

MEDIAN & ULNAR NERVES



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MEDIAN NERVE

O.:- lateral to axillary artery

By 2 roots

Lateral root :- from lateral cord

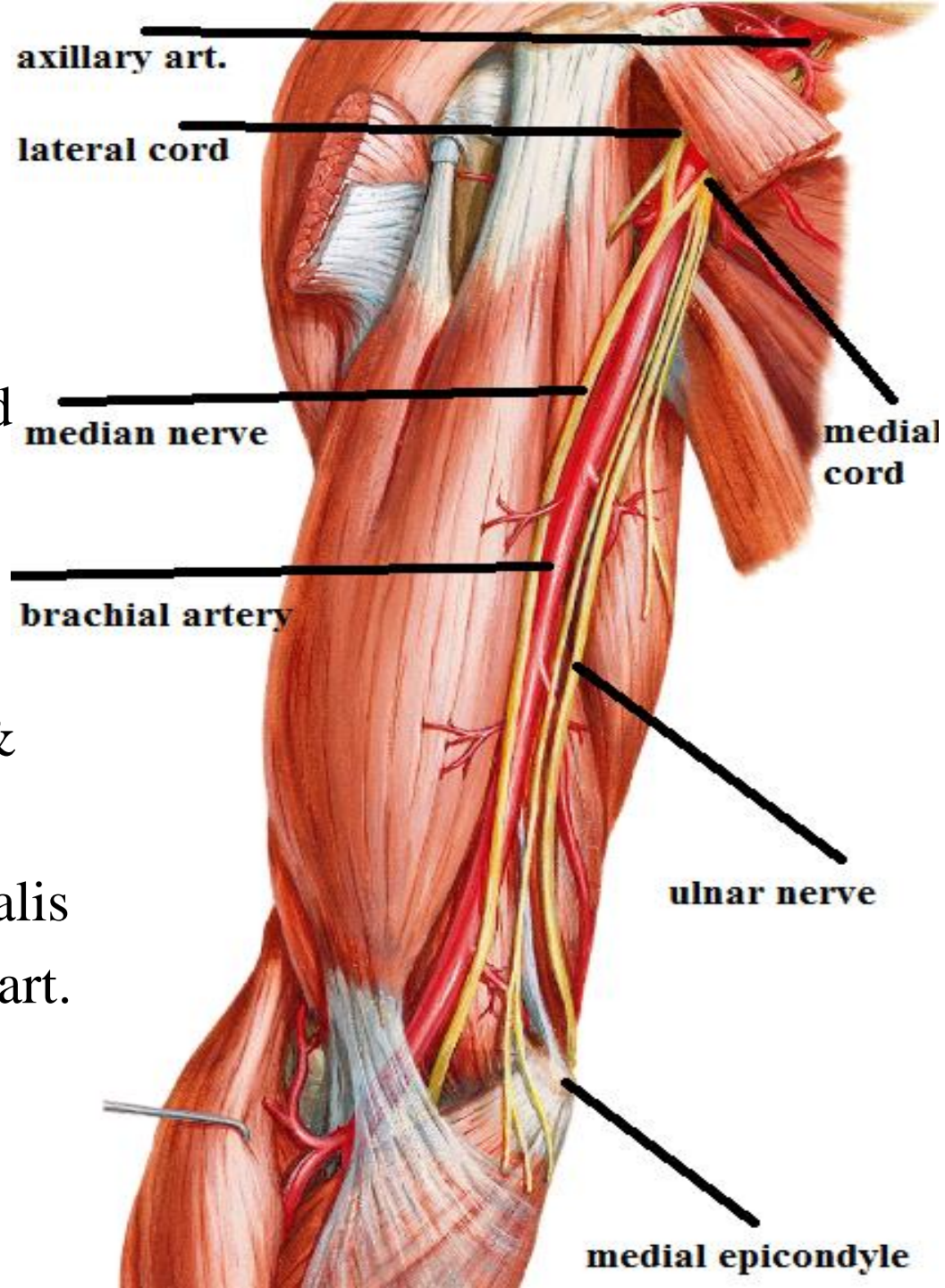
Medial root :- from medial cord

Root value:- C 5 , 6 , 7, 8, T1

C.& R.

In axilla & arm

- Descends lateral to axillary & upper part of brachial art
- At insertion of Coracobrachialis it crosses in front of brachial art. from lateral to medial
- Enters the cubital fossa medial to brachial artery



MEDIAN NERVE

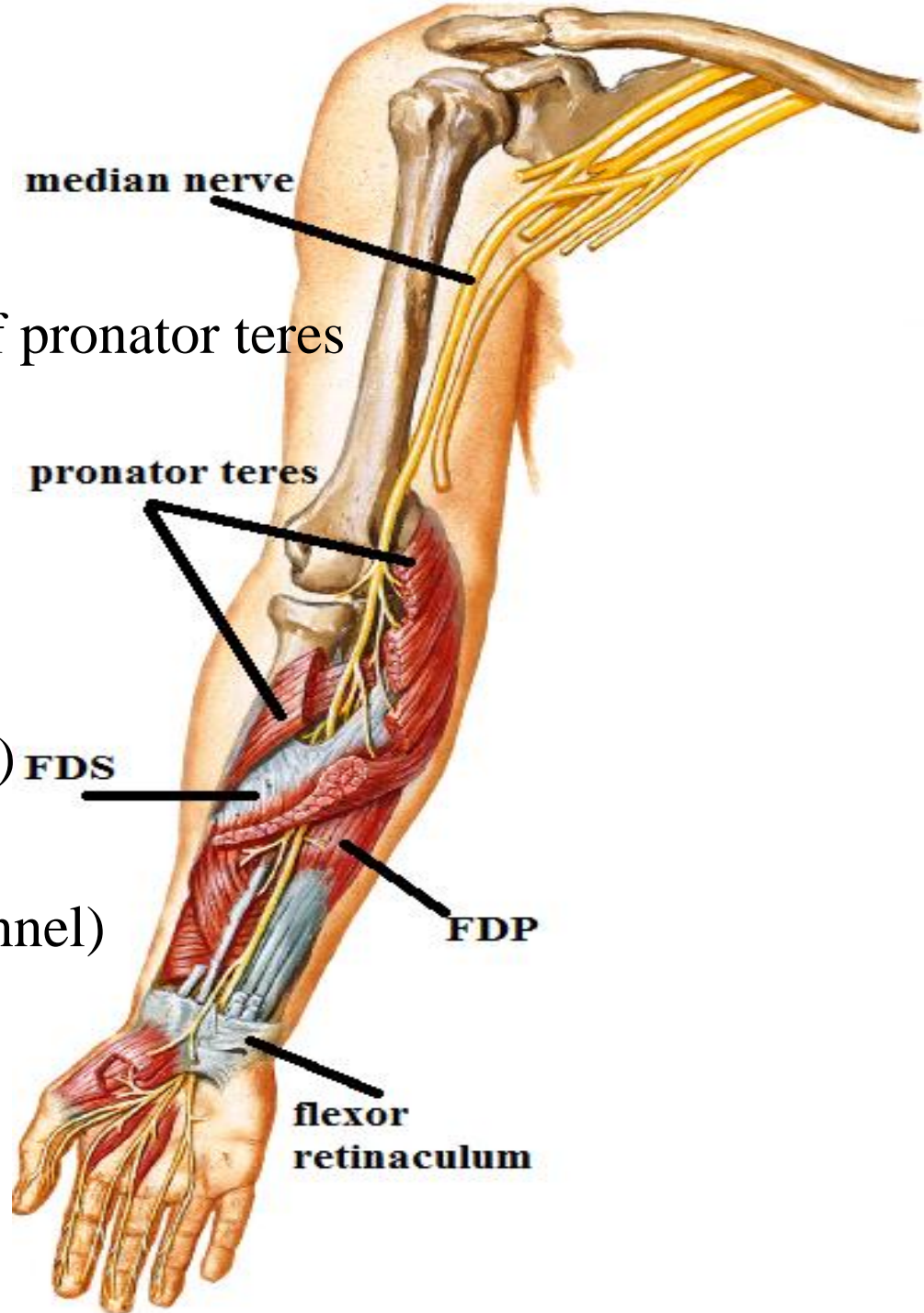
C. & R.

In the forearm

- Enters the forearm () 2 heads of pronator teres
- descends in midline of forearm between FDS & FDP
- 5 cm above the wrist it becomes superficial covered only by skin & fascia (the dangerous)
- enters the hand deep to flexor retinaculum (in carpal tunnel)

In the hand

- distal to flexor retinaculum, it divides into 2 branches: medial & lateral branches



MEDIAN NERVE

Branches

In the forearm

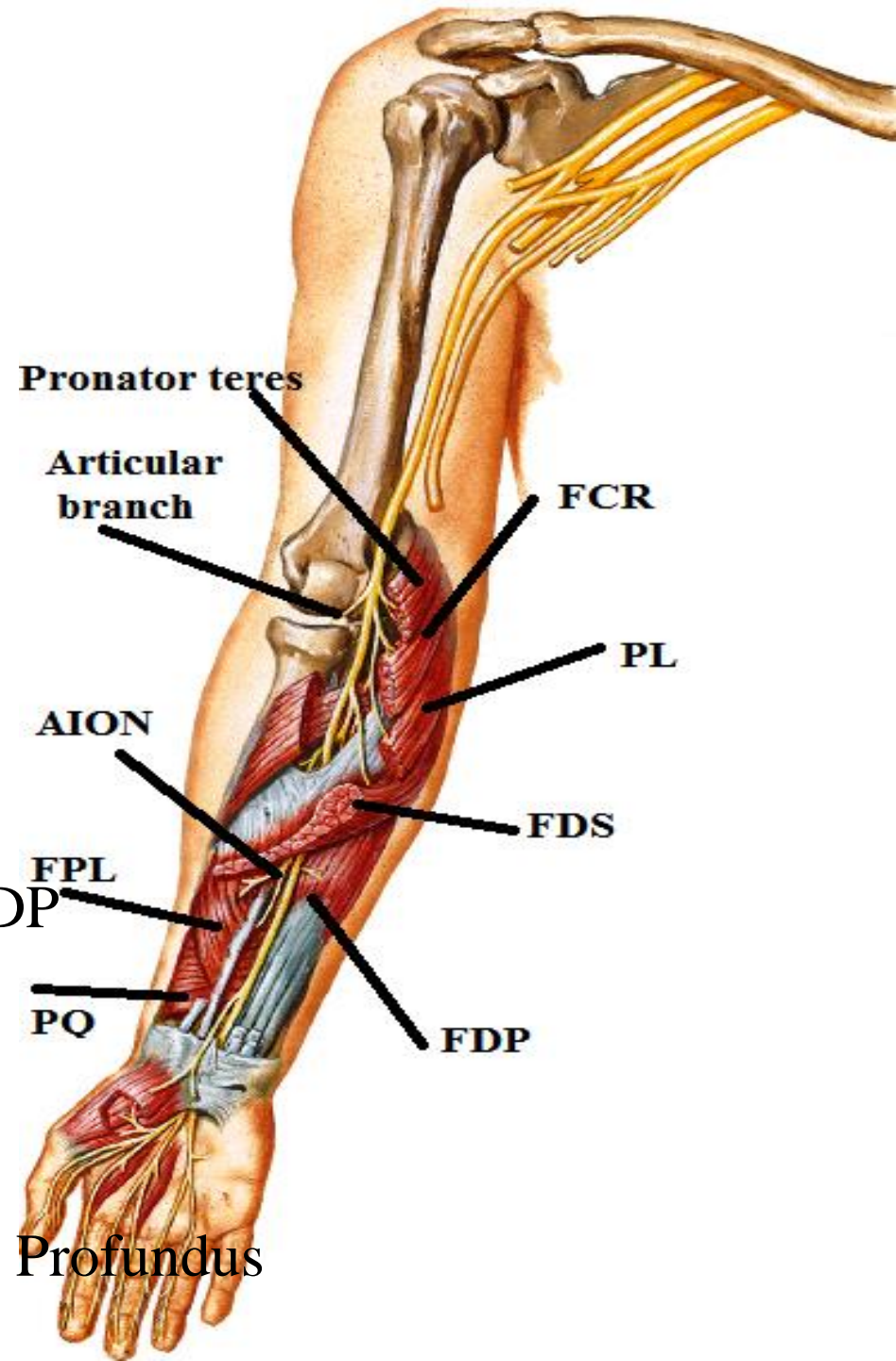
A-Muscular branches:-

1-in cubital fossa :

Pronator teres & FCR & P L & FDS.

2-ant. interosseous nerve:

- arise from median n. between 2 heads of pronator teres
- descends in front of interosseous membrane () FPL & FDP
- end deep to pronator quadratus.
- supply: 1-pronator quadratus.
2-flex. pollicis longus.
3-Lateral 1/2 of flex. digit. Profundus



MEDIAN NERVE

Branches

In the forearm

B-Cutaneous branches:-

- palmar cutaneous branch:
to skin of lateral 2/3 of palm.

C-Articular branches:-

- Elbow superior radio ulnar joints

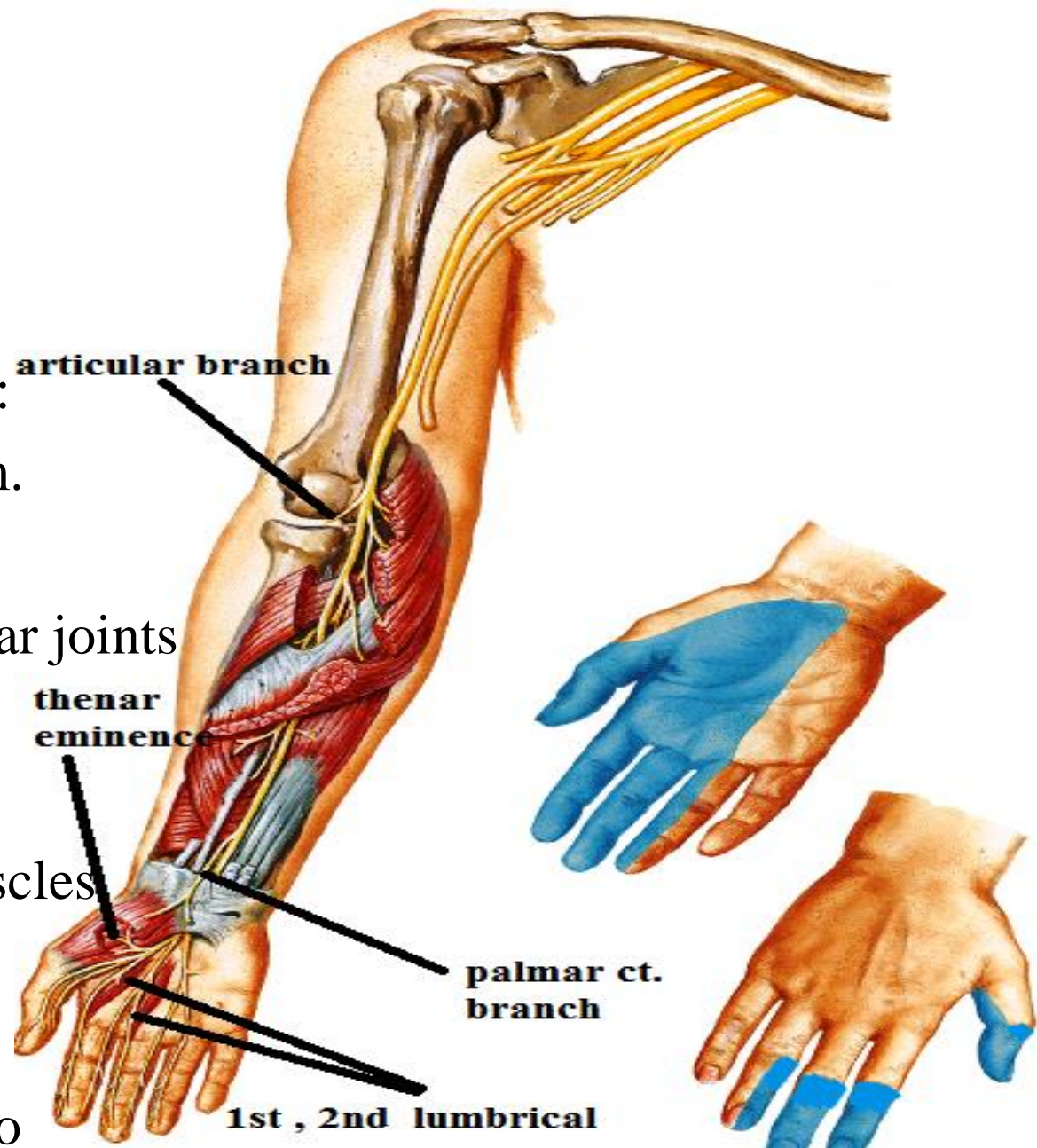
In the hand

A-Muscular branches:

- the thenar eminence muscles
- 1st. & 2nd. Lumbricals

B-Cutaneous branches

- Palmar digital branches to
lateral 3 ½ fingers except the dorsal surface of their proximal phalanges



MEDIAN NERVE

Effect of injury

Above the elbow:-

Sensory loss:-

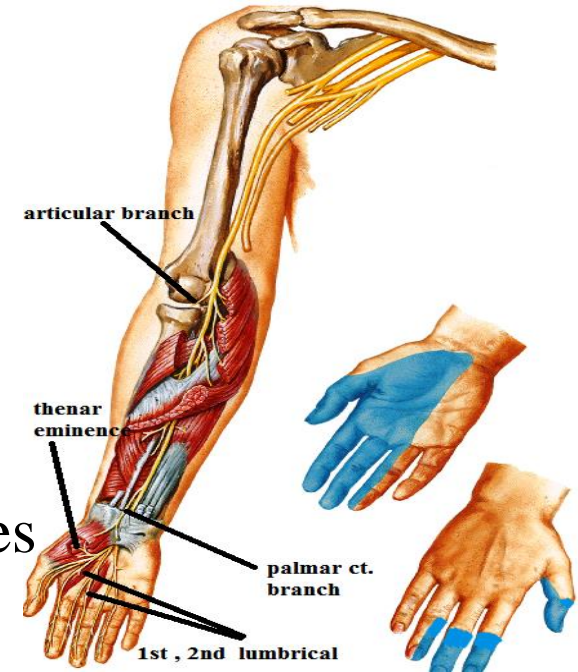
in lat. 2/3 of palm & lat. 3 1/2 fingers
except the dorsal surface of their proximal phalanges

Motor affection:-

- Paralysis of all muscles supplied by median nerve ??
- Leading to - Loss of pronation
 - Weak flexion of wrist with adduction of hand
 - loss of flexion & opposition of thumb

Deformity: - APE HAND

- Extended adducted thumb
- Loss of opposition
- Wasting of thenar eminence



MEDIAN NERVE

Effect of injury

Above wrist:-

Sensory loss:-

In lat. 3 1/2 fingers except
the dorsal surface of their proximal phalanges

Motor affection:-

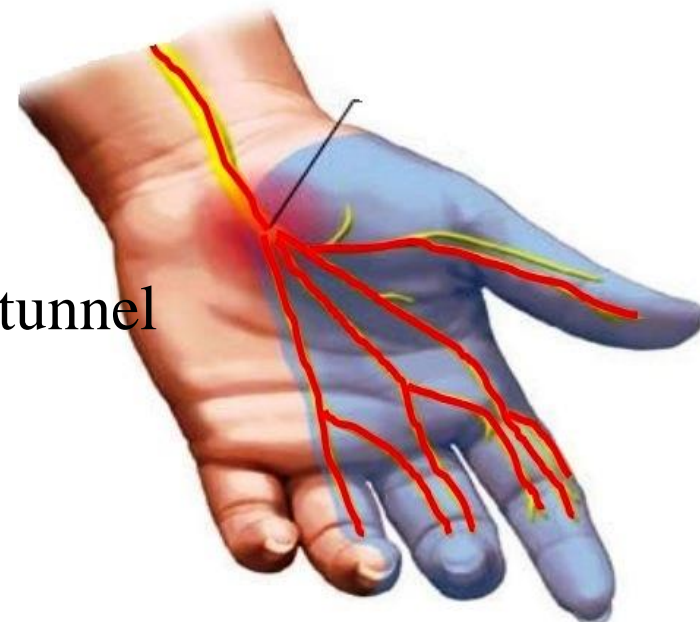
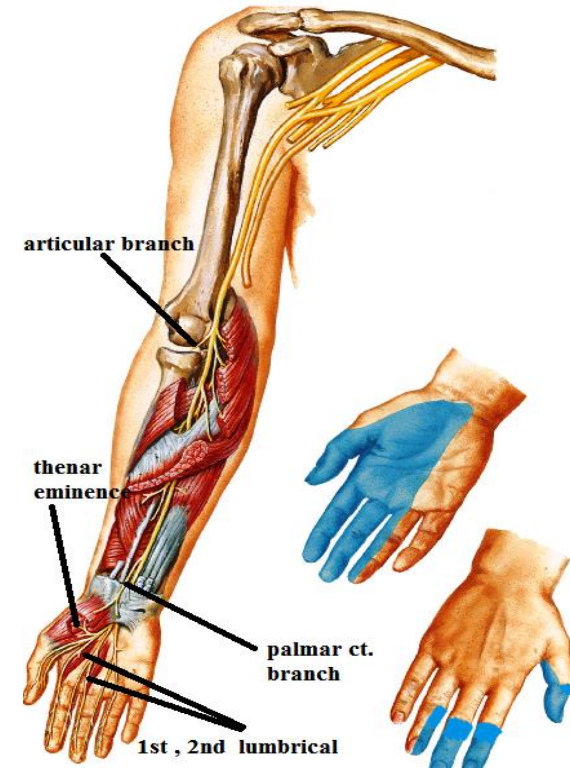
- paralysis of thenar eminence
- „ „ „ 1st. & 2nd. Lumbricals

Deformity: - APE HAND

Carpal tunnel syndrome

Def.:- compression of median nerve in carpal tunnel

effect:- as above wrist



ULNAR NERVE

ULNAR NERVE

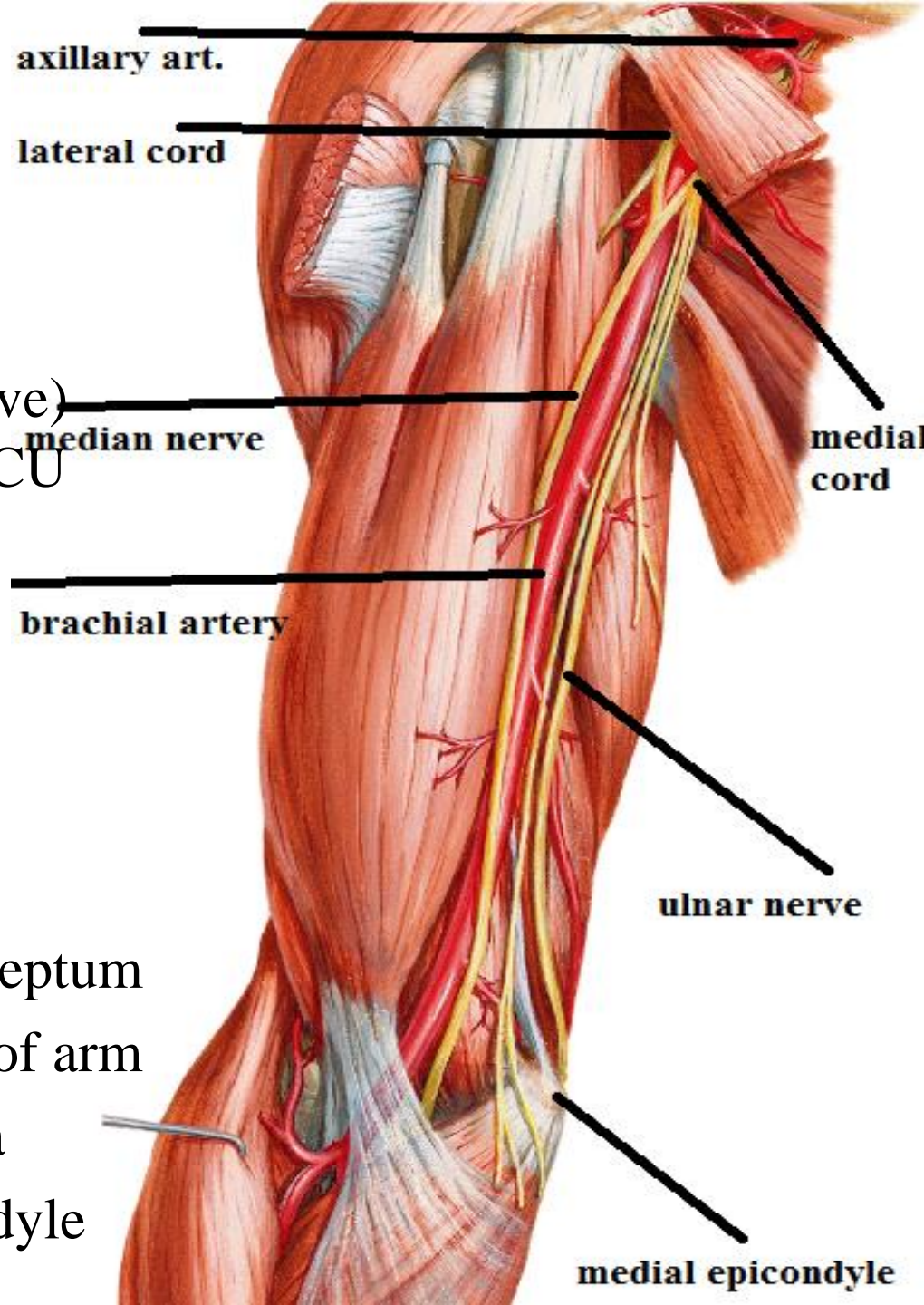
O. medial to axillary artery
as continuation of medial cord

Root value:- C8, T1 +
C7 (from median nerve)
these fibers are mainly motor to FCU

C. & R.

In axilla & arm

- Descends medial to axillary & upper part of brachial art
- at insertion of Coracobrachialis it pierces medial intermuscular septum to enter posterior compartment of arm
- does not enter the cubital fossa
But pass behind medial epicondyle

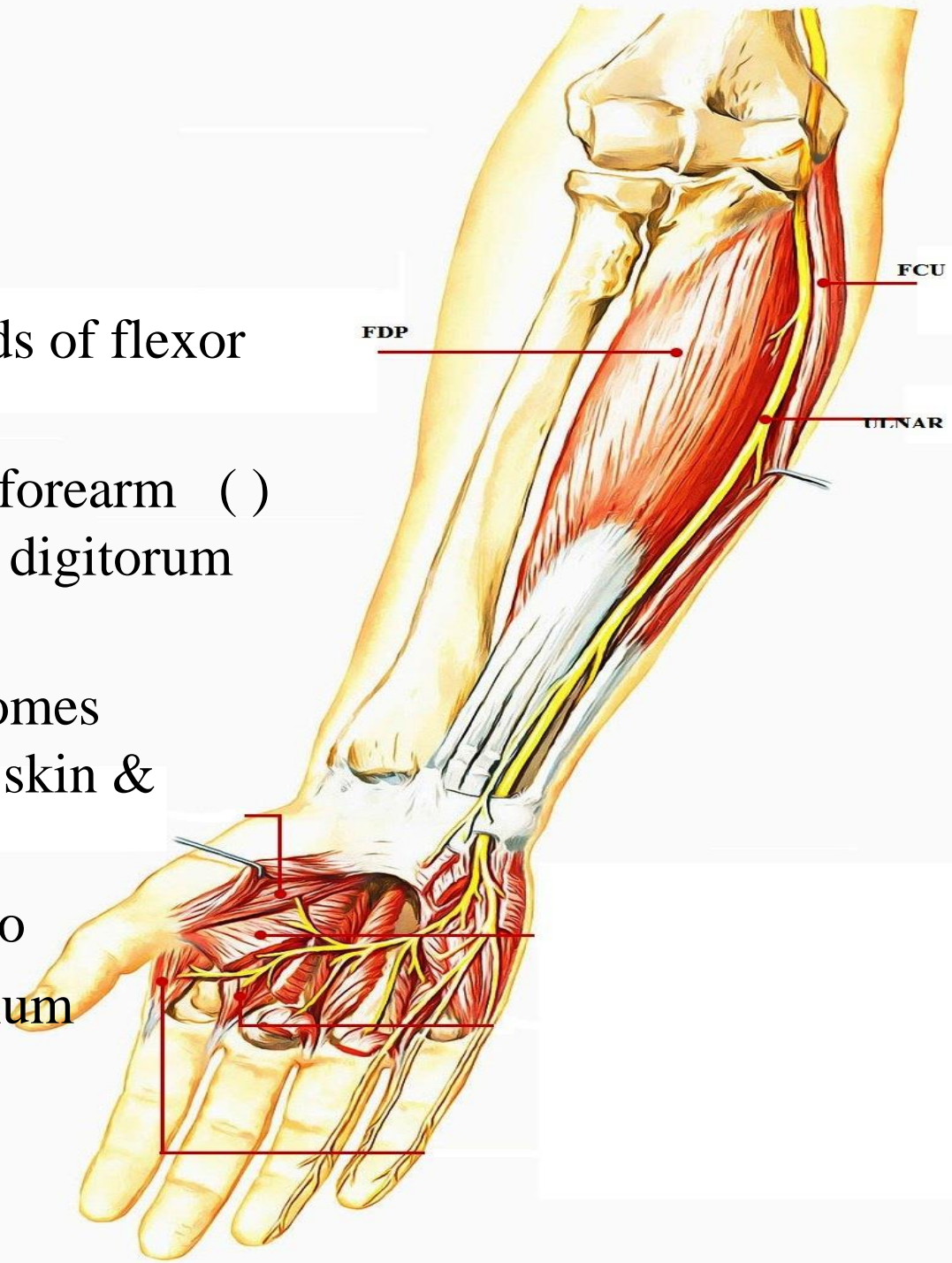


ULNAR NERVE

C.& R.

in the forearm

- enters the forearm () 2 heads of flexor carpi ulnaris
- descends in medial side of forearm () flexor carpi ulnaris & flexor digitorum profundus
- 5 cm above the wrist it becomes superficial covered only by skin & fascia
- enters the hand superficial to (or through) flexor retinaculum



ULNAR NERVE

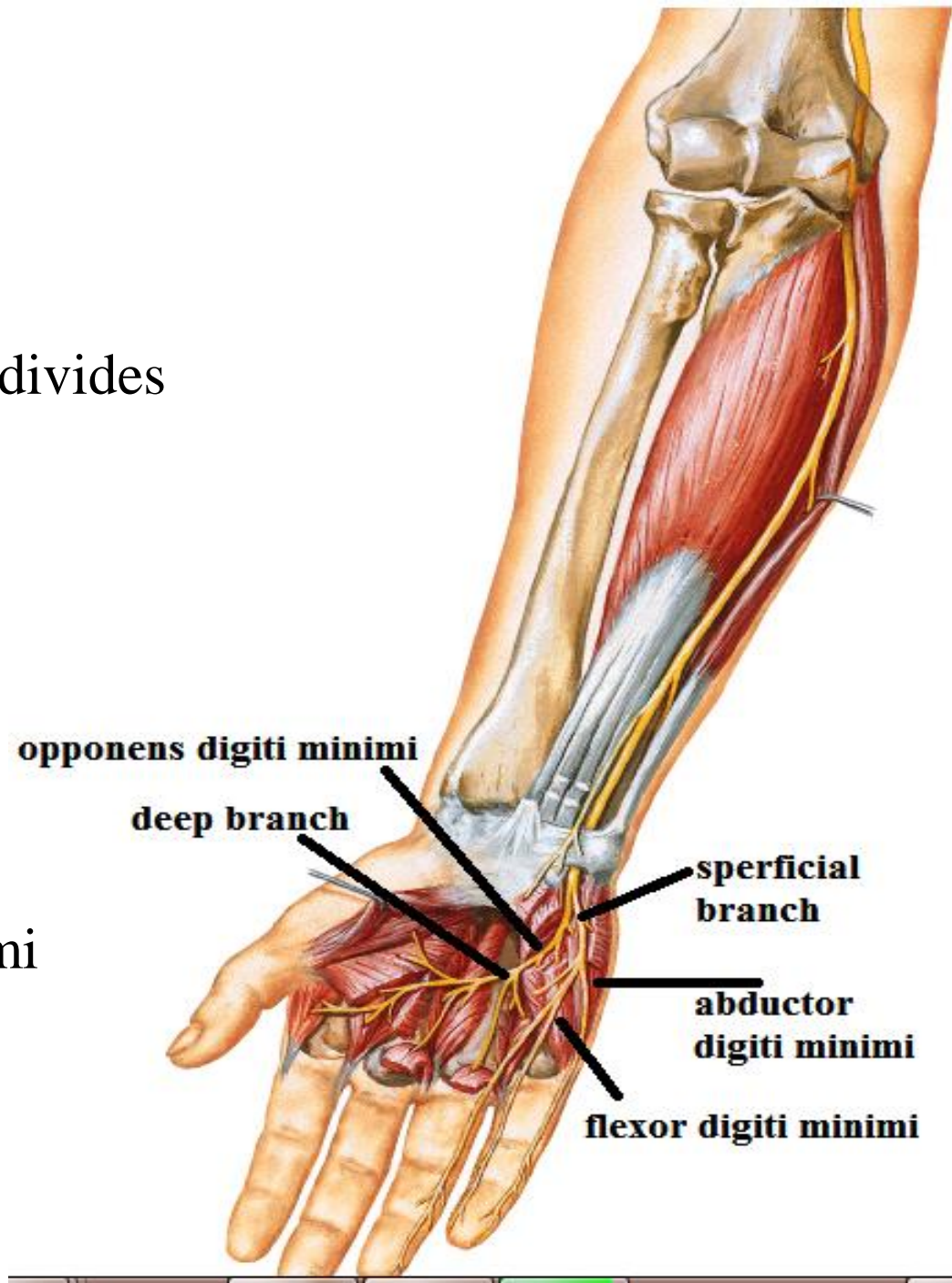
C.&R.

In the hand

- distal to flexor retinaculum ,it divides into

1- Superficial division that pass on medial side of hand

2-deep division that pass ()abductor digiti minimi & flexor digiti minimi then pierce opponens digiti minimi then curves laterally



ULNAR NERVE

Branches

in the forearm

A-Muscular branches:-

2 branches to:

Flexor carpi ulnaris

Medial 1/2 of flexor digitorum profundus

B-Articular branches:-

Elbow joint

C-Cutaneous branches:-

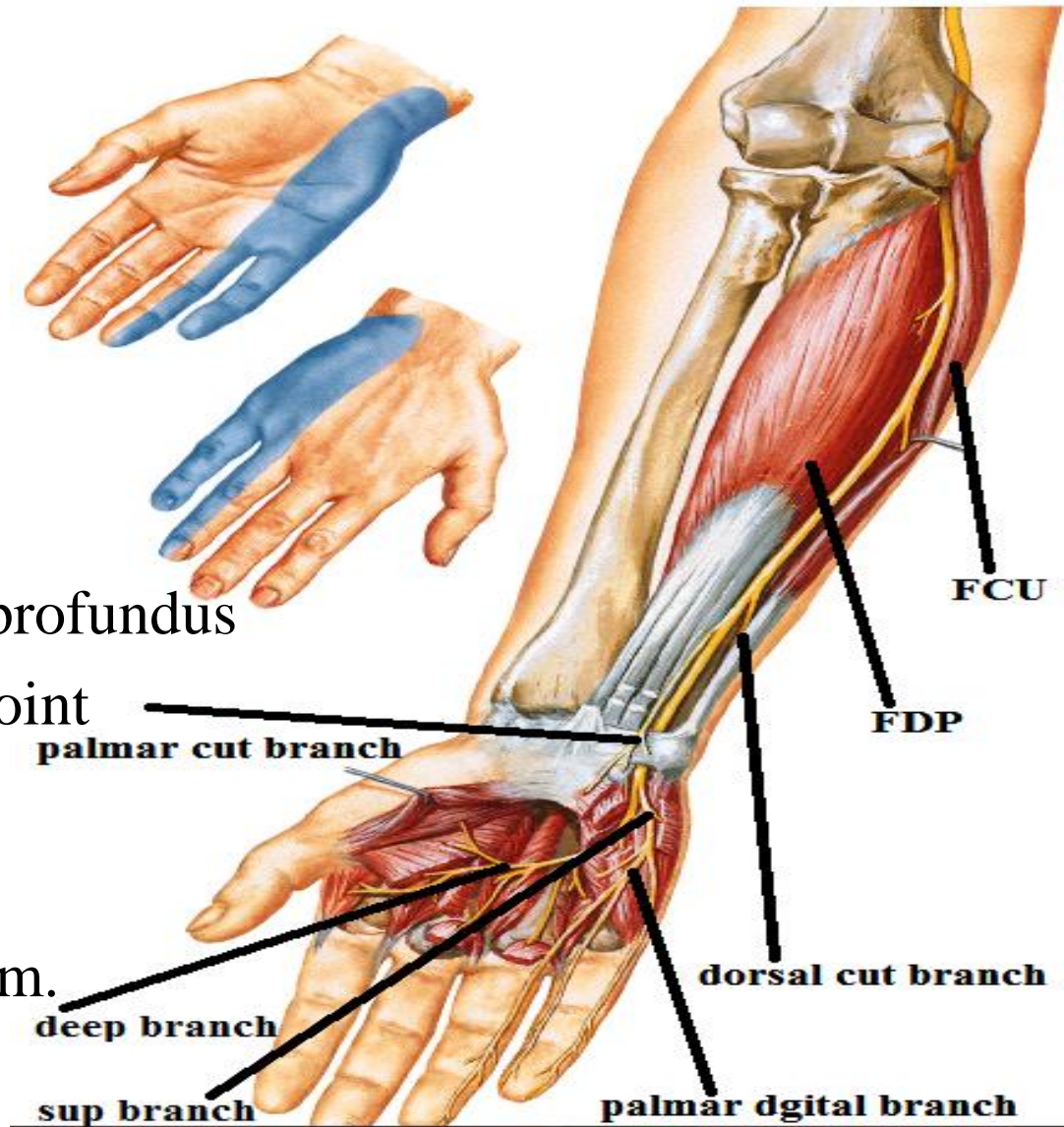
palmar cutaneous branch:

supply skin of medial 1/3 of palm.

Dorsal cutaneous branch:-

Supply skin of medial 1/3 of dorsum of hand

& dorsum of medial 1 1/2 fingers.



ULNAR NERVE

Branches

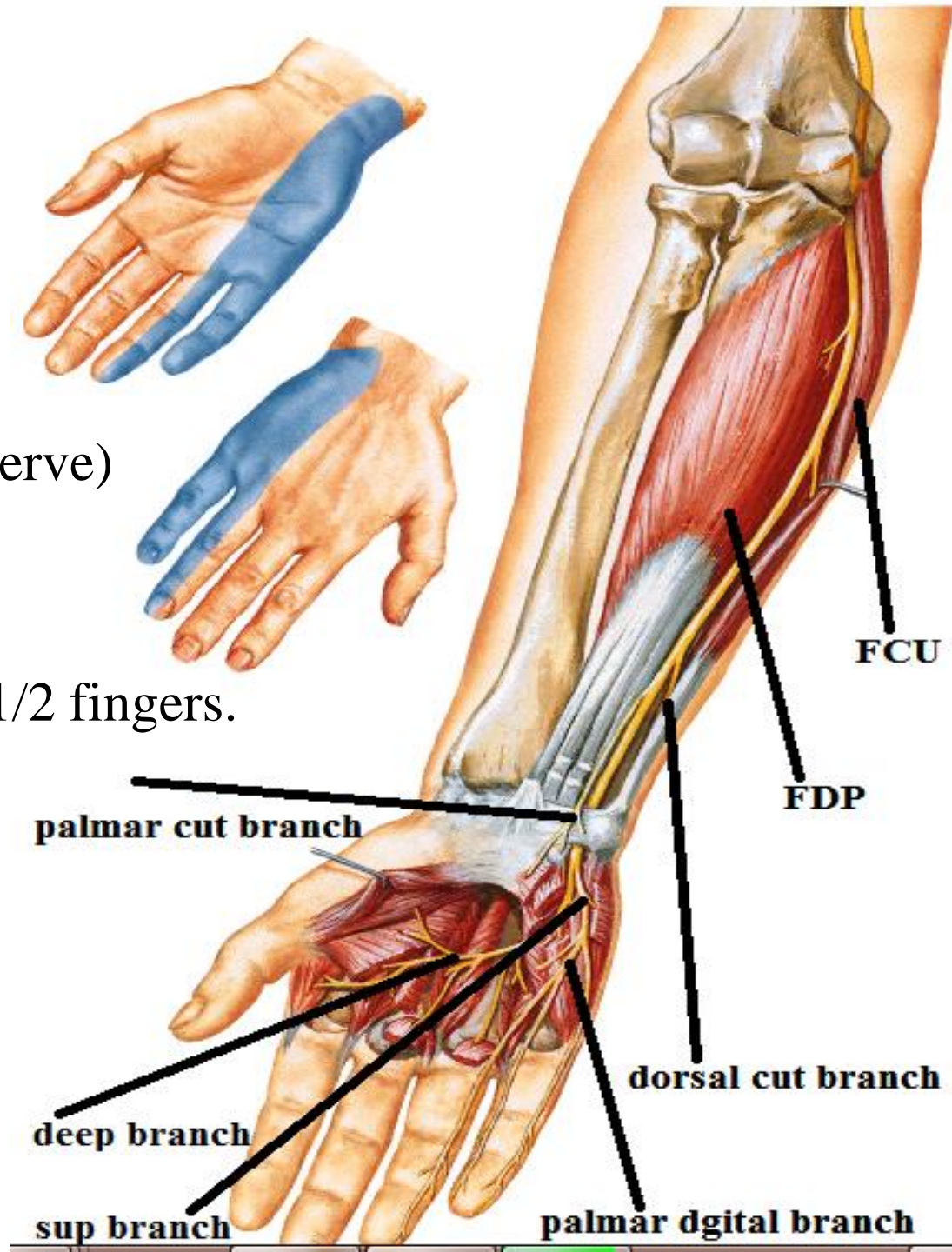
in the hand

A- Muscular branches

All muscles of the hand except
(Muscles supplied by median nerve)

B- cutaneous branches

Palmar digital branches
to palmar surface of medial 1 1/2 fingers.



ULNAR NERVE

Effect of injury

Above elbow:-

Sensory loss:-

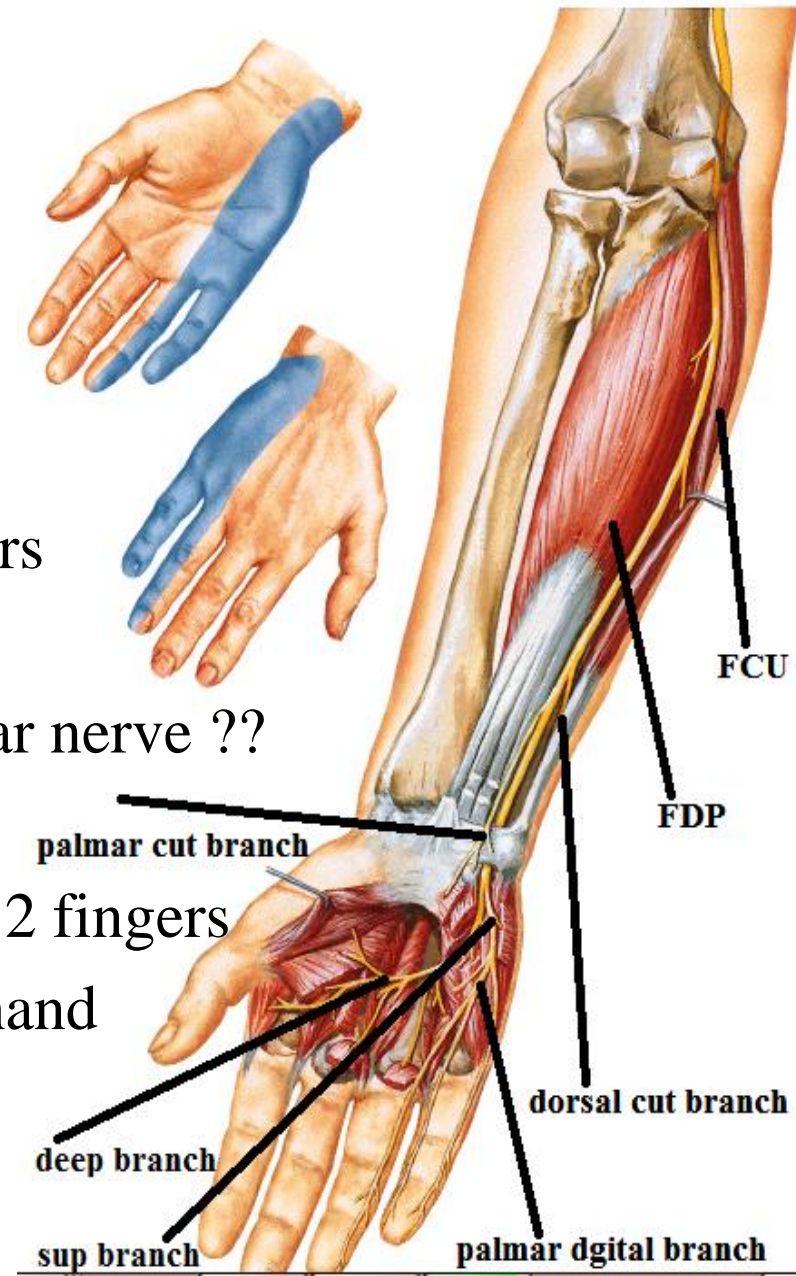
In palmar & dorsal surfaces
of med. 1/3 of the hand & med. 1 1/2 fingers

Motor affection:-

- Paralysis of all muscles supplied by ulnar nerve ??

Leading to

- loss of flexion of distal phalanx of medial 2 fingers
- Weak flexion of wrist with abduction of hand
- loss of adduction of thumb
- Inability to put hand in writing position



ULNAR NERVE

Effect of injury

Above elbow:-

Deformity: - partial claw hand

Extension of (m/p) joints & flexion of (I/p) joints of medial 2 fingers.

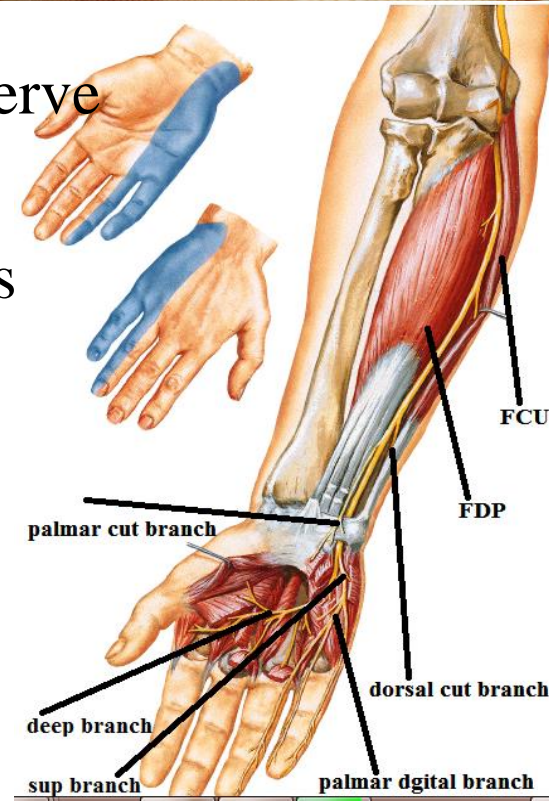
N.B: index & middle finger are less affected because their Lumbricals are supplied by median nerve

Above wrist:-

Sensory loss: - In palmar surface of med. 1 1/2 fingers

Motor affection: - As above elbow except F.CU & medial 1/2 of F.D.P.

Deformity: - partial claw hand



THANK