Slides of anatomy

Please note : These slides are Dr. Maher Hadidi’ slides of Fall 2015 and were edited by the Premed Academic Team to fit the slides of Spring 2019.

Upper Limb

Hand

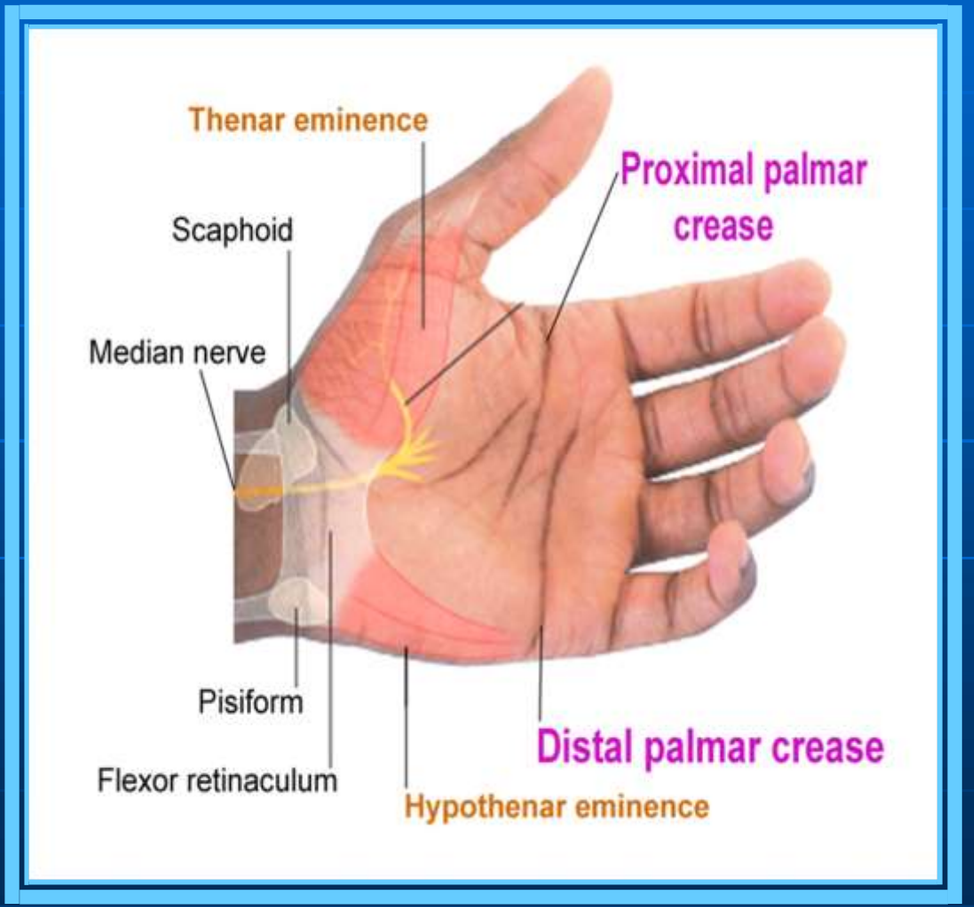
Spring 2019

Dr. Maher Hadidi, University of Jordan

HAND-1

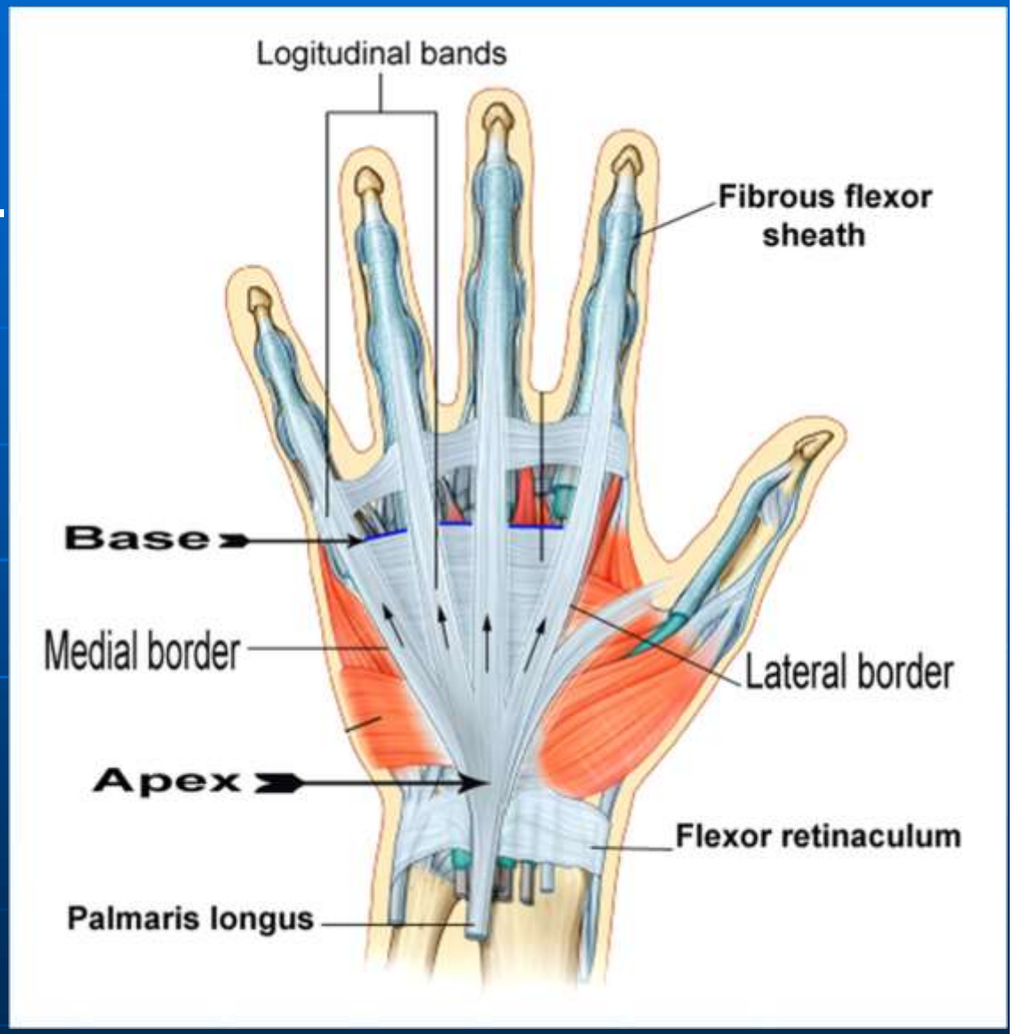
Skin

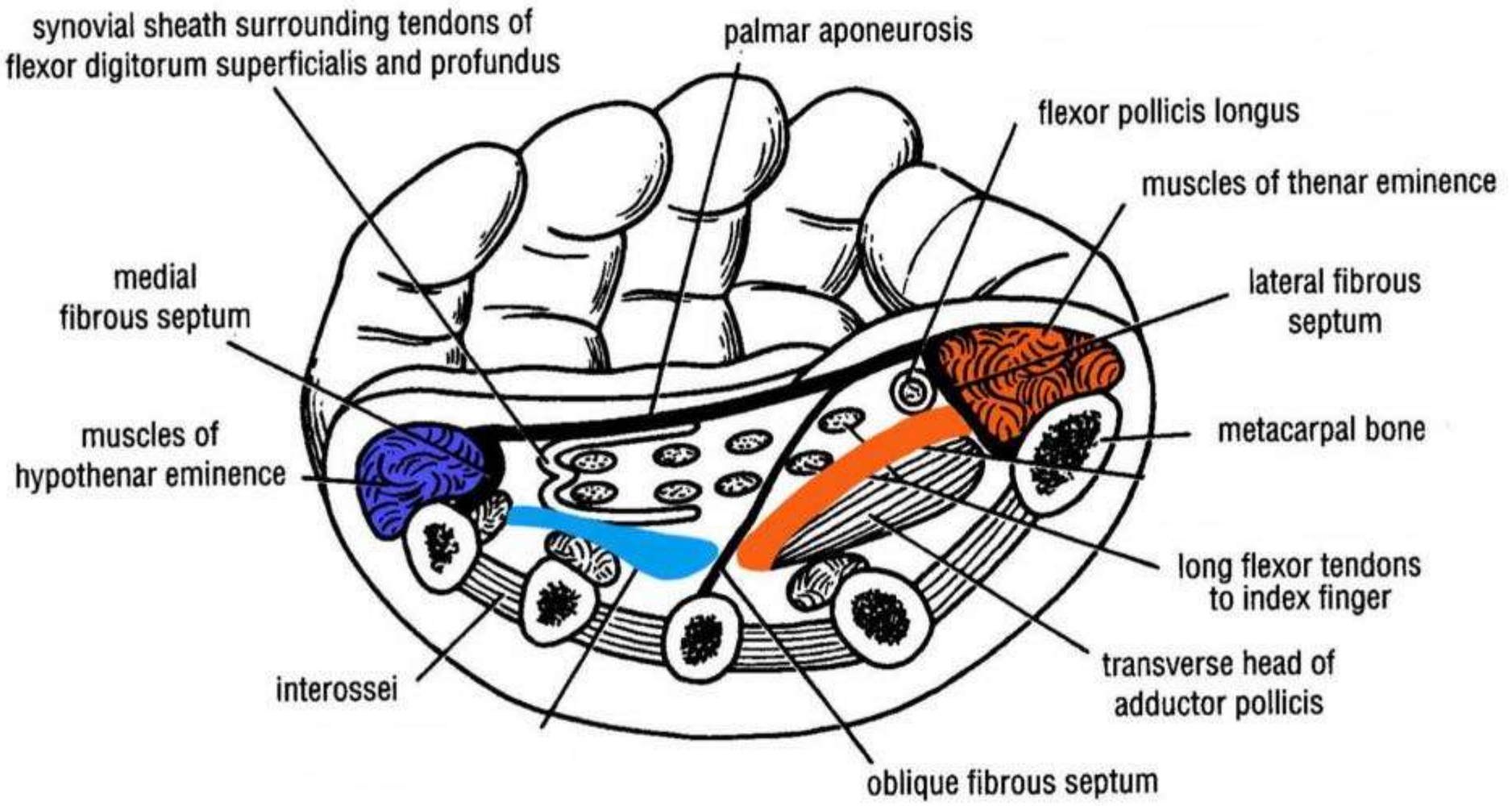
- Thick and show many flexure creases ثنيات
- Flexure creases are important landmarks.
  - Proximal palmar crease.
  - Distal palmar crease.
- Thenar راحة eminence.
- Hypothenar eminence



Palmar aponeurosis

- A triangular-shaped thickening of the deep fascia at central part of the palm.
- Receives palmaris Longus ms.
- Apex: to flexor retinaculum.
- Base: to med. 4 fingers.
- Sends 3 septums:
  -medial septum ⇨ 1st MC .
  -lateral septum ⇨ 5th MC .
  They divide the hand into:
  1. Thenar compartment. (Lateral)
  2- Hypothenar compartment. (Med)
  3- Central compartment. (Middle)

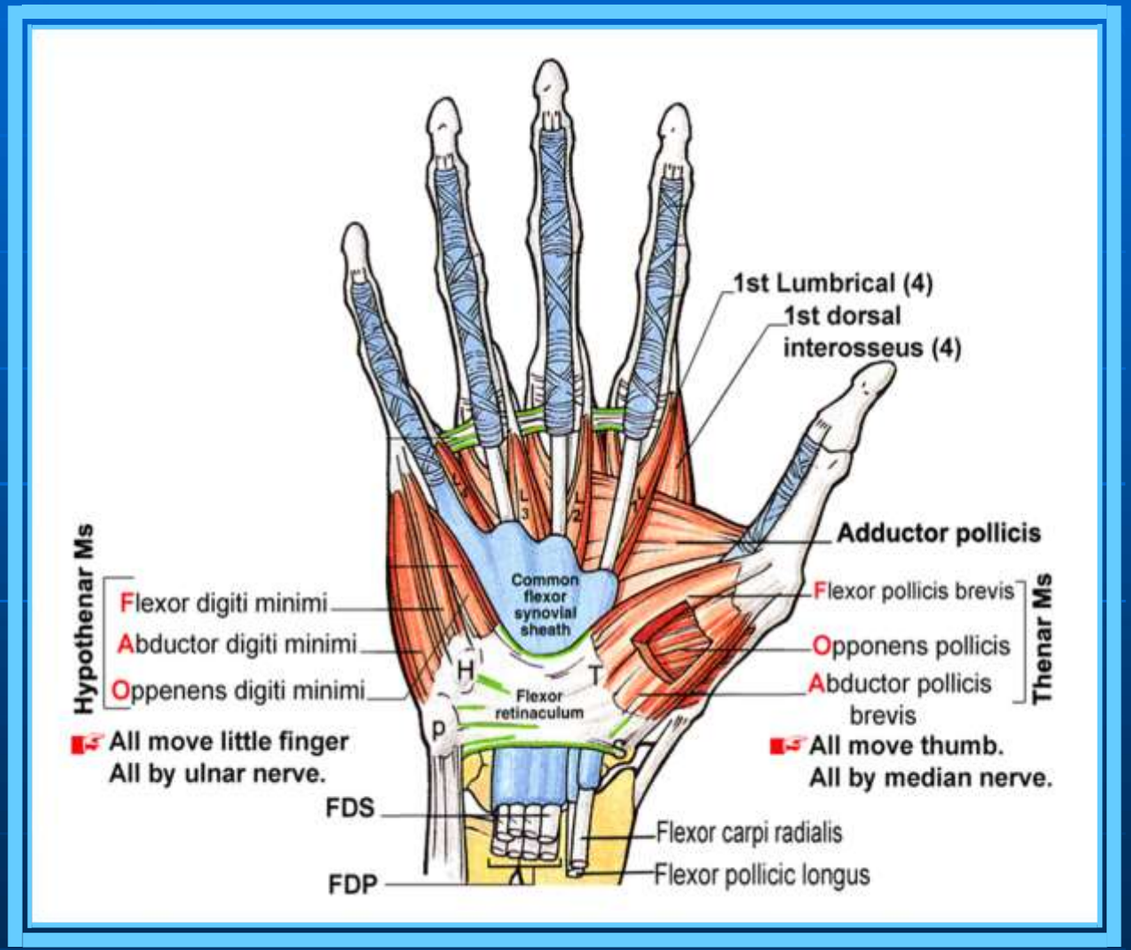


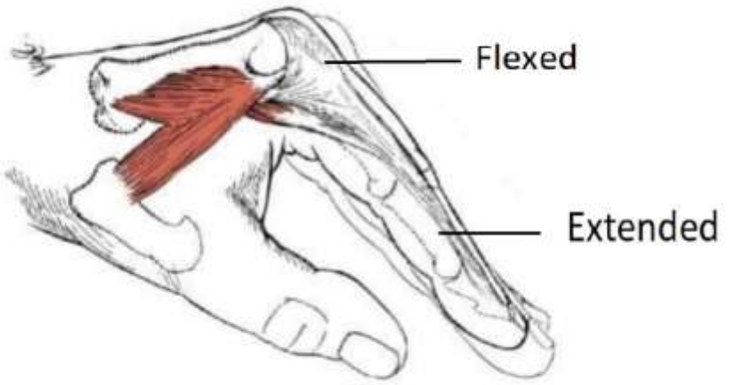

synovial sheath surrounding tendons of flexor digitorum superficialis and profundus
palmar aponeurosis
flexor pollicis longus
muscles of thenar eminence
medial fibrous septum
lateral fibrous septum
muscles of hypothenar eminence
metacarpal bone
long flexor tendons to index finger
transverse head of adductor pollicis
interossei
oblique fibrous septum

Small muscles of the Hand

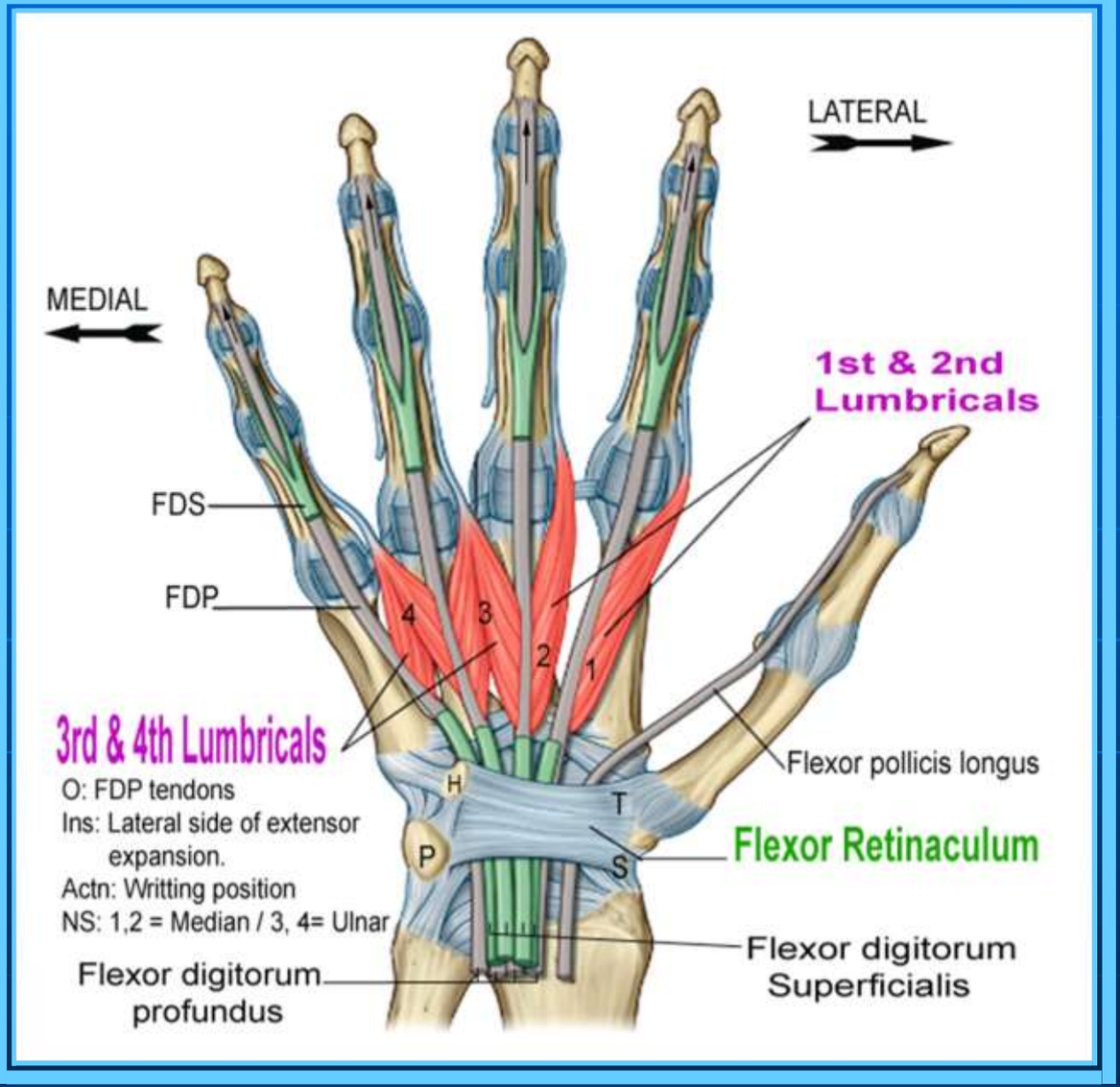
Arranged in five groups:

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



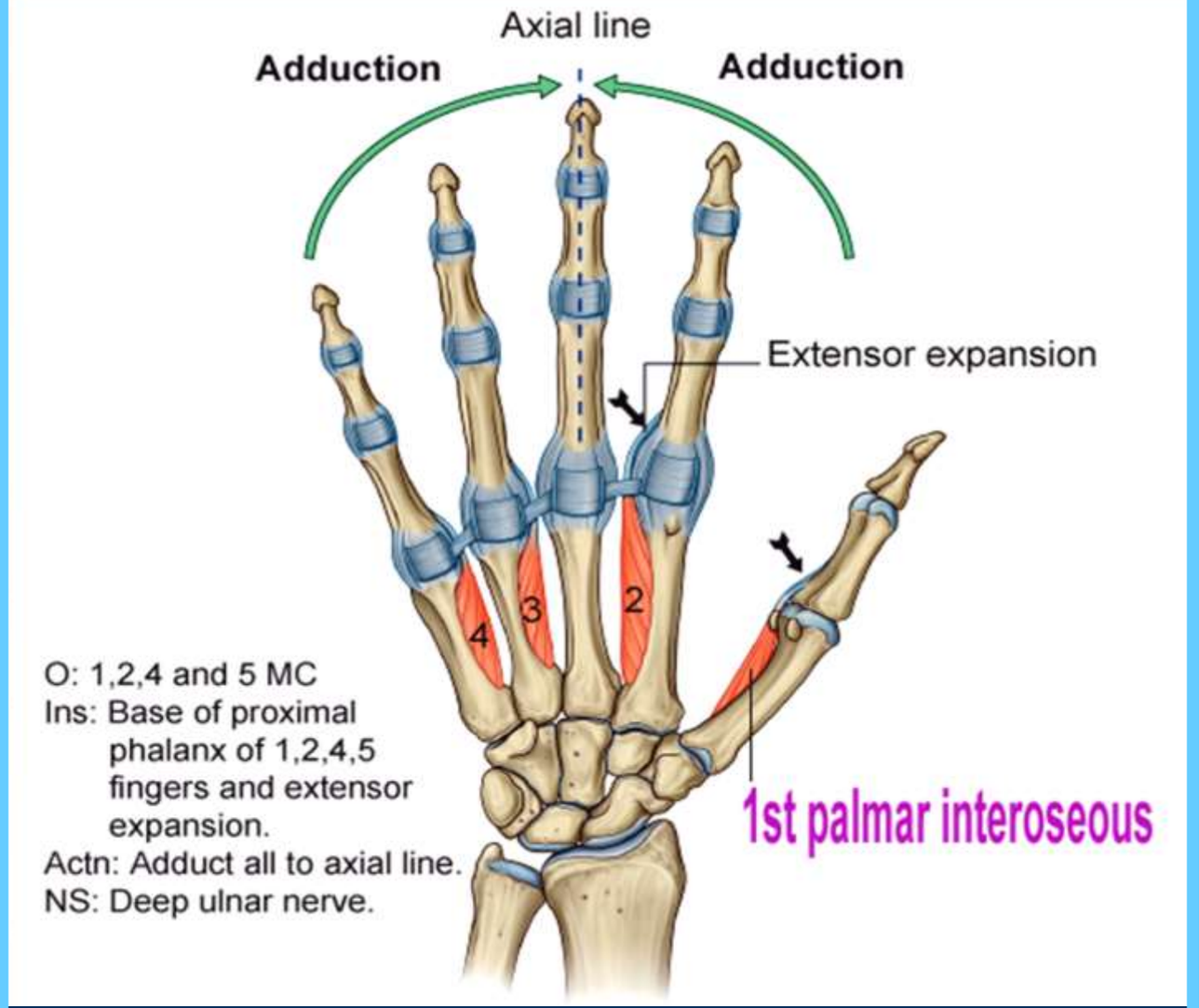

Flexed
Extended

Lumbricals

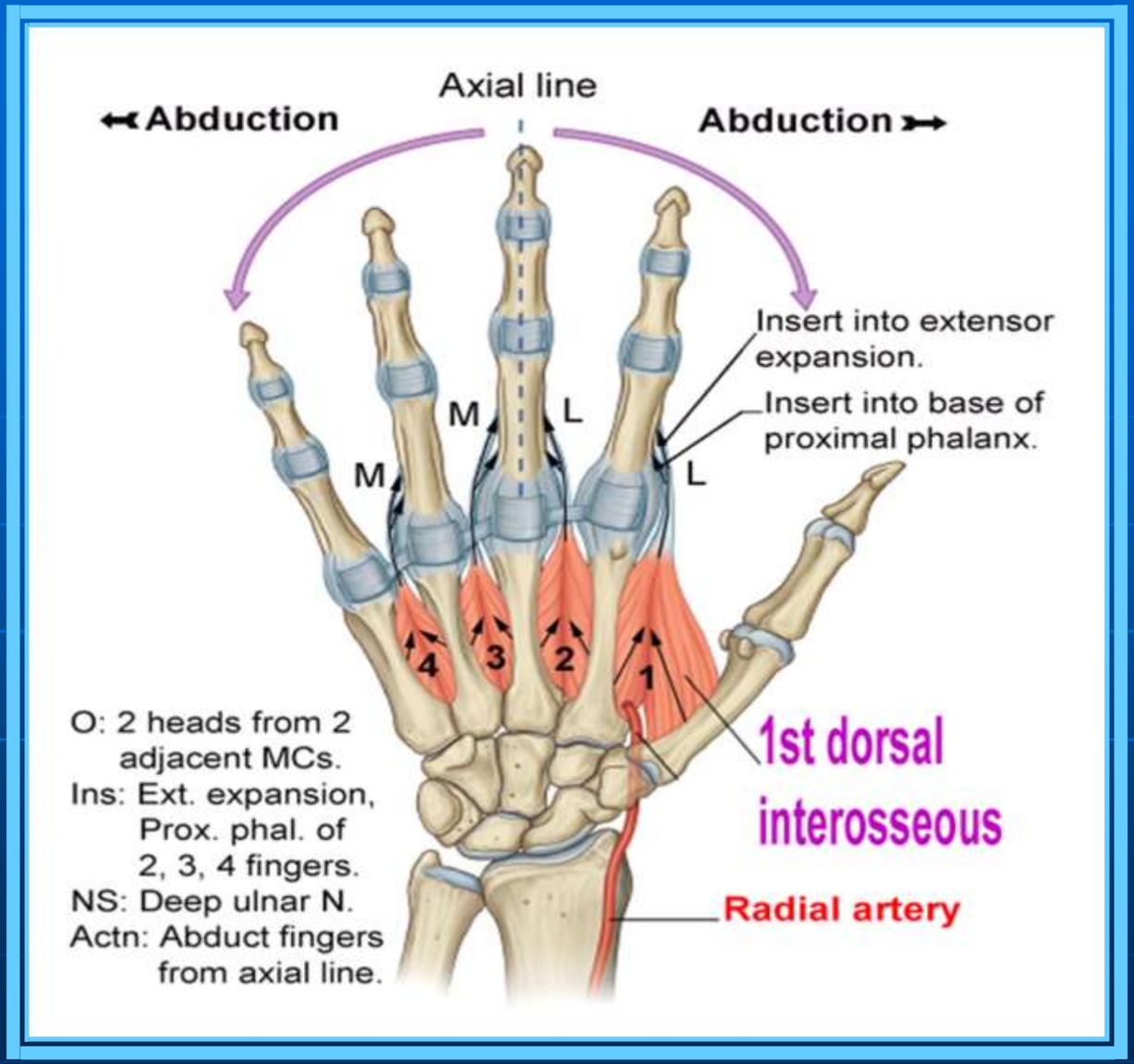

LATERAL
MEDIAL
1st & 2nd Lumbricals
FDS
FDP
4
3
2
1
3rd & 4th Lumbricals
O: FDP tendons
Ins: Lateral side of extensor expansion.
Actn: Writting position
NS: 1,2 = Median / 3, 4= Ulnar
Flexor digitorum profundus
H
T
P
S
Flexor pollicis longus
Flexor Retinaculum
Flexor digitorum Superficialis

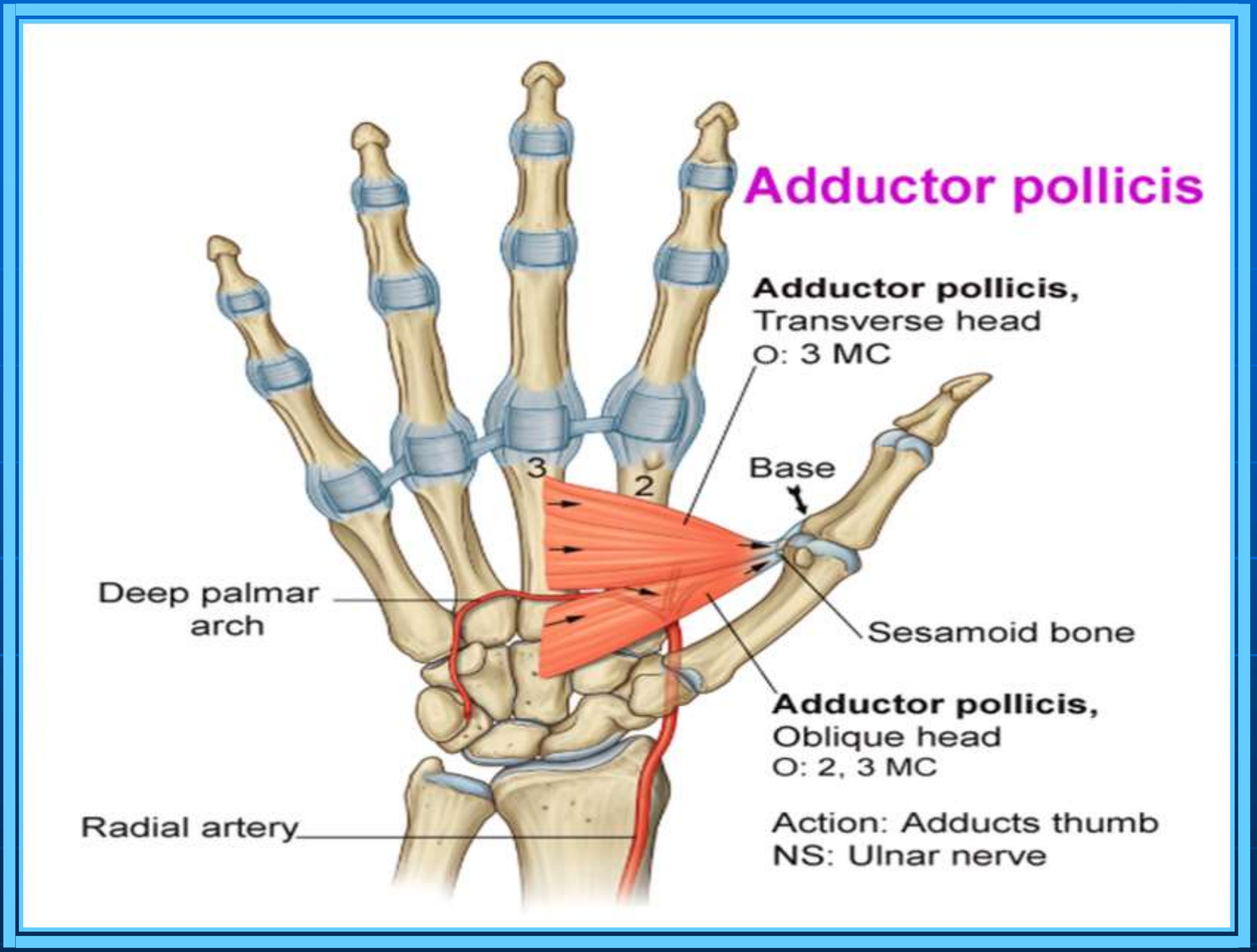
4 Palmar interossei

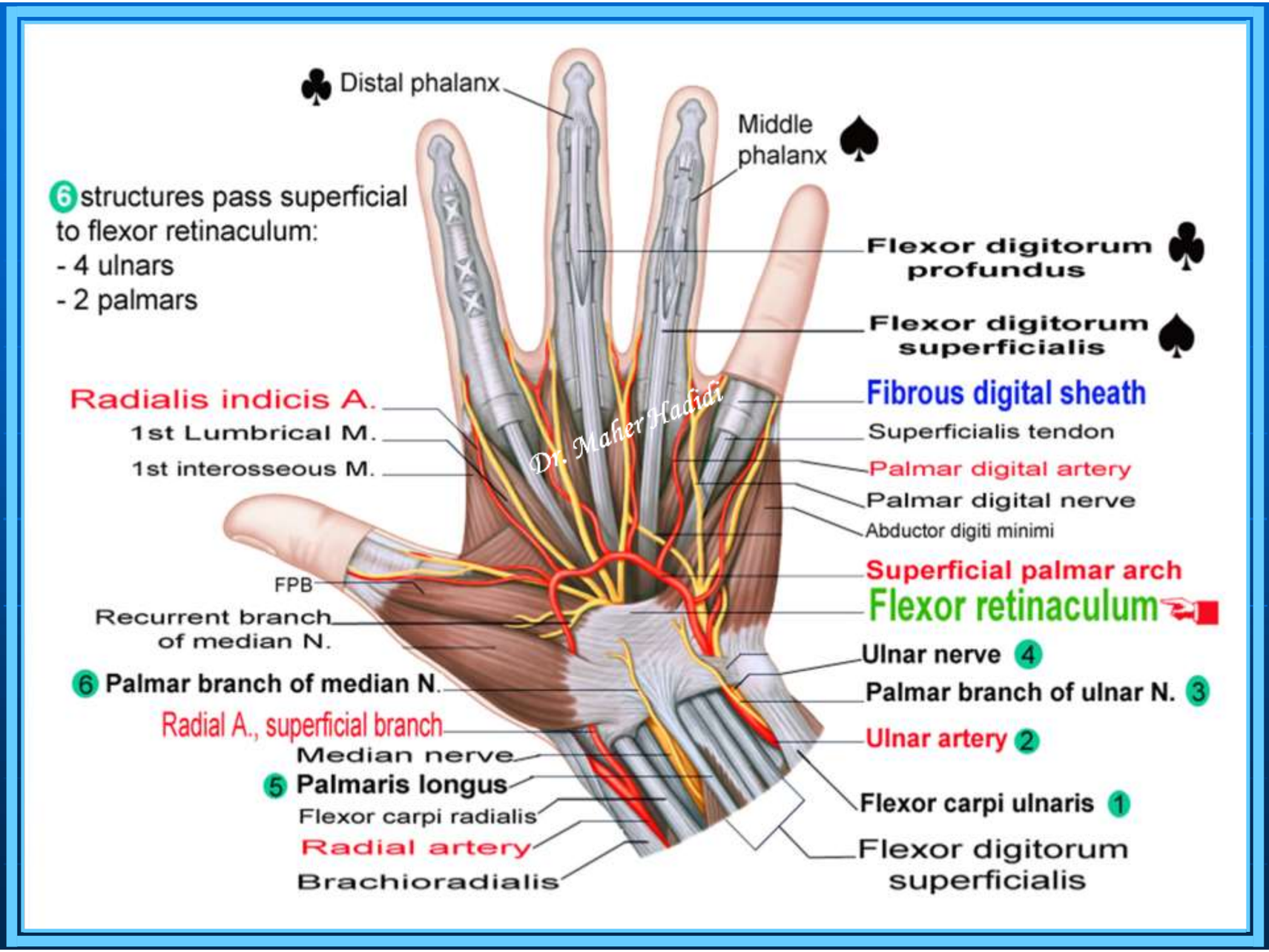
Axis of the hand is the middle finger.
So all movements occur around it



4 Dorsal interossei




Adductor pollicis
Adductor pollicis,
Transverse head
O: 3 MC
3
2
Base
Deep palmar
arch
Sesamoid bone
Adductor pollicis,
Oblique head
O: 2, 3 MC
Action: Adducts thumb
NS: Ulnar nerve
Radial artery


Distal phalanx
Middle phalanx
6 structures pass superficial to flexor retinaculum:
- 4 ulnars
- 2 palmars
Flexor digitorum profundus
Flexor digitorum superficialis
Radialis indicis A.
1st Lumbrical M.
1st interosseous M.
Fibrous digital sheath
Superficialis tendon
Palmar digital artery
Palmar digital nerve
Abductor digiti minimi
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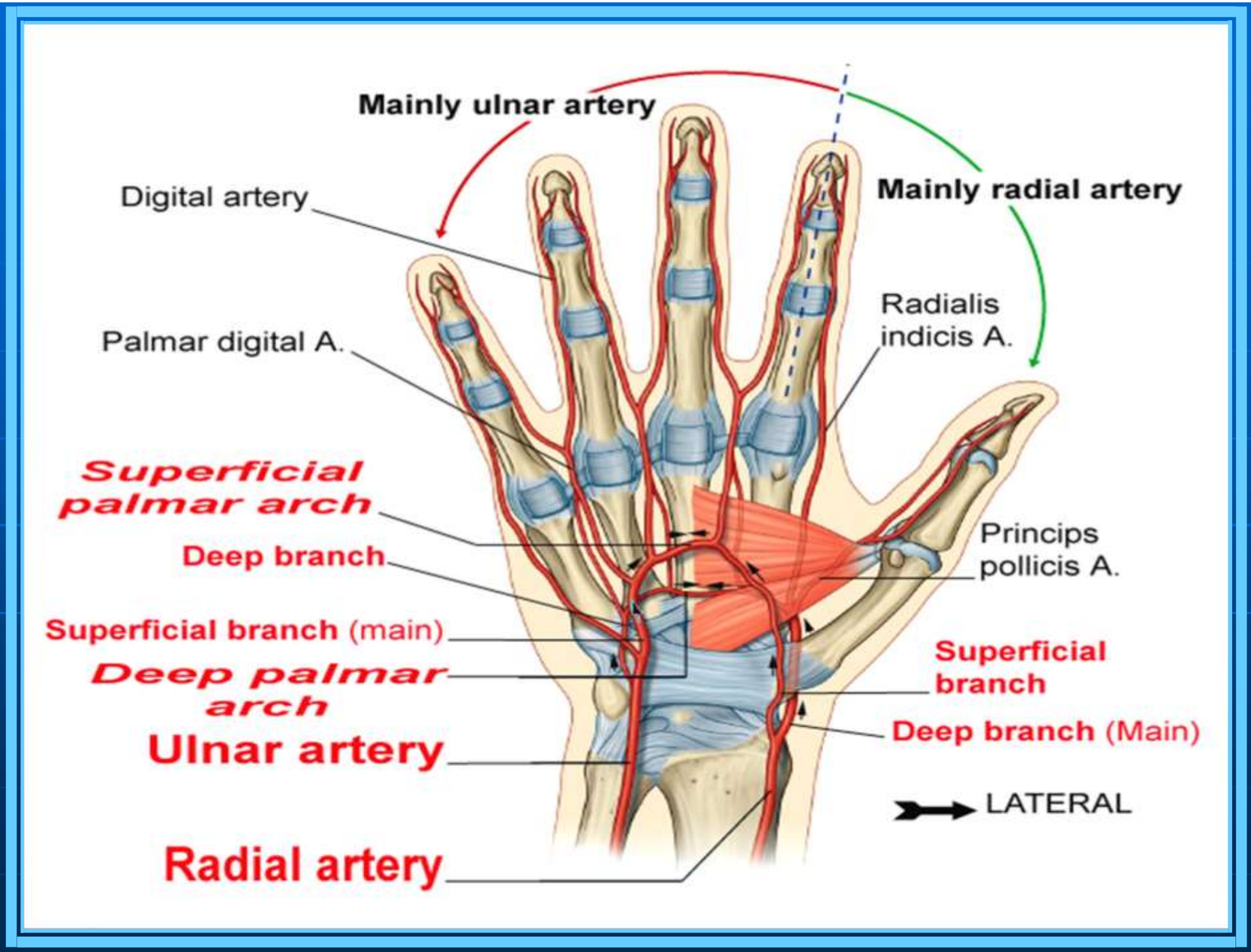
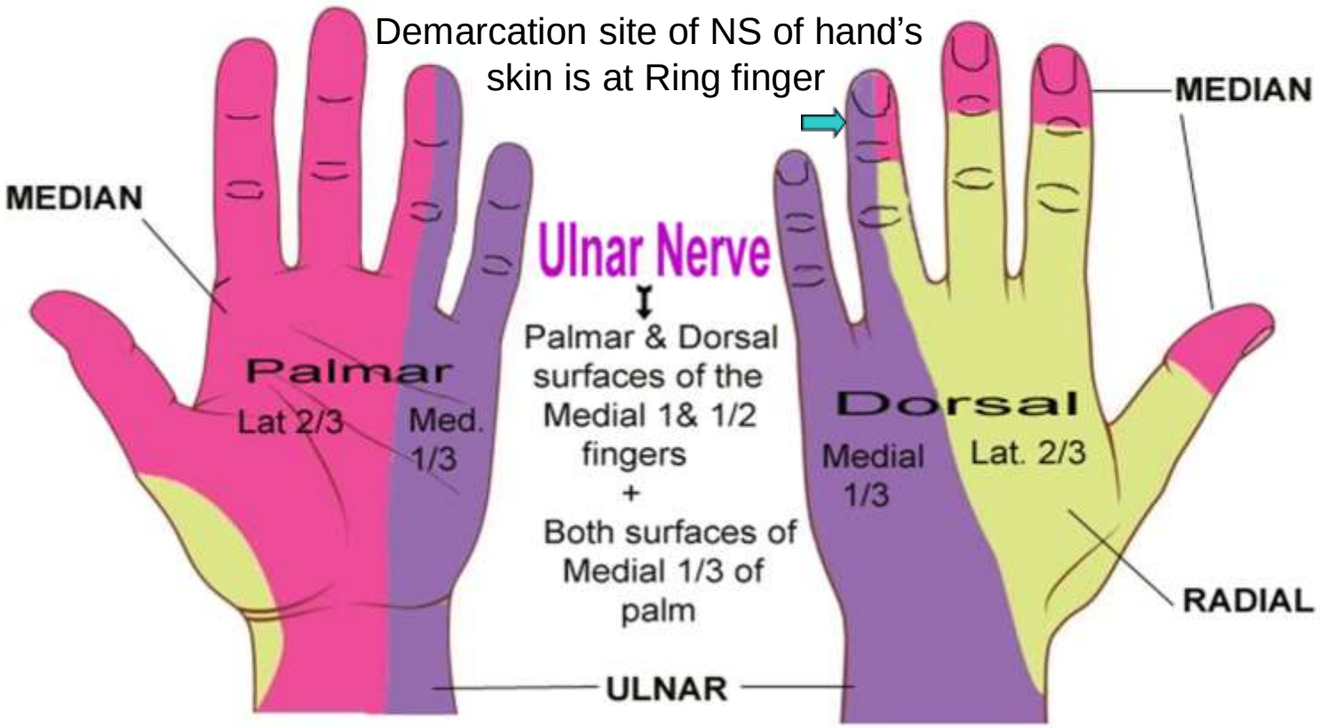
FPB
Superficial palmar arch
Flexor retinaculum
Recurrent branch of median N.
Ulnar nerve 4
6 Palmar branch of median N.
Palmar branch of ulnar N. 3
Radial A., superficial branch
Ulnar artery 2
Median nerve
5 Palmaris longus
Flexor carpi ulnaris 1
Flexor carpi radialis
Radial artery
Flexor digitorum superficialis
Brachioradialis


Mainly ulnar artery
Mainly radial artery
Digital artery
Palmar digital A.
Radialis indicis A.
Superficial palmar arch
Deep branch
Princips pollicis A.
Superficial branch (main)
Deep palmar arch
Superficial branch
Deep branch (Main)
Ulnar artery
LATERAL
Radial artery

Cutaneous nerve supply to the hand

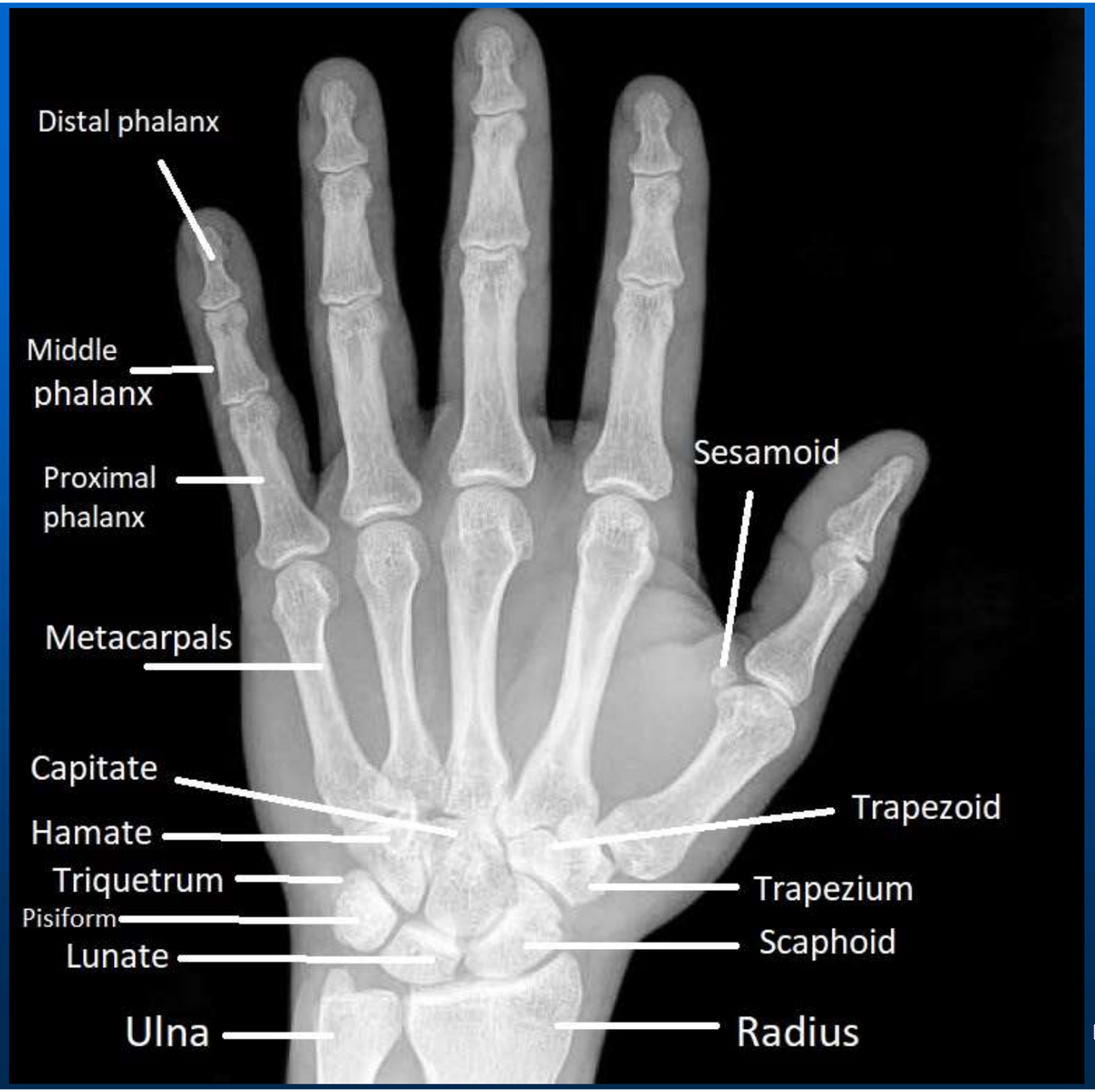


MEDIAN NERVE:

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.



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