



# Upper Limb

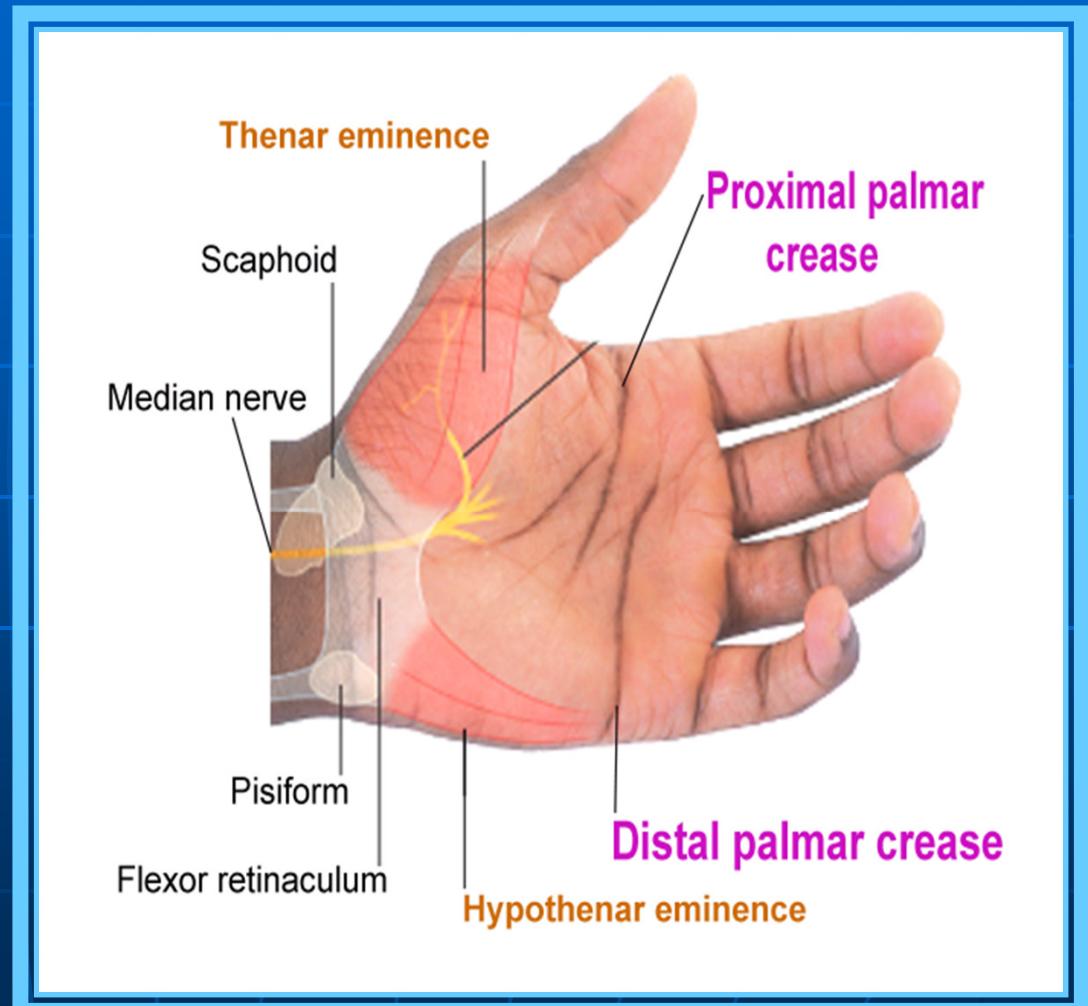
## Lecture 8

# Hand

# HAND-1

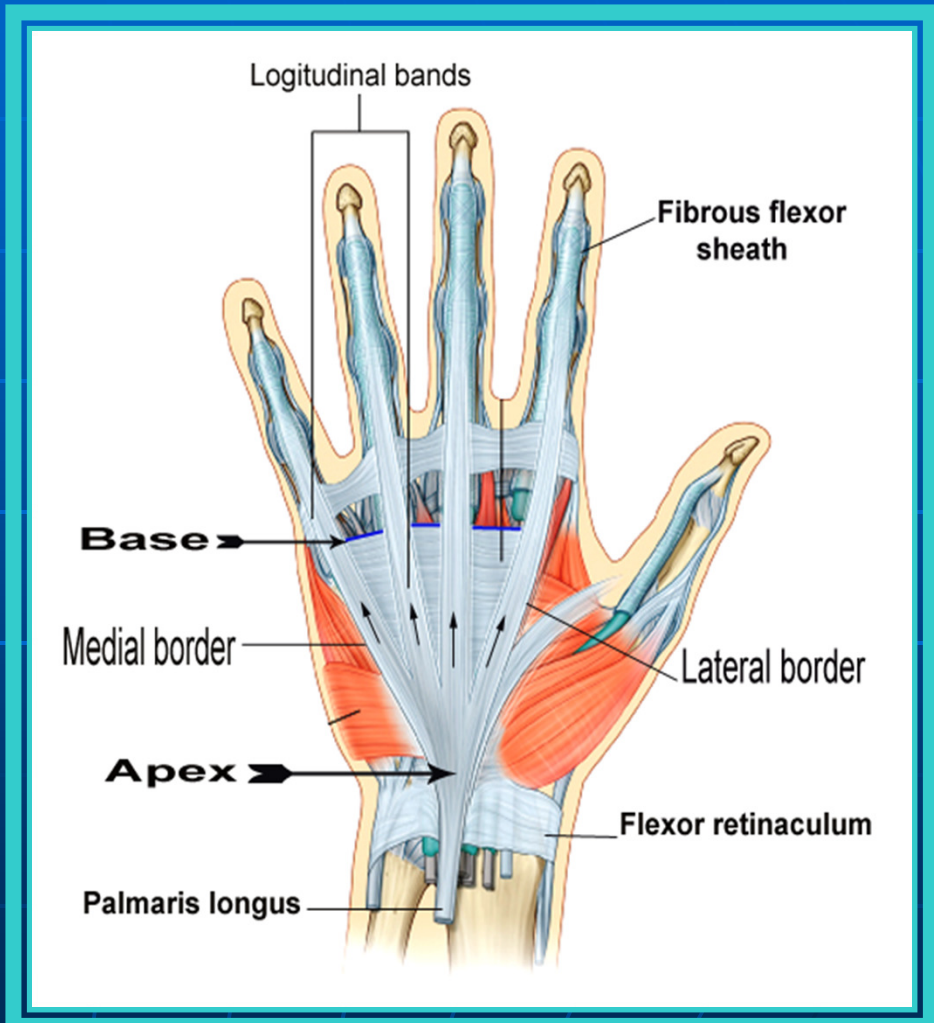
## Skin

- Thick and show many flexure creases ثنيات
- Flexure creases are important landmarks.
  - Proximal palmar crease.
  - Distal palmar crease.
- Thenar راحة eminence.
- Hypothenar eminence



# Palmar aponeurosis

- A triangular-shaped thickening of the deep fascia in the central part of the palm.
- Apex:  
Attach to Flexor Retina.
- Base:  
Fuse to proximal phalanx of medial four fingers.



♣ Distal phalanx

♠ Middle phalanx

6 structures pass superficial to flexor retinaculum:  
- 4 ulnars  
- 2 palmars

♣ Flexor digitorum profundus

♠ Flexor digitorum superficialis

Fibrous digital sheath

Superficialis tendon

Palmar digital artery

Palmar digital nerve

Abductor digiti minimi

Superficial palmar arch

Flexor retinaculum

Ulnar nerve 4

Palmar branch of ulnar N. 3

Ulnar artery 2

Flexor carpi ulnaris 1

Flexor digitorum superficialis

Radialis indicis A.

1st Lumbrical M.

1st interosseous M.

FPB

Recurrent branch of median N.

6 Palmar branch of median N.

Radial A., superficial branch

Median nerve

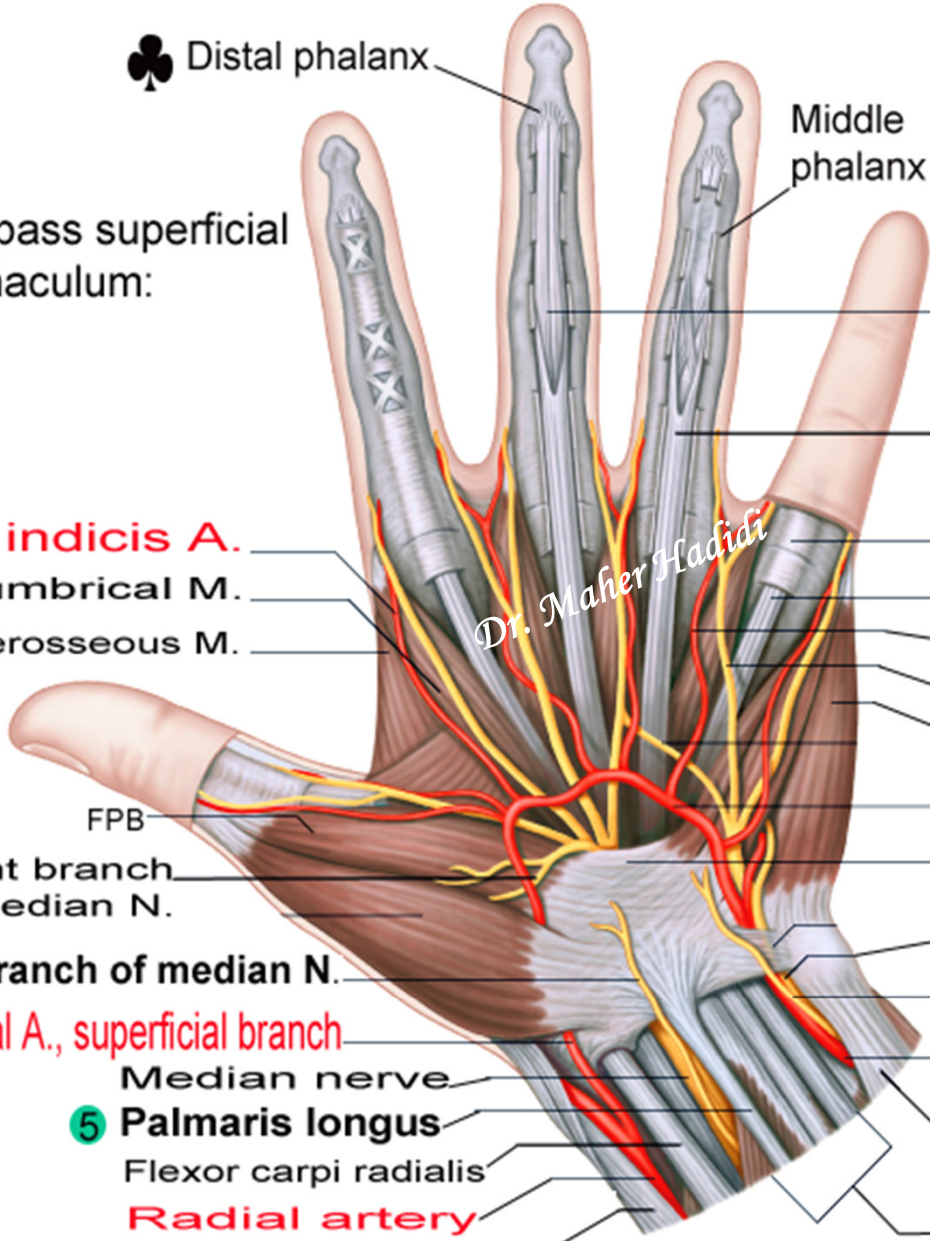
5 Palmaris longus

Flexor carpi radialis

Radial artery

Brachioradialis

Dr. Maher Hadidi





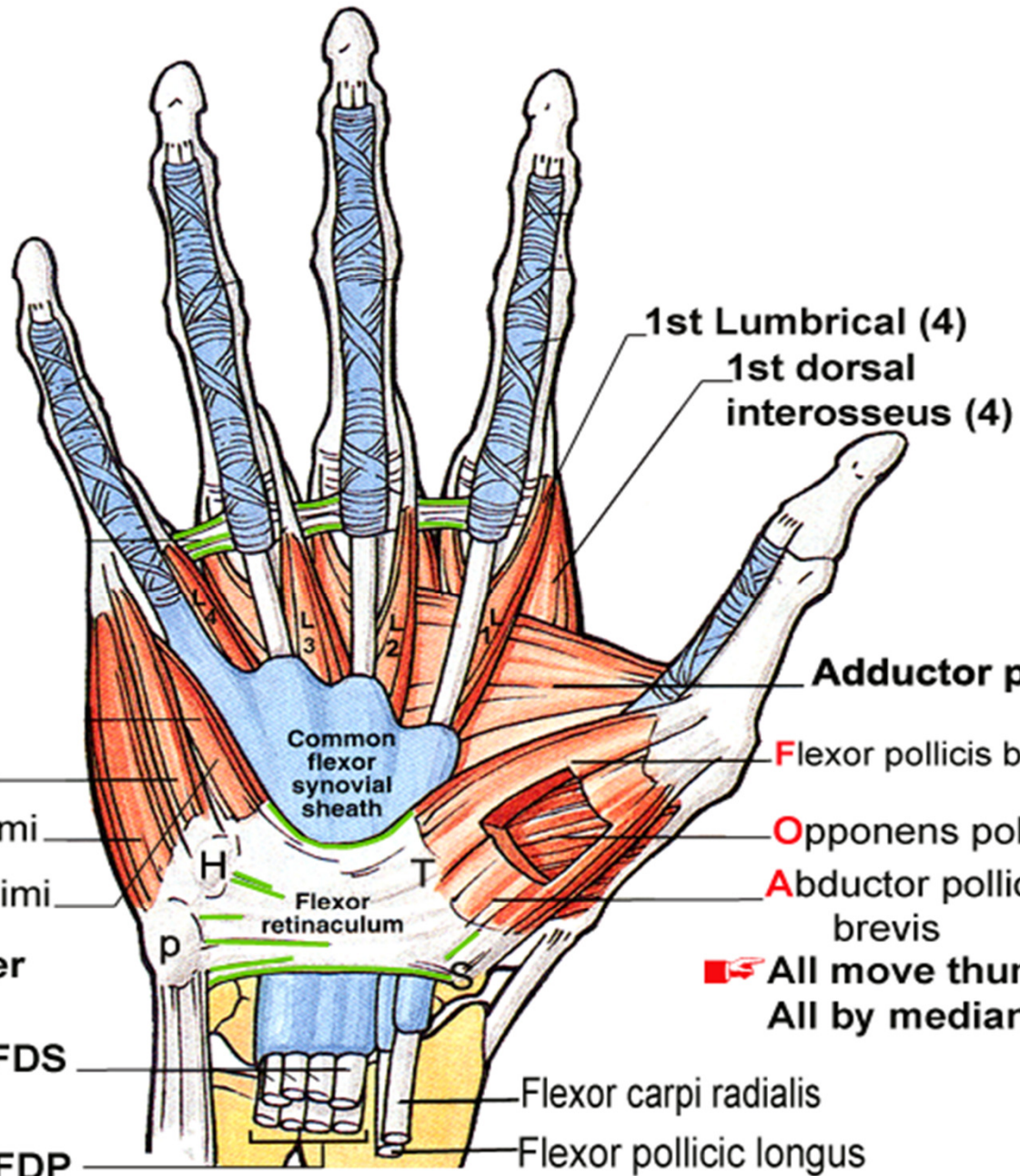
**Hypothenar Ms**

- F**lexor digiti minimi
- A**bductor digiti minimi
- O**ppenens digiti minimi

**All move little finger  
All by ulnar nerve.**

FDS

FDP



1st Lumbrical (4)  
1st dorsal  
interosseus (4)

**Adductor pollicis**

**F**lexor pollicis brevis

**O**pponens pollicis

**A**bductor pollicis  
brevis

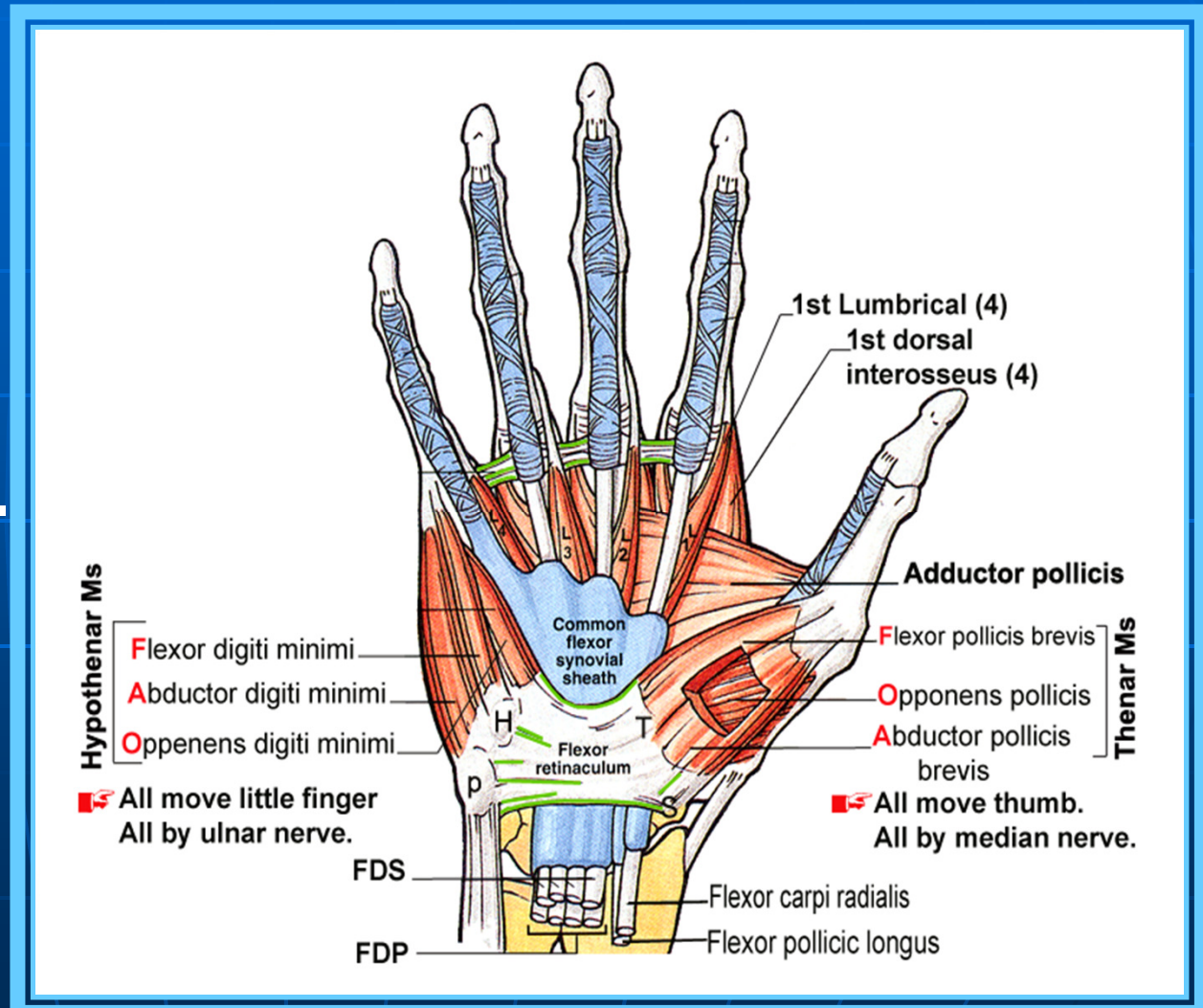
**All move thumb.  
All by median nerve.**

**Thenar Ms**

# Small muscles of the Hand

## Arranged in five groups:

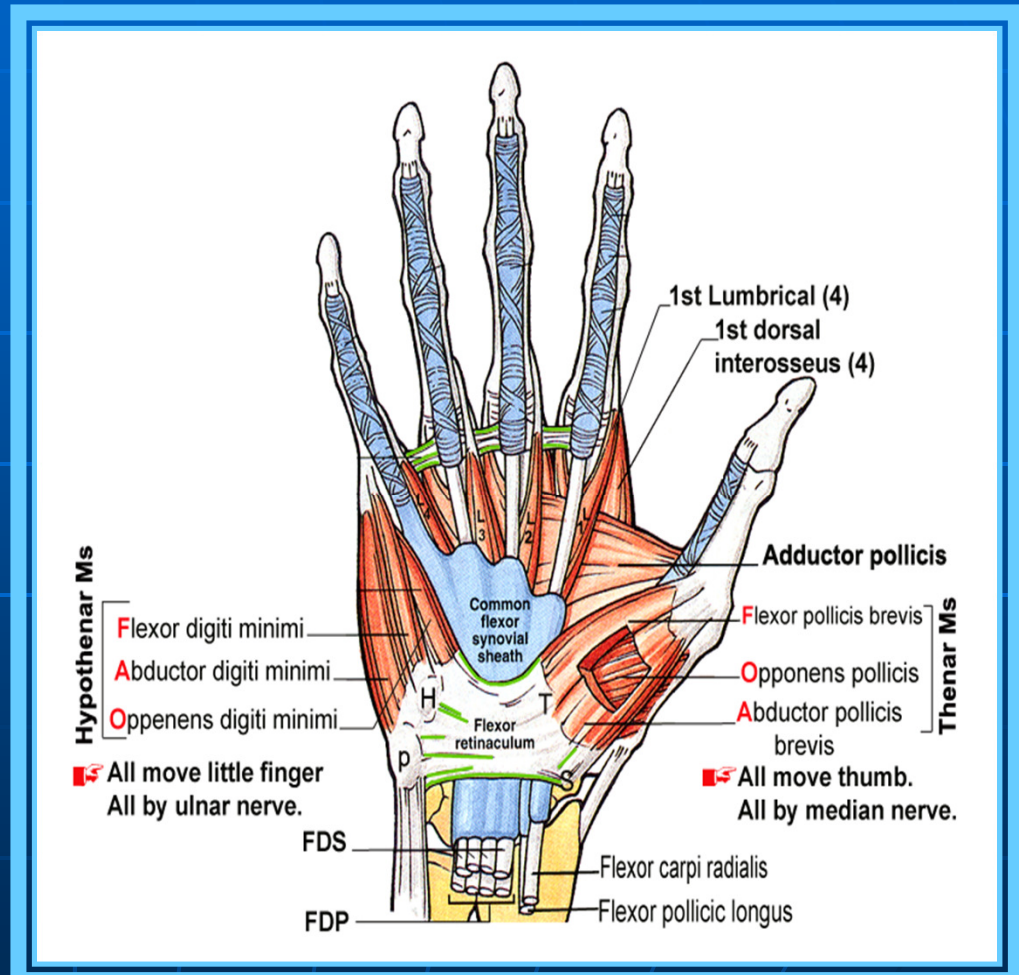
- Thenars **3.**
- Hypothenars **3.**
- Lumbricals **4.**
- Palmar interossei **4.**
- Dorsal interossei **4.**
- Adductor pollicis **1.**



# Short muscles of the thumb

## 3 thenar Muscles

- All moves the thumb according to their names.
- All supplied by median nerve.

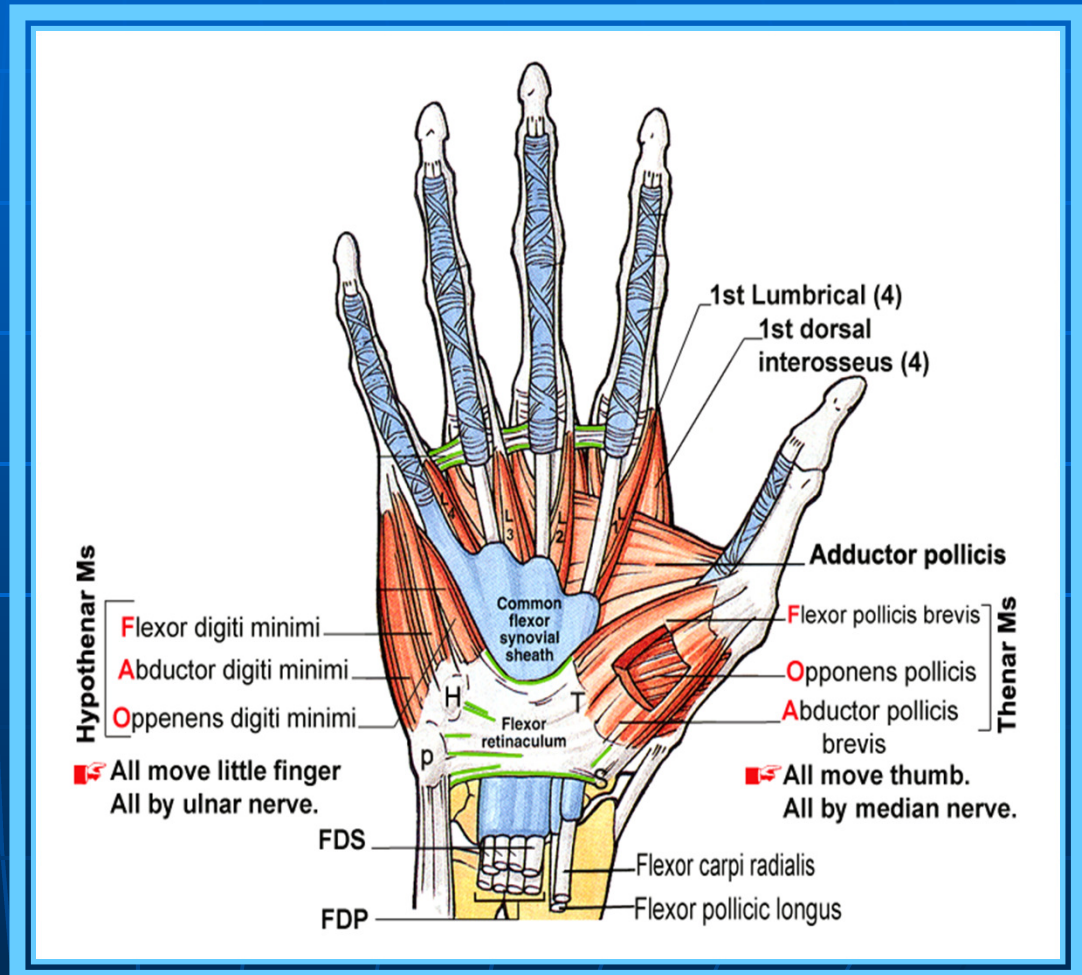




# Short muscles of little finger

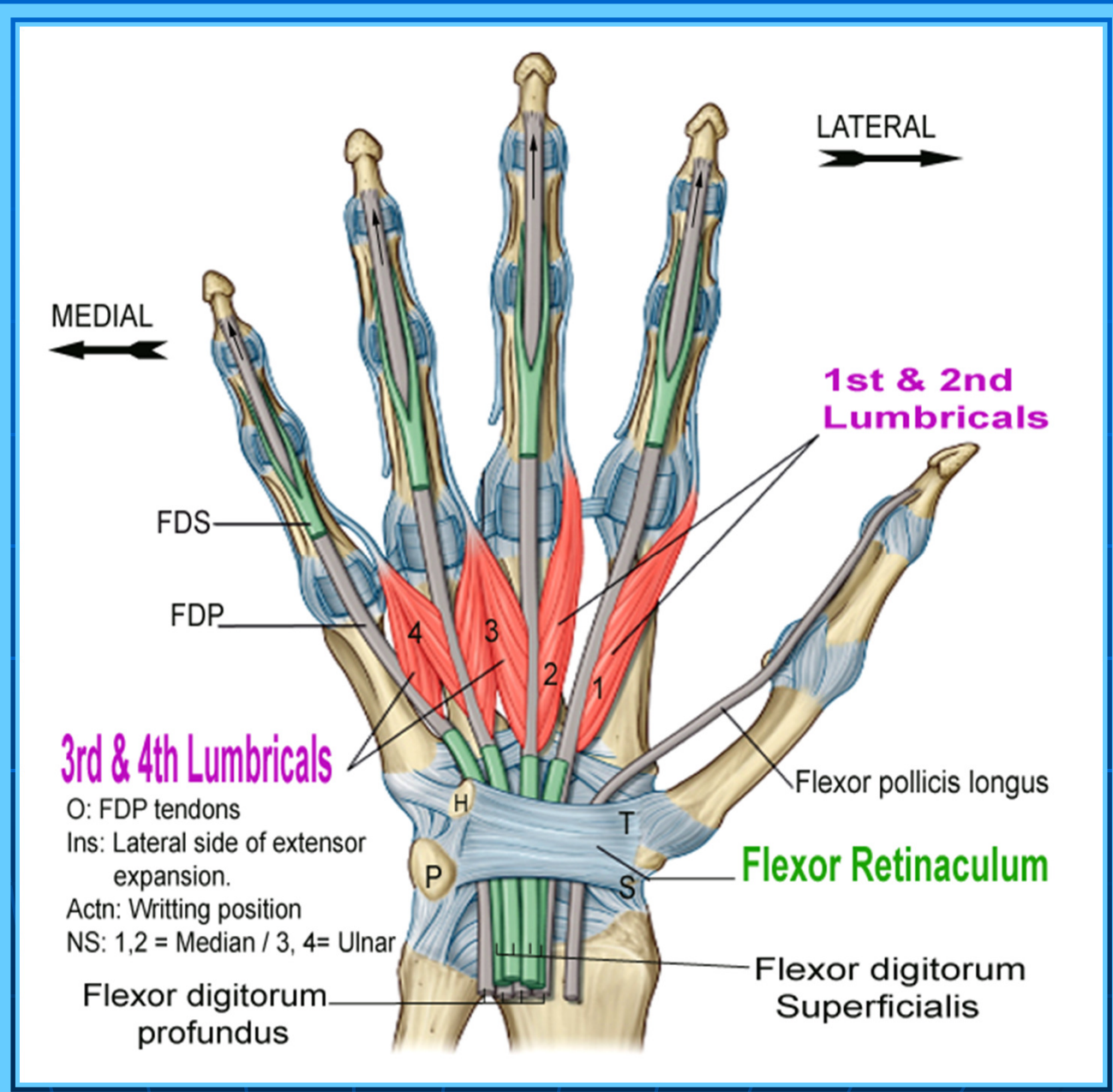
## 3 hypothenar Muscles

- All moves the little finger according to their names.
- All supplied by ulnar N.





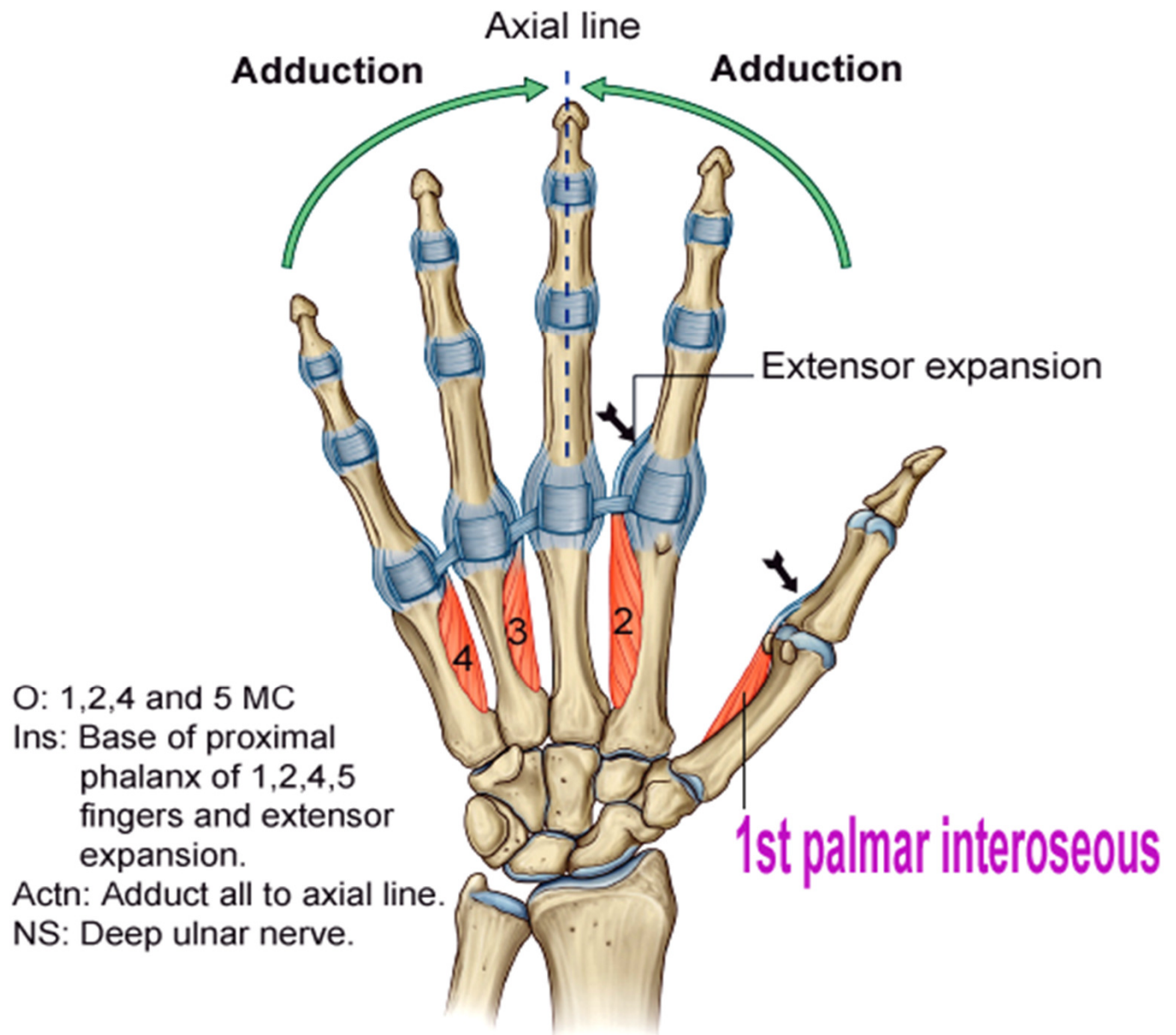
# Lumbricals



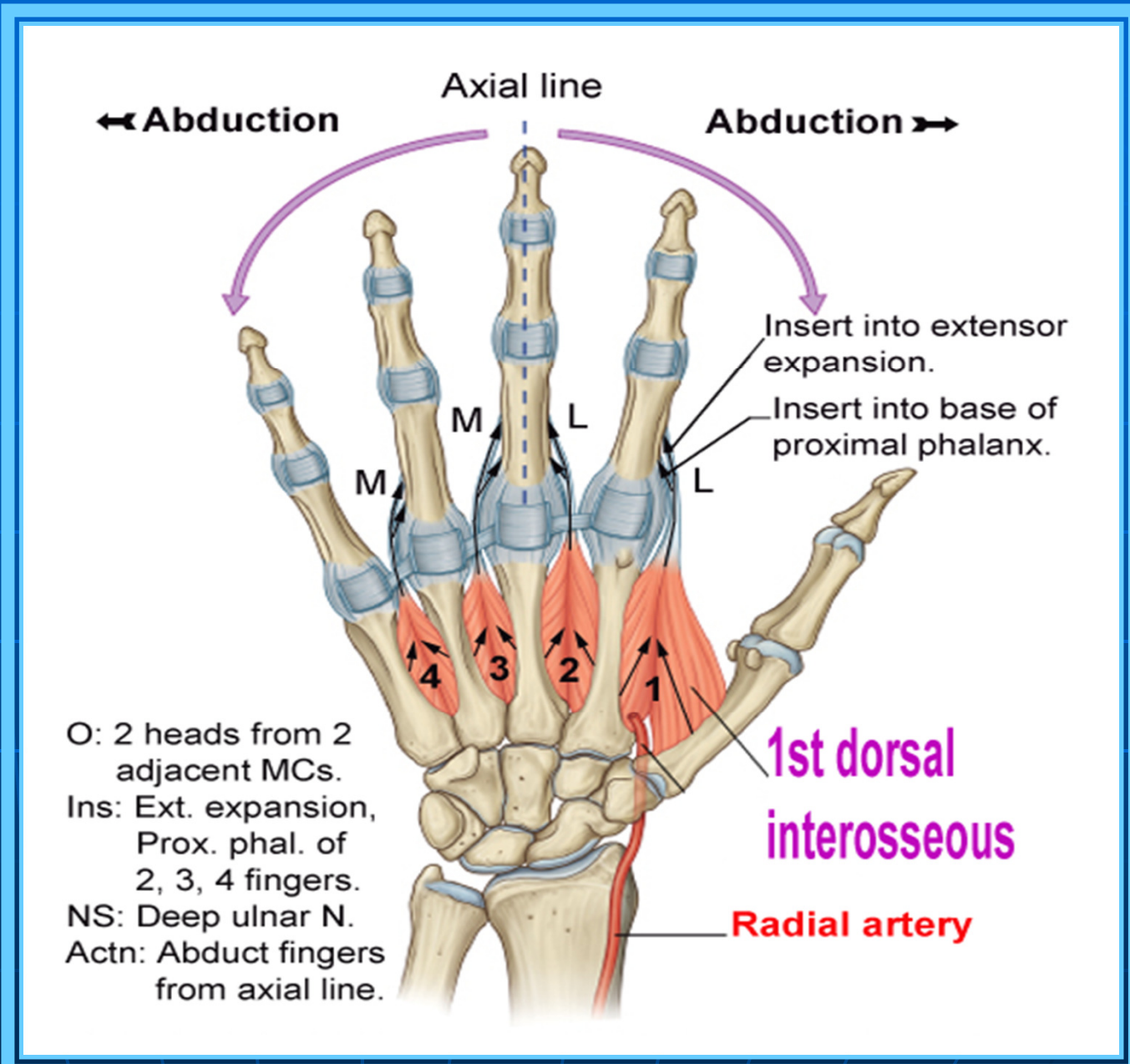
**3rd & 4th Lumbricals**  
 O: FDP tendons  
 Ins: Lateral side of extensor expansion.  
 Actn: Writing position  
 NS: 1,2 = Median / 3, 4= Ulnar  
 Flexor digitorum profundus

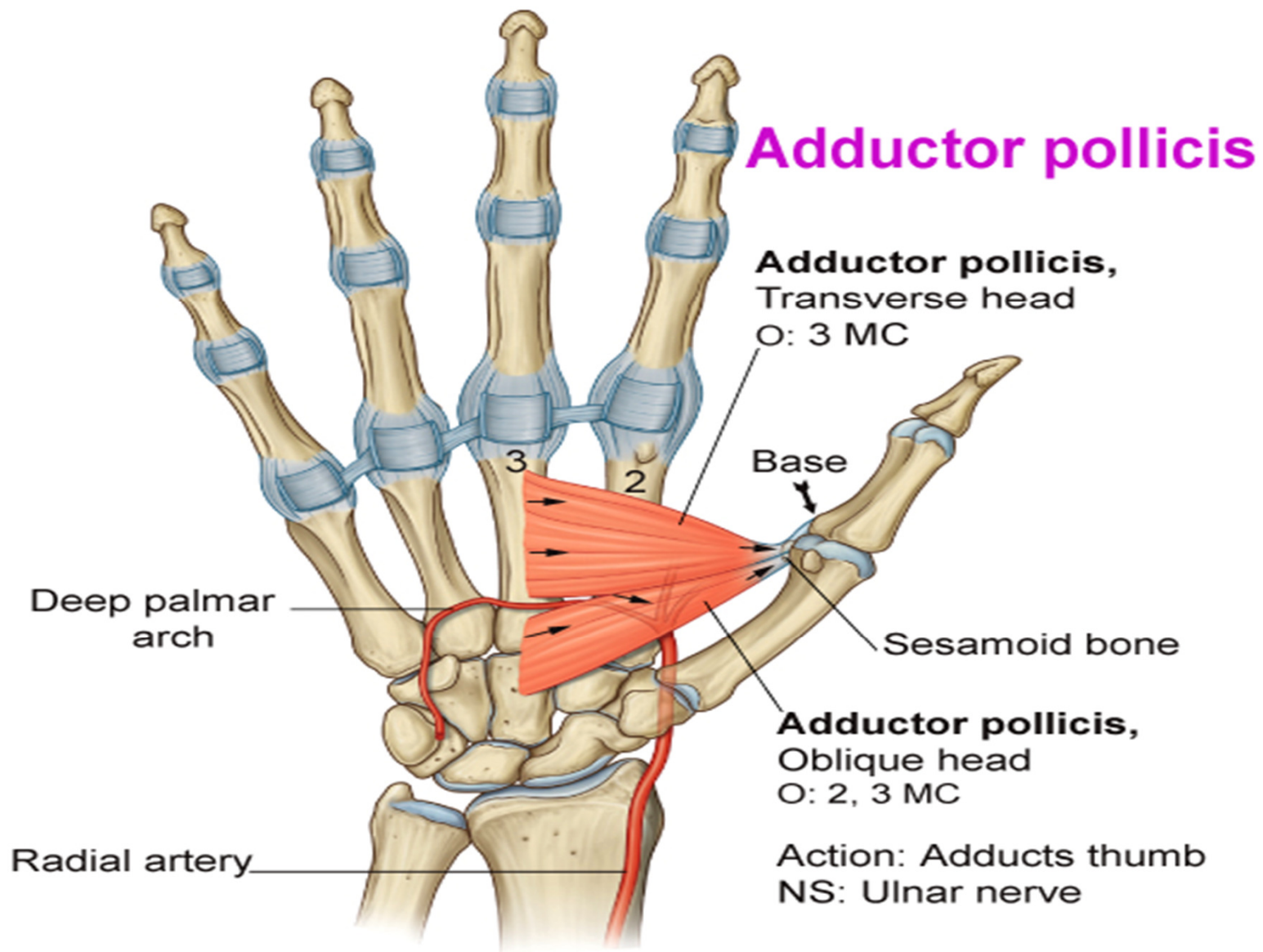
**Flexor Retinaculum**  
 Flexor digitorum Superficialis

# 4 Palmar interossei

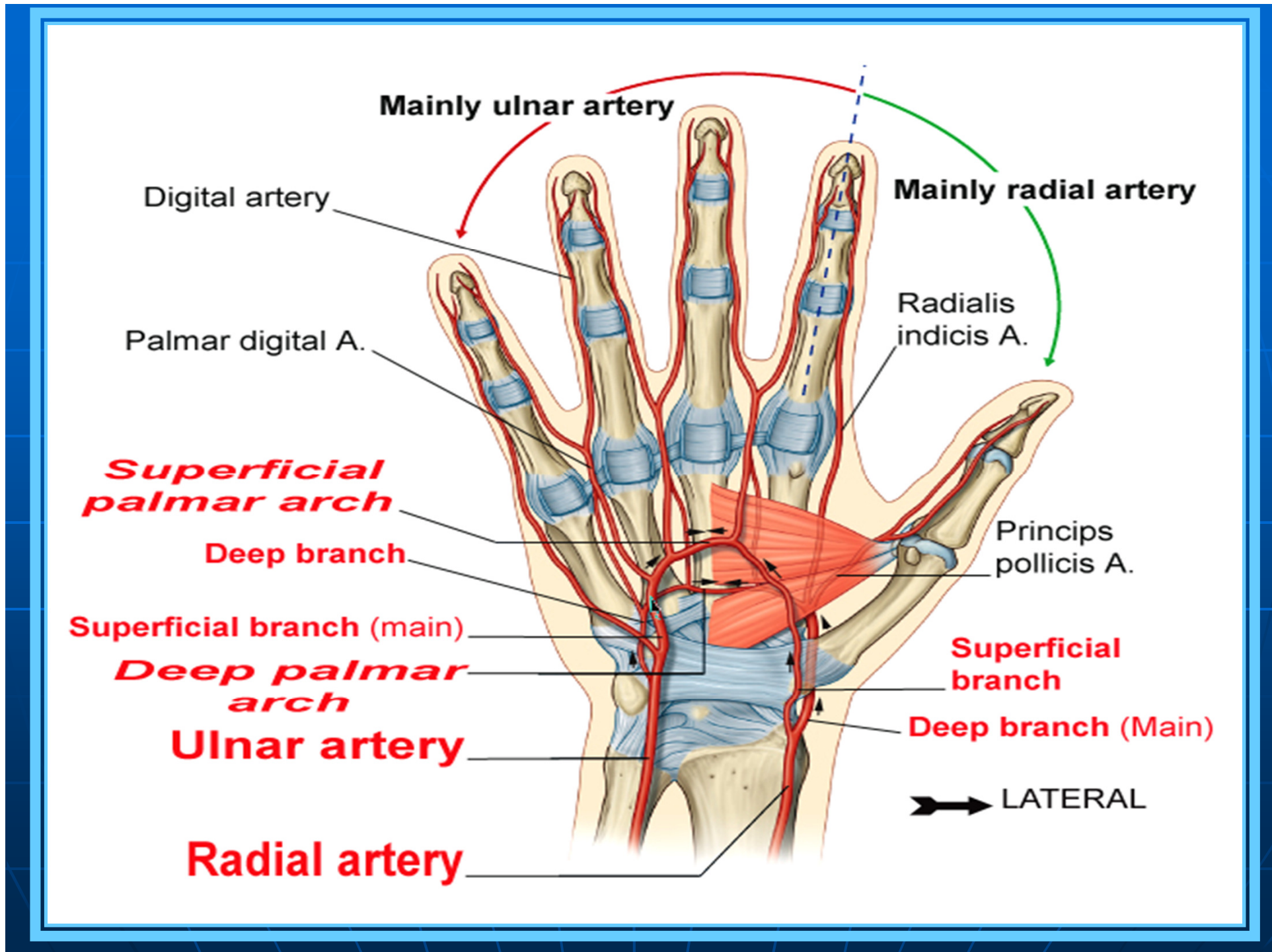


# 4 Dorsal interossei



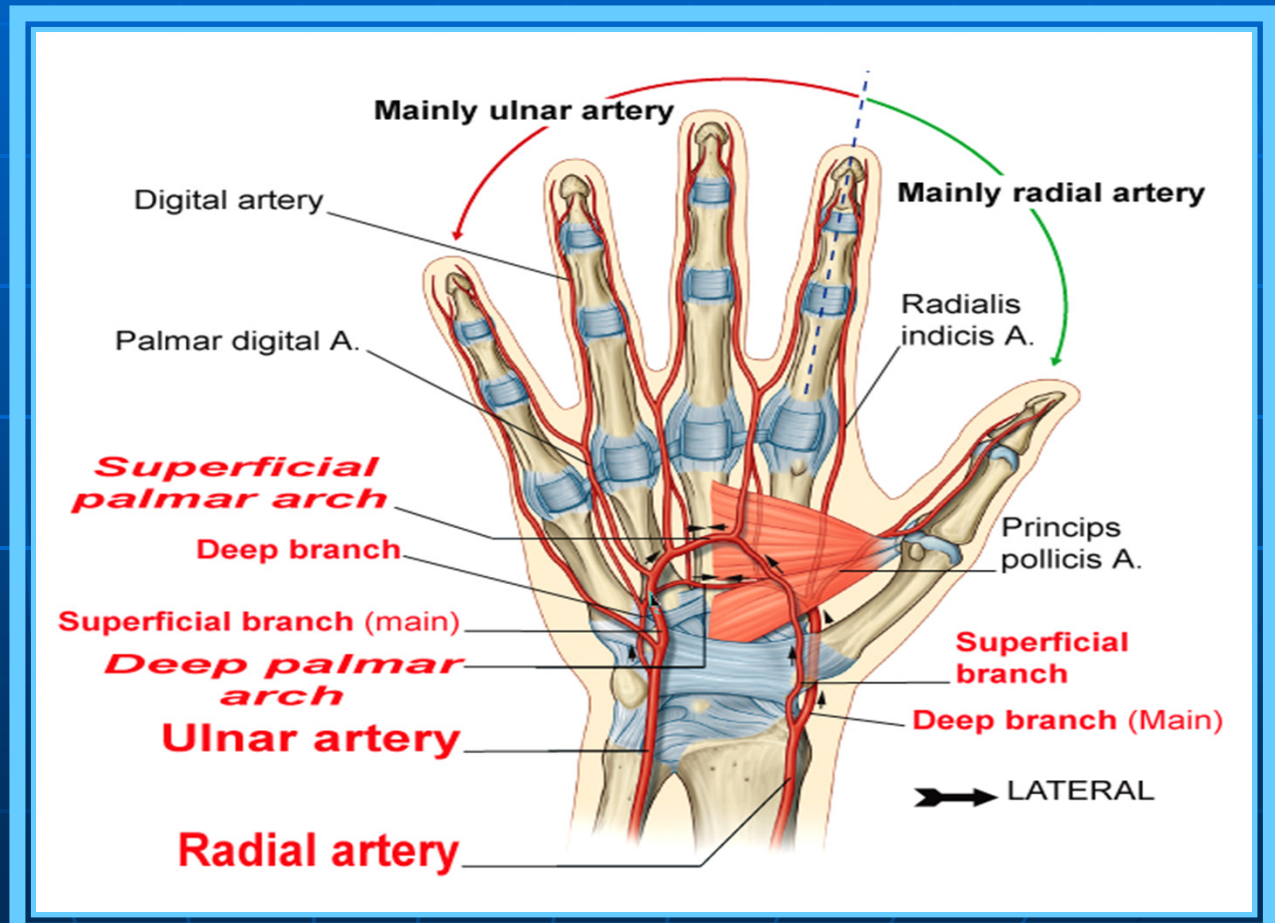






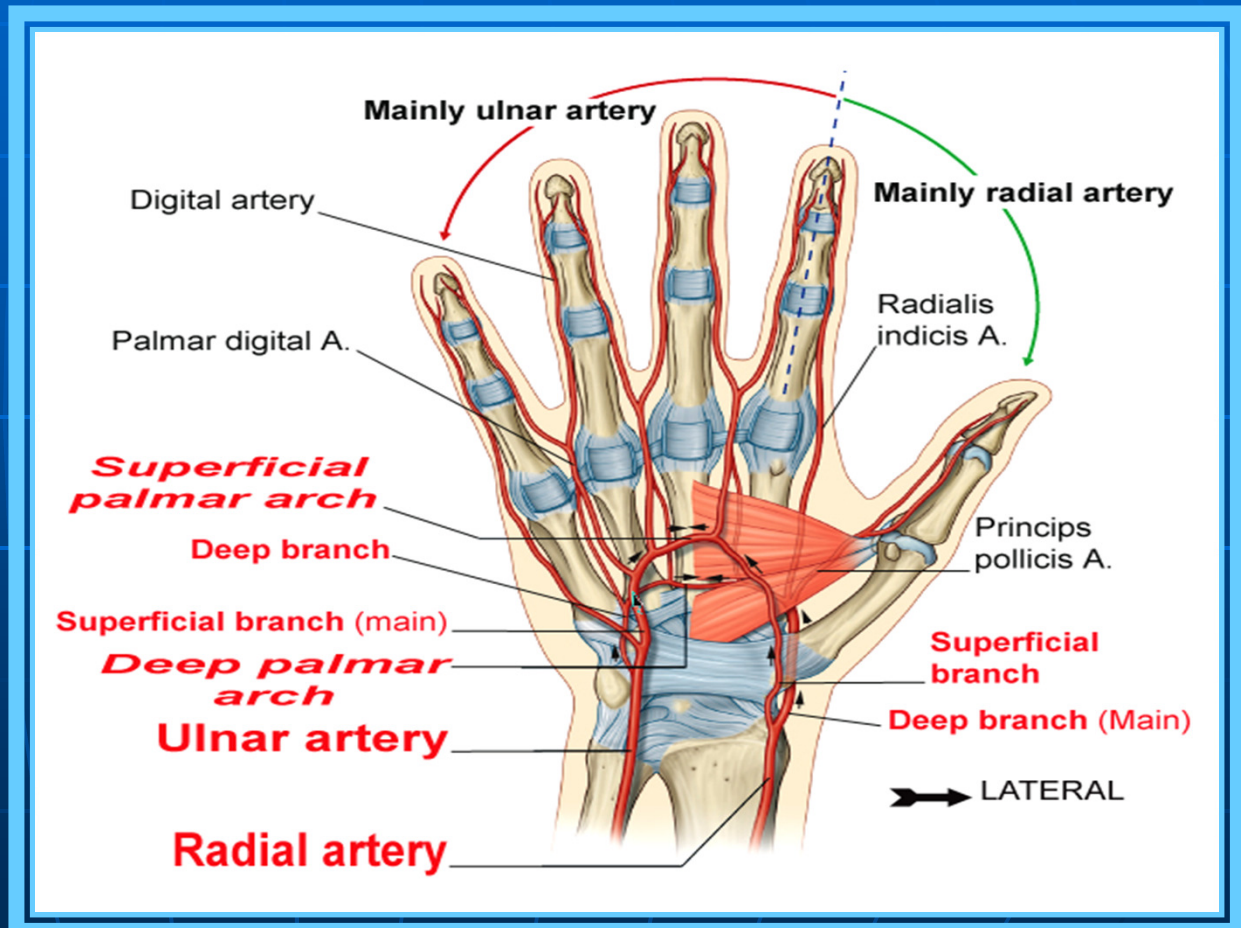
# Superficial palmar arch

- Mainly from superficial branch of ulnar A + superficial branch of radial A.

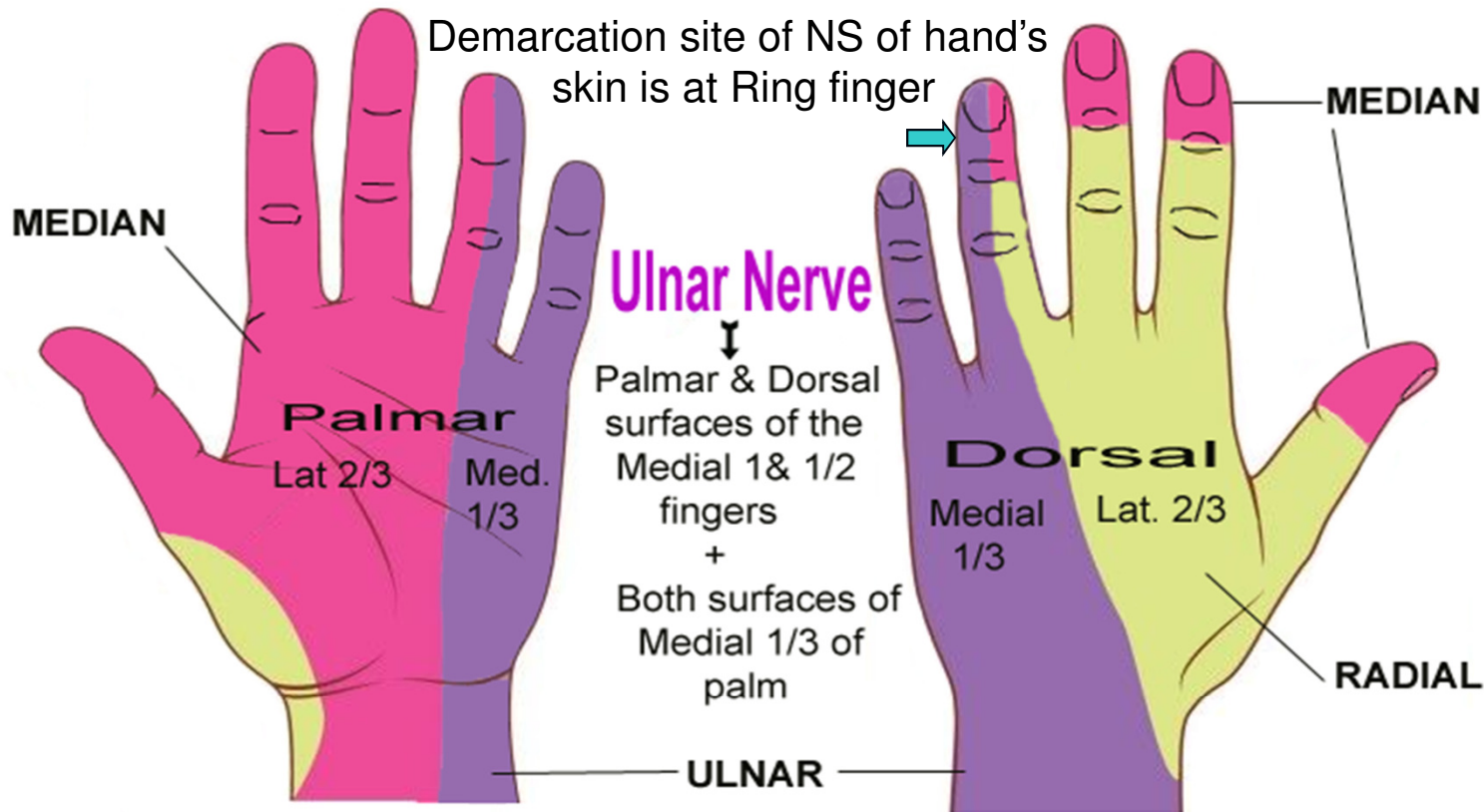


# Deep Palmar arch

- Mainly from deep branch of radial A. + deep branch of ulnar A.



## Cutaneous nerve supply to the hand



### **MEDIAN NERVE:**

Lateral 2/3 of palmar skin & Palmar aspect of the Lateral 3 & 1/2 fingers + their Nail beds

### **RADIAL NERVE:**

Lateral 2/3 of the Dorsal aspect of hand & Dorsal aspect of the 3 & 1/2 fingers except Nail beds.