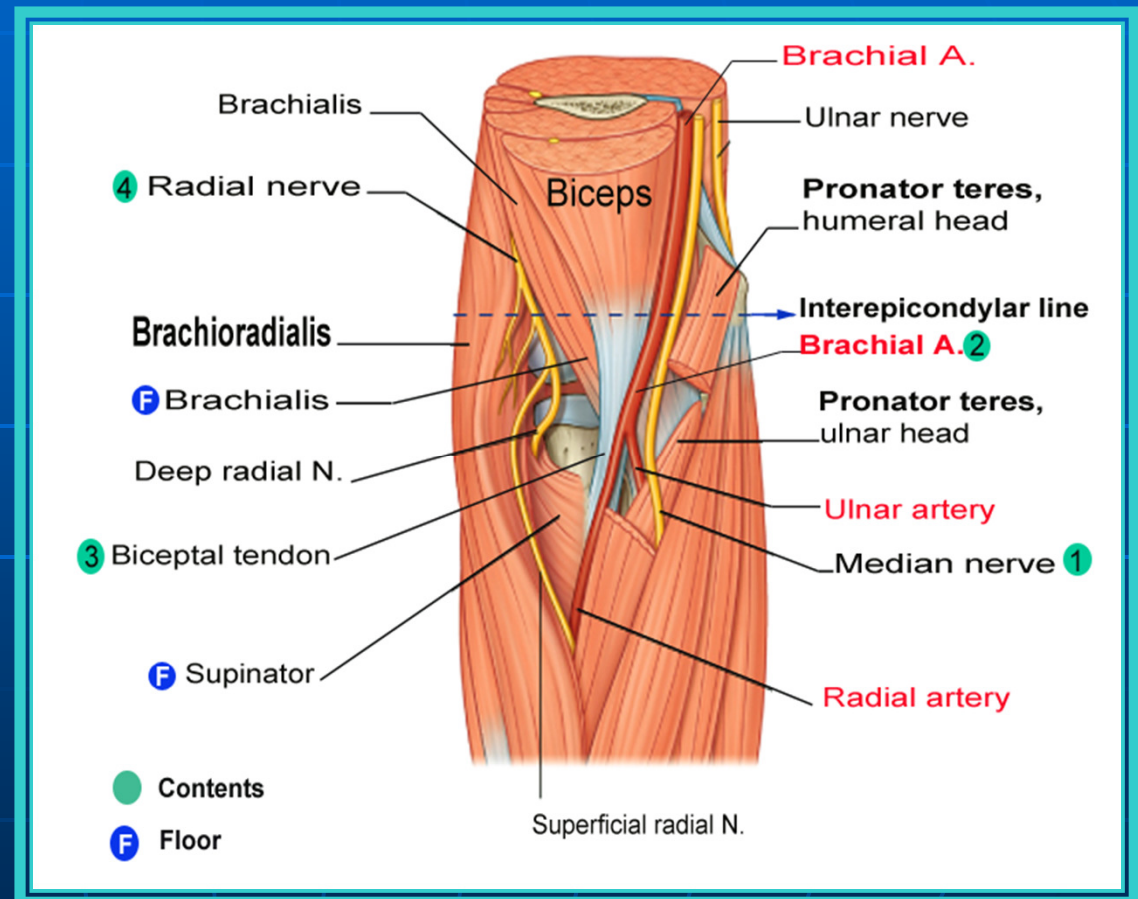
- Brachialis.
- Supinator.

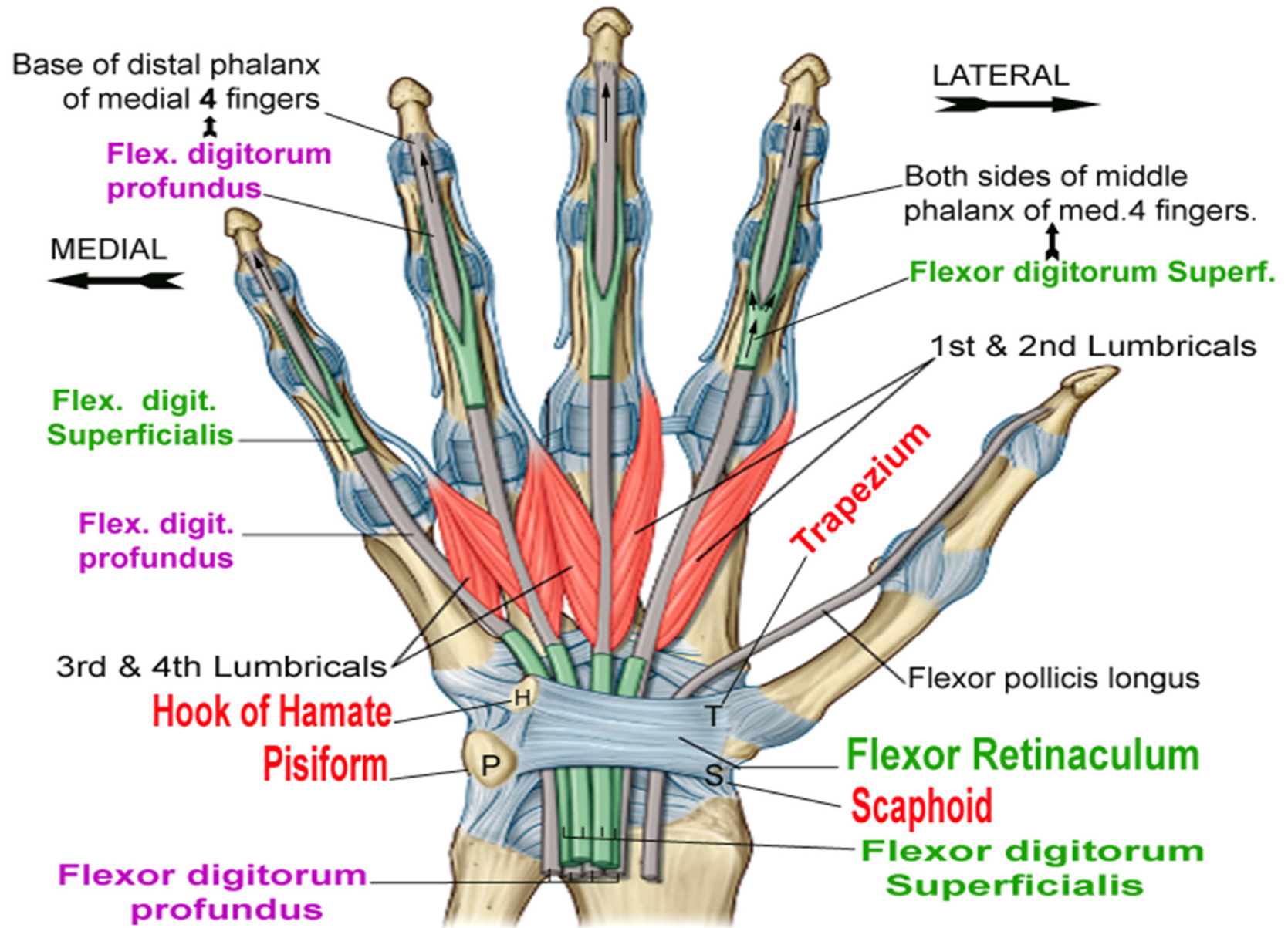
Roof:

- Fascia.
- Median cubital vein.
- Bicipital aponeurosis.

Contents:

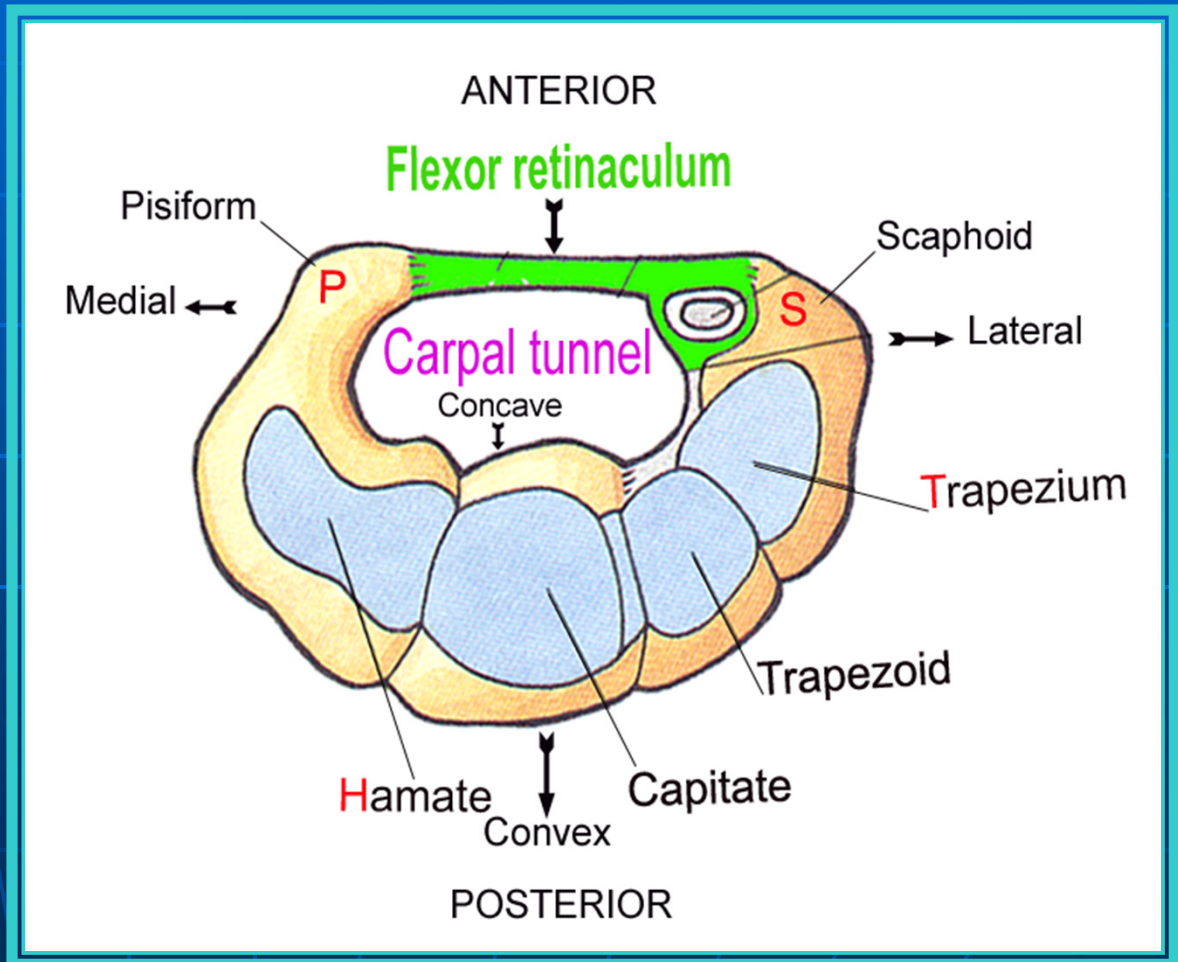
- 1-4





Carpal tunnel

- Carpal bones form a concave arch anterior.
- Flexor retinaculum bridge the concave carpal arch to form the **carpal tunnel** below.

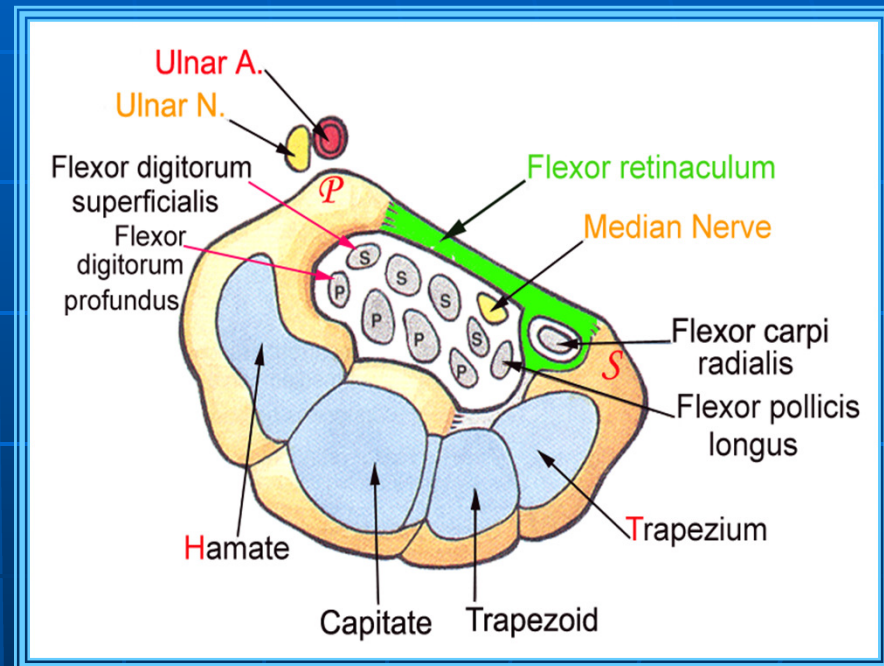


Flexor retinaculum

- Carpal Tunnel: Act as a subway for the long flexor tendons between the forearm and the hand.

Function:

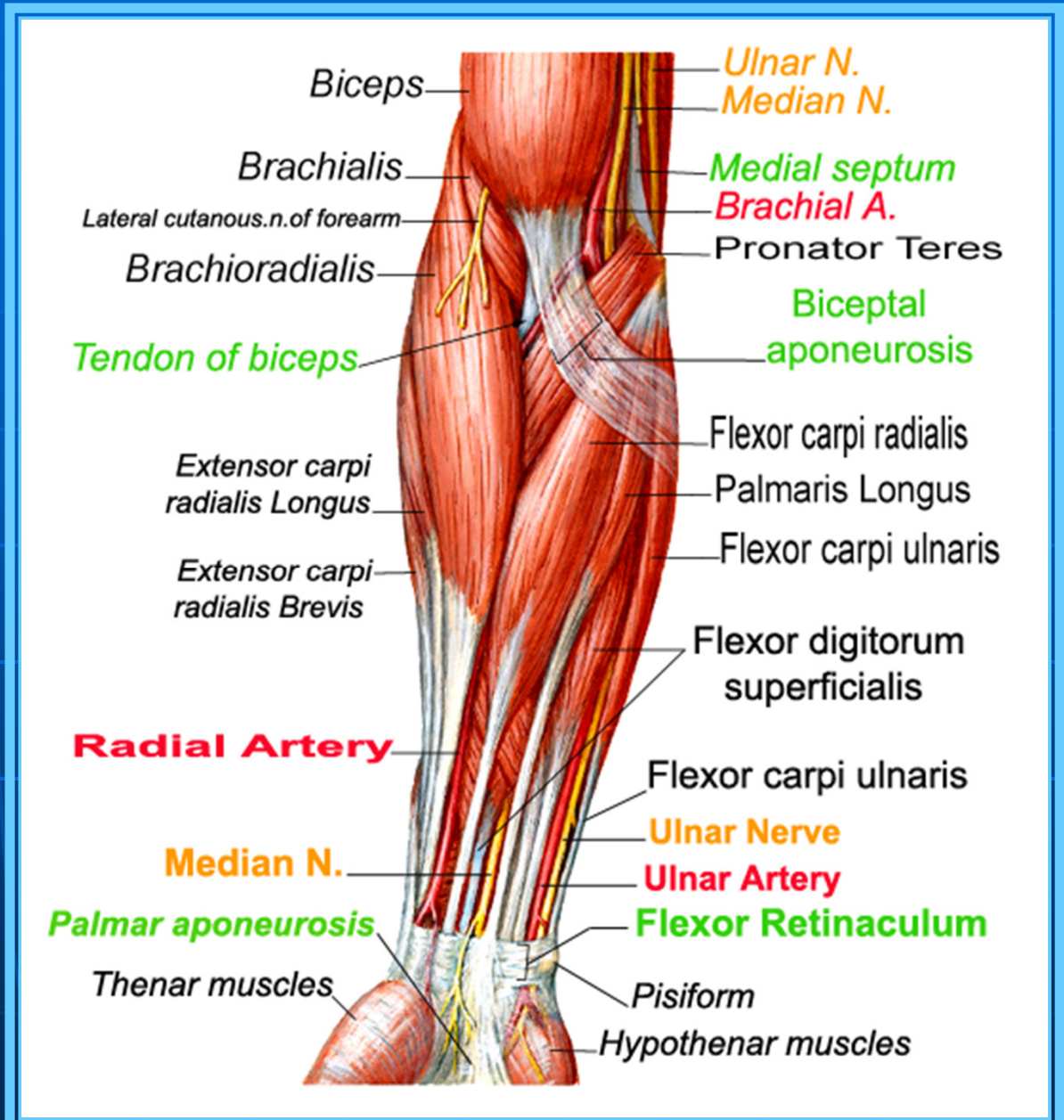
- Hold long flexor tendons to direct their pull while in action.
- 6 Structures pass above the FR.
- 10 Structures pass below the FR.

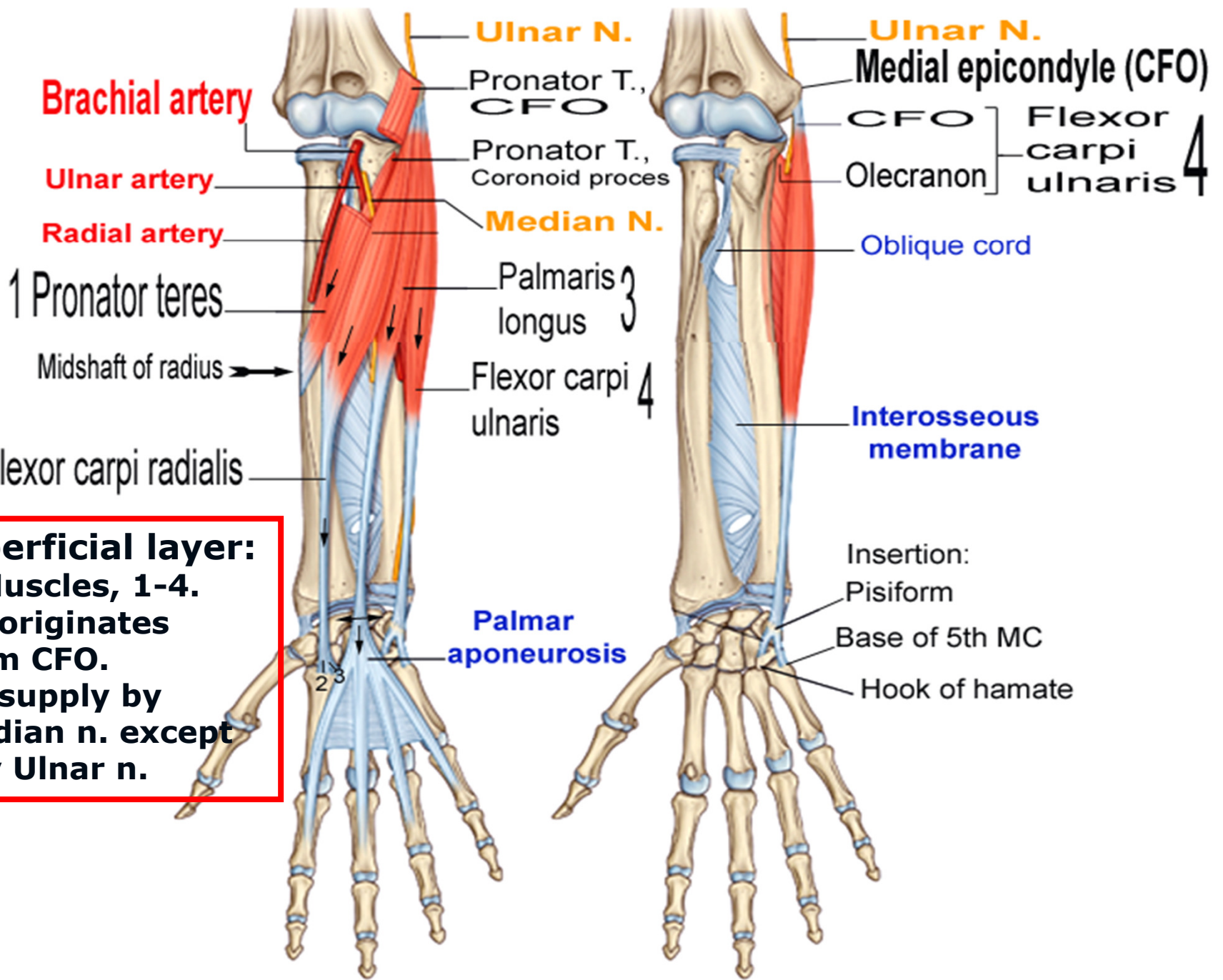


Muscles of the Anterior compartment of Forearm

Three layers:

1. Superficial 4M
2. Middle 1M.
3. Deep 3M.



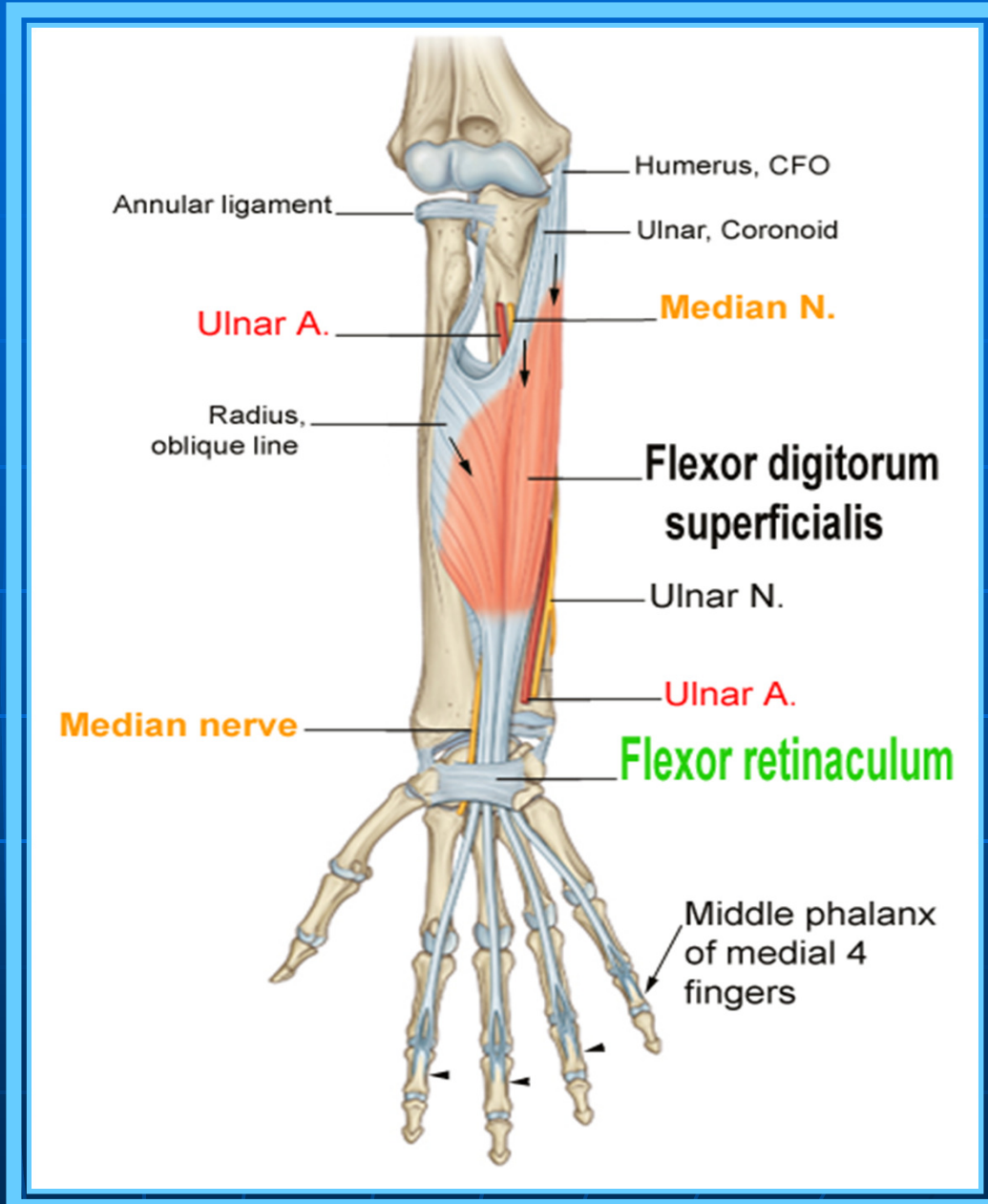


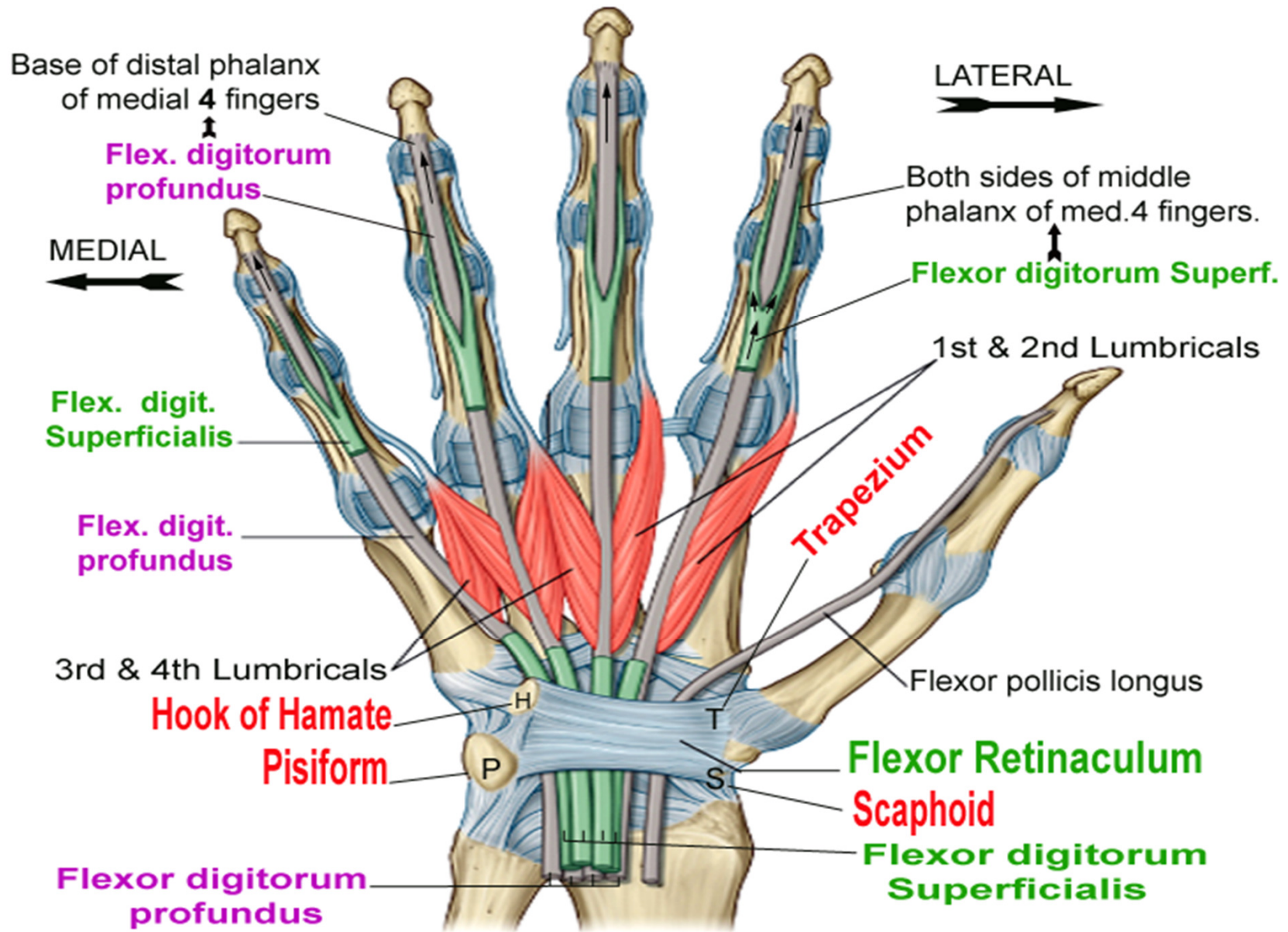
Superficial layer:
 -4 Muscles, 1-4.
 -All originates from CFO.
 -All supply by median n. except 1 by Ulnar n.

Intermediate layer

Consists 1 M → FDS.

- Origin: 3 bones.
- Insertion:
 - Pass deep to flexor retinaculum.
 - Give 4 tendons to medial 4 fingers.
- Action:
 - Flex wrist.
 - Flex fingers.
- NS:
Median N.

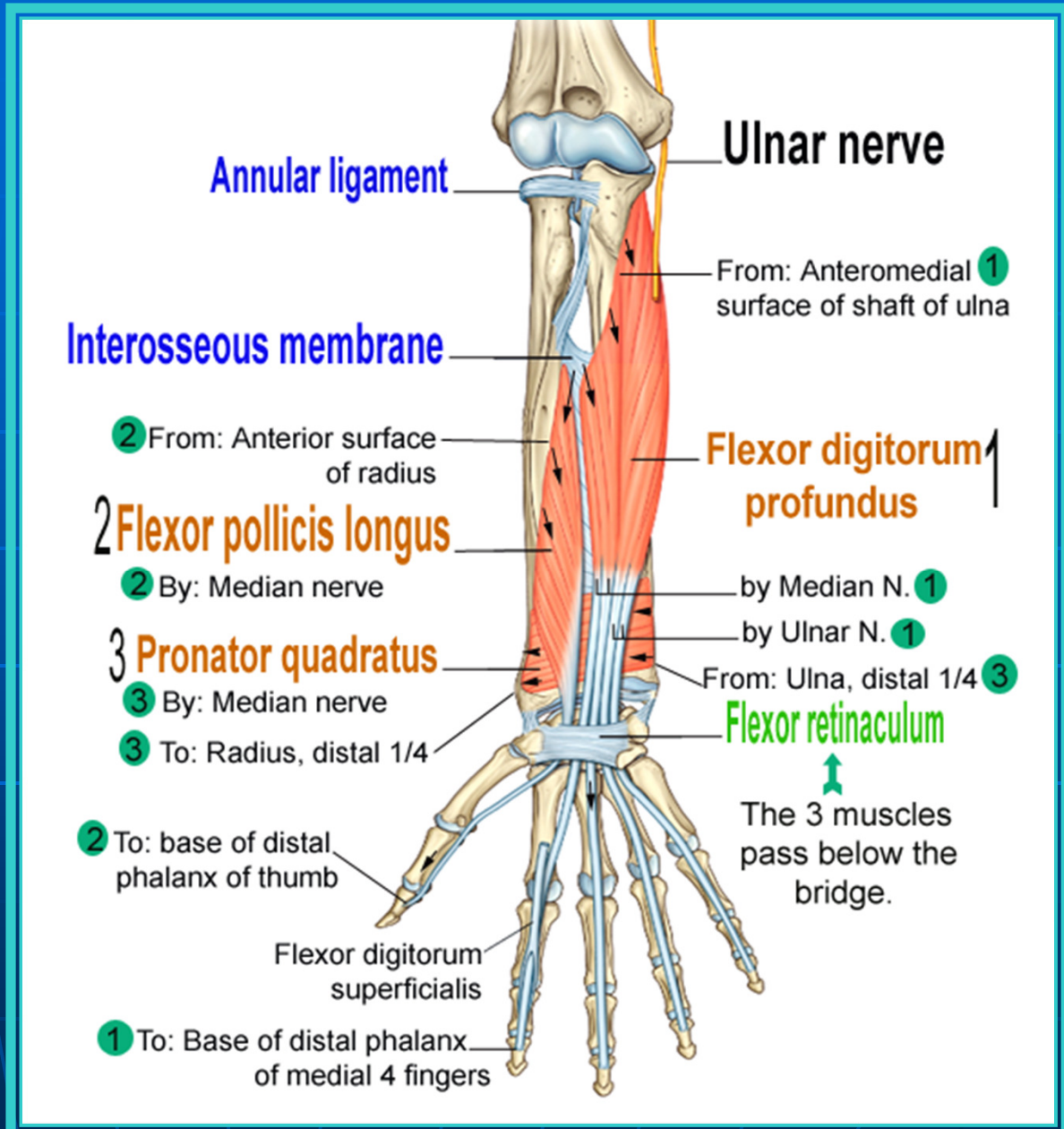


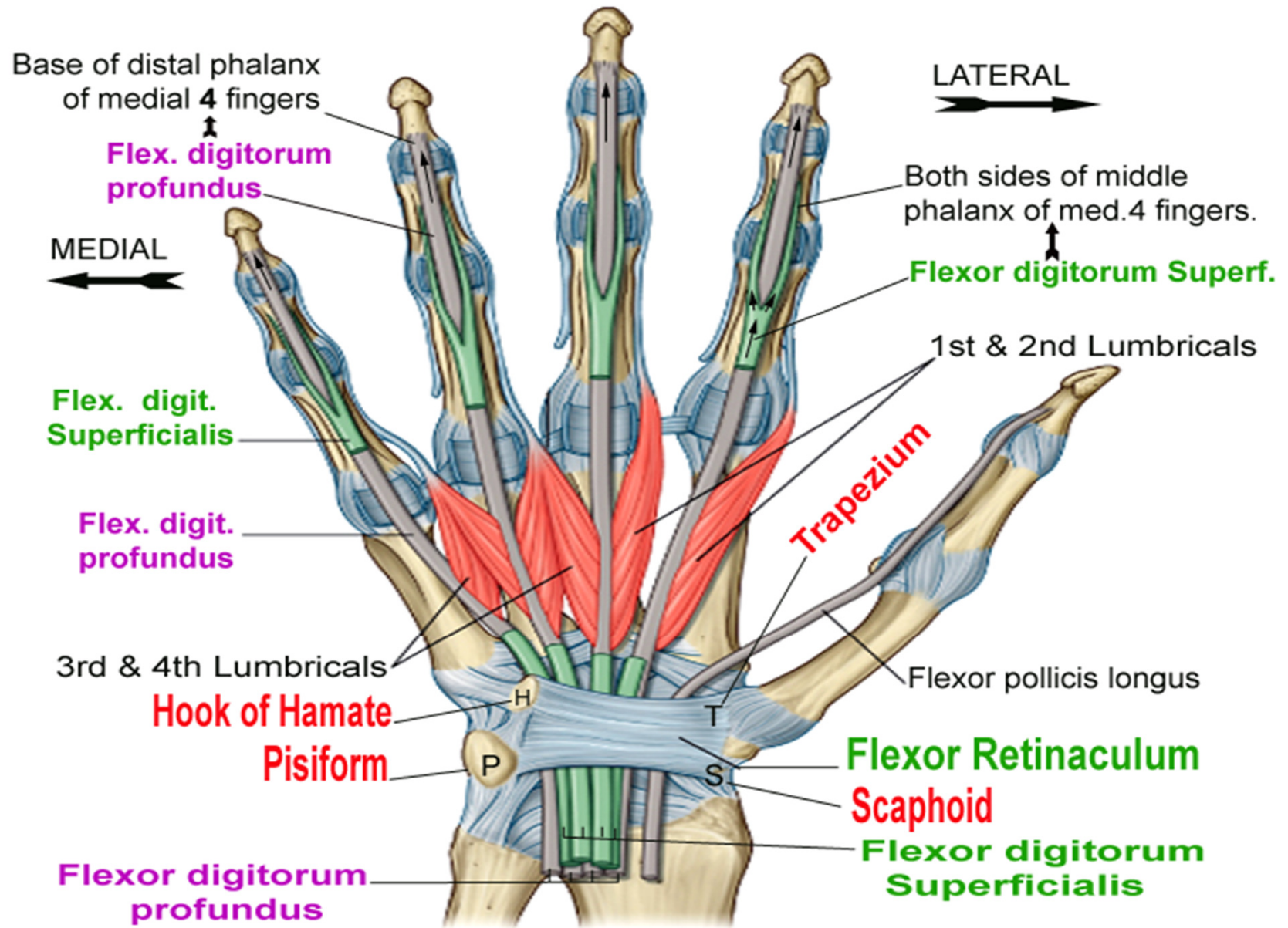


Deep layer

3 muscles (1-3)

- 1 & 2 are flexors.
- No. 3 pronate forearm.
- 2 flexors pass below flexor retinaculum.
- All by median nerve except tendons to the little and ring fingers of FDP.

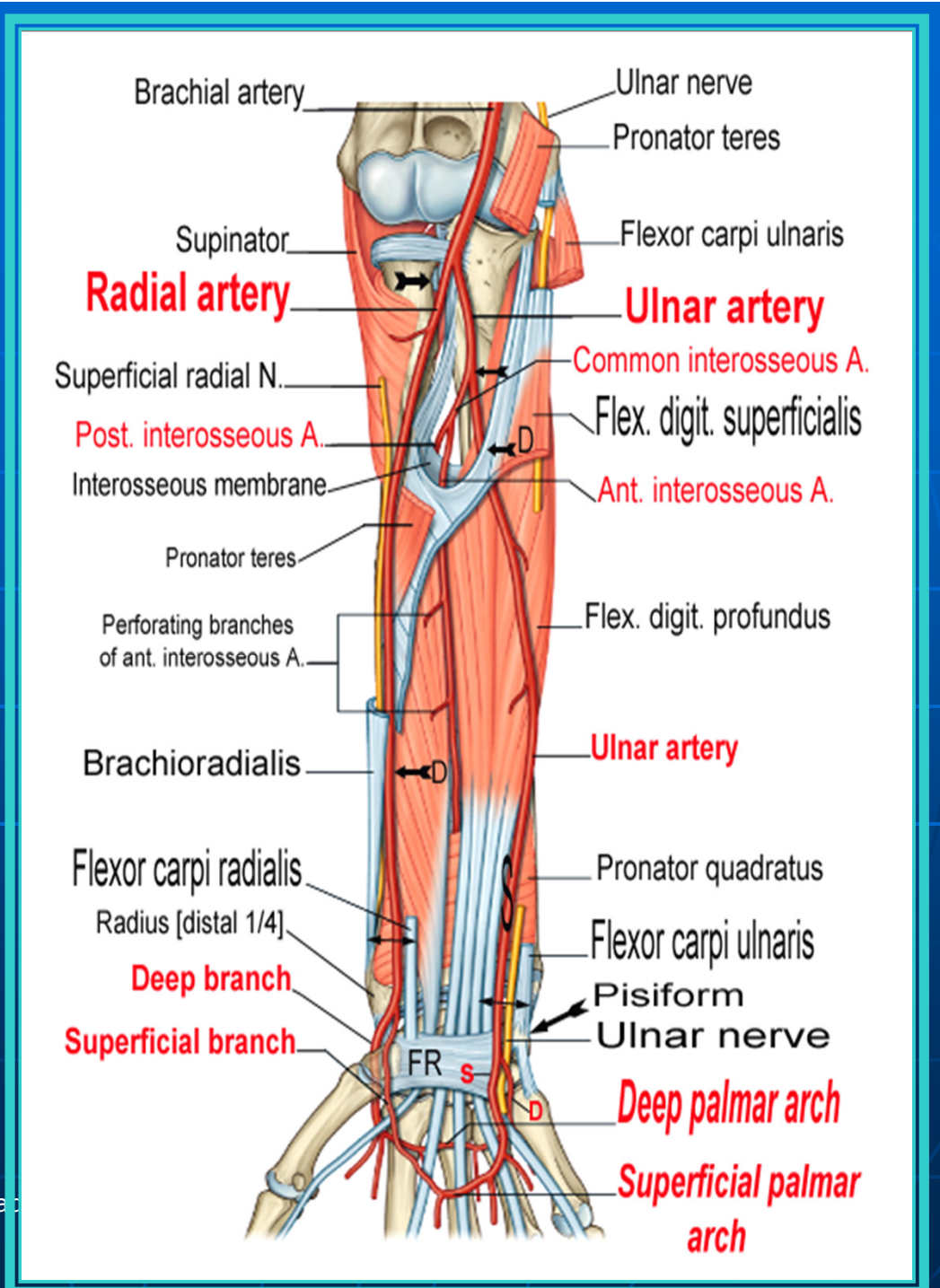




Arteries

1. Ulnar artery

- Larger branch of Brach. a.
- Course:
 - Begin: At neck of radius.
 - End: Above Flexor Retinaculum.
- Branches:
 - At cubital fossa, gives
 - **Common interosseous A.**
 - **Ant. interosseous** to anterior compt.
 - **Post. Interosseous** to posterior compt.
 - Above flex. Retinaculum divides into:
 - **Superficial branch.**
 - **Deep branch.**



Radial nerve

to **Brachioradialis**

to **Extensor carpi radialis longus**

To elbow joint

Deep branch

Supinator

Superficial branch

Posterior interosseous A.

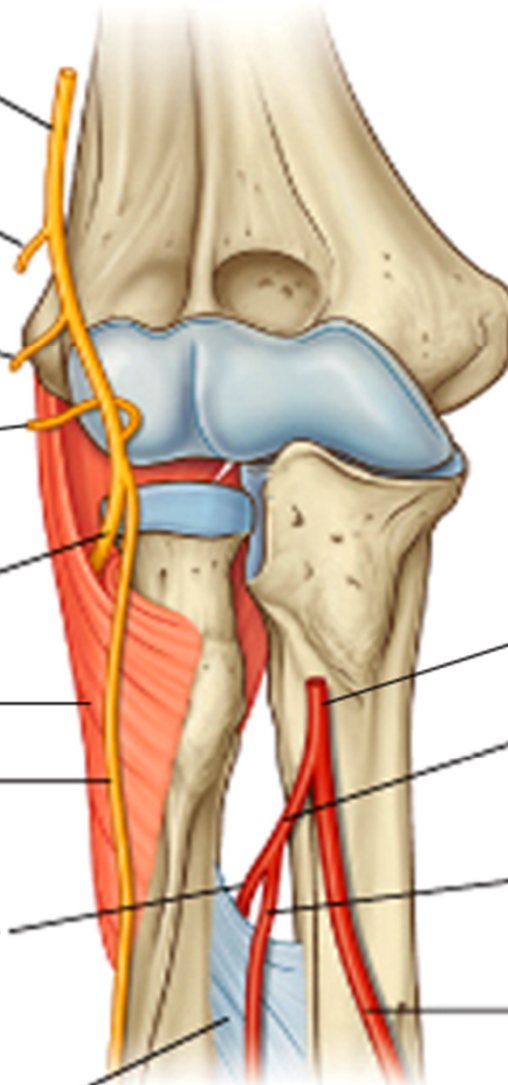
Interosseous membrane

Ulnar artery

Common interosseous A.

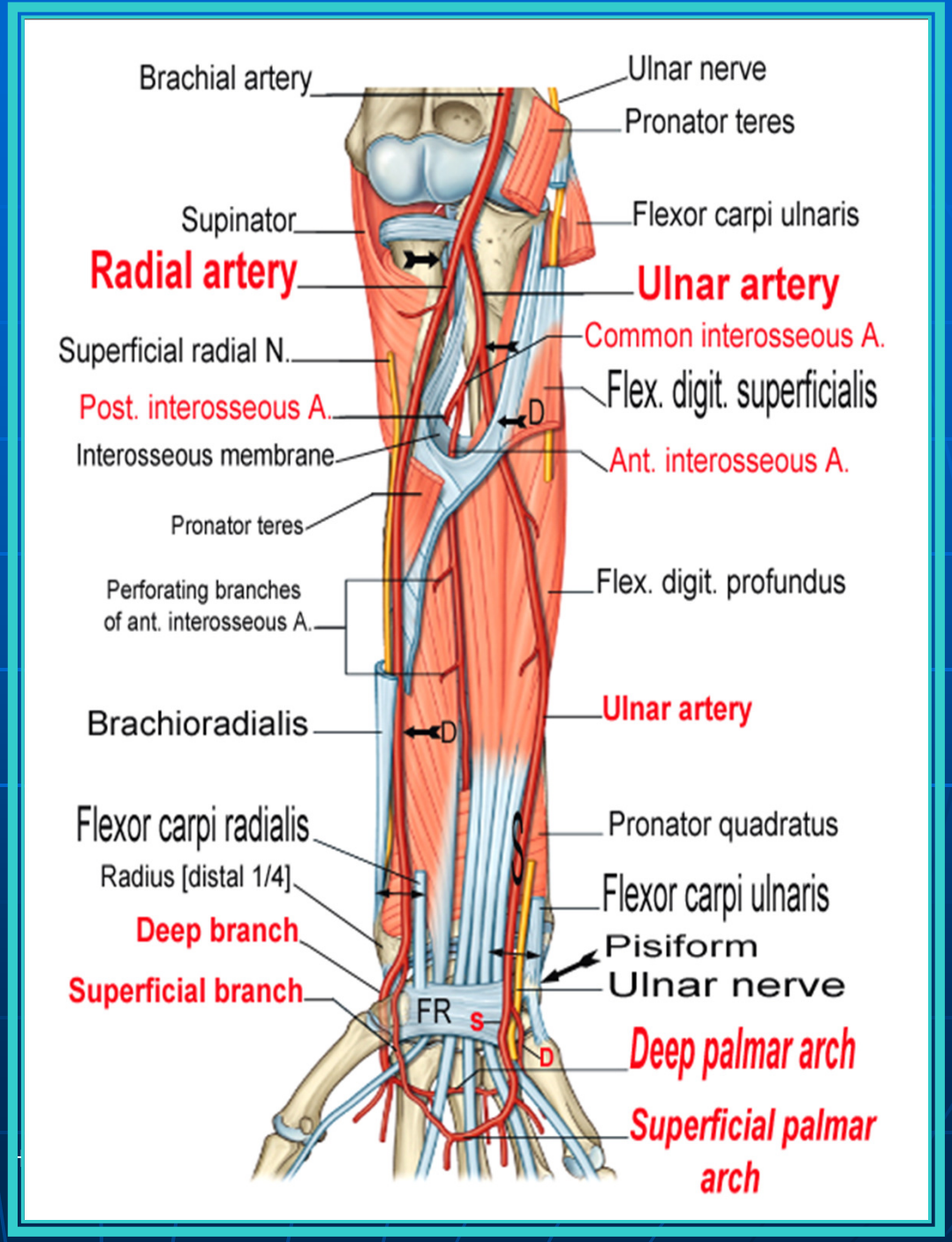
Anterior interosseous A.

Ulnar artery



Radial artery

- Smaller branch.
- Course:
 - Pass between,
 - Brachioradialis.
 - Flex. carpi. radialis.
- Radial pulse site:
At distal 1/4 of anterior surface of radius.
- Before FR, Divides into:
 - Superficial branch.
 - **Deep branch.**



Ulnar N.

■ Course:

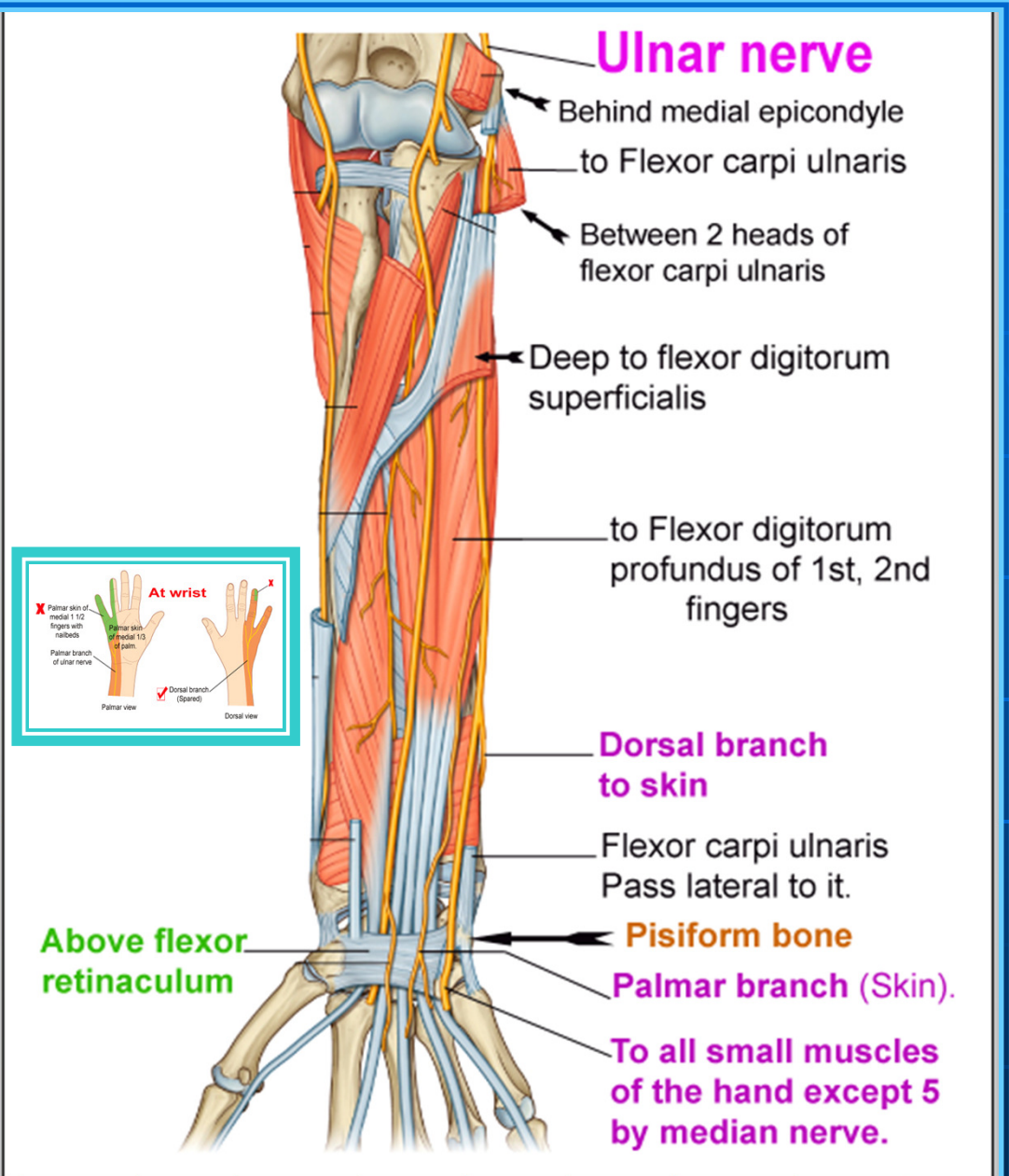
- Behind medial epicondyle.
- Above FR → 2 branches → Superf. & Deep.
- Lat. to pisiform.
- Medial to ulnar A.

■ Branches:

- Dorsal → M1/3 hand.
- Palmar → M1/3 hand.
- Superficial (Ms).
- Deep branch (Ms).

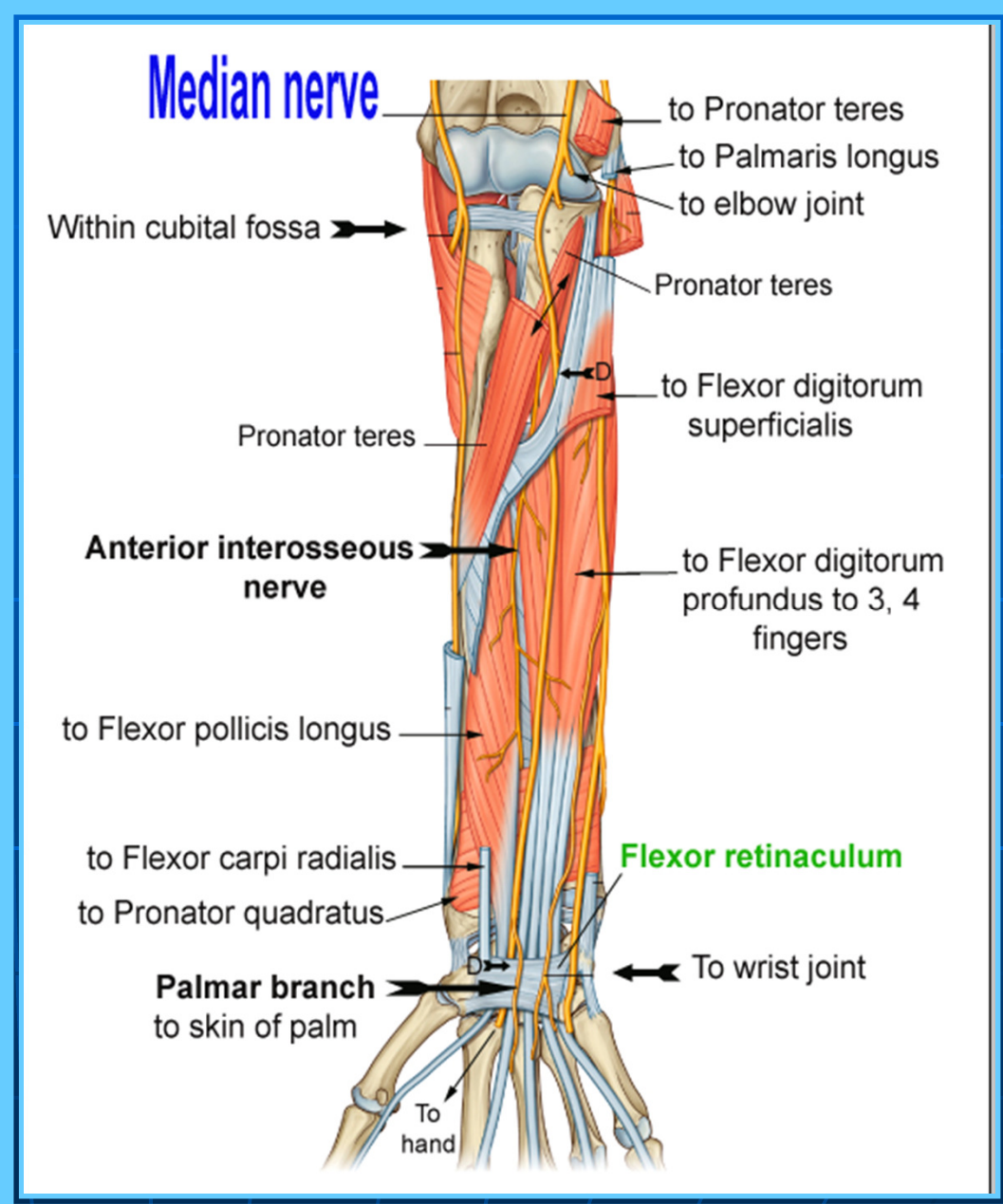
■ Supply:

- Elbow & wrist joints.
- Forearm: 1½ Ms.
- Hand: All small Ms except 5.
- M1/3 Skin of hand, palmar and dorsal.



Median nerve

- Course:
 - Medial inside cubital fossa.
 - Between FDS, FDP.
 - At wrist:
 - Deep to palmaris Longus tendon.
 - Deep to **FR**.
- Branches:
 - Ant. interosseous N.
 - To deep layer of anterior compt.
 - Palmar branch → skin
- Supply:
 - Forearm: All Ms except (1 & 1/2) by ulnar N.
 - Hand: 5 muscles.
 - Elbow, Wrist joints.
 - Skin the of hand.



Median Nerve

