

# Imaging Anatomy of Elbow

A 20 minutes Lecture

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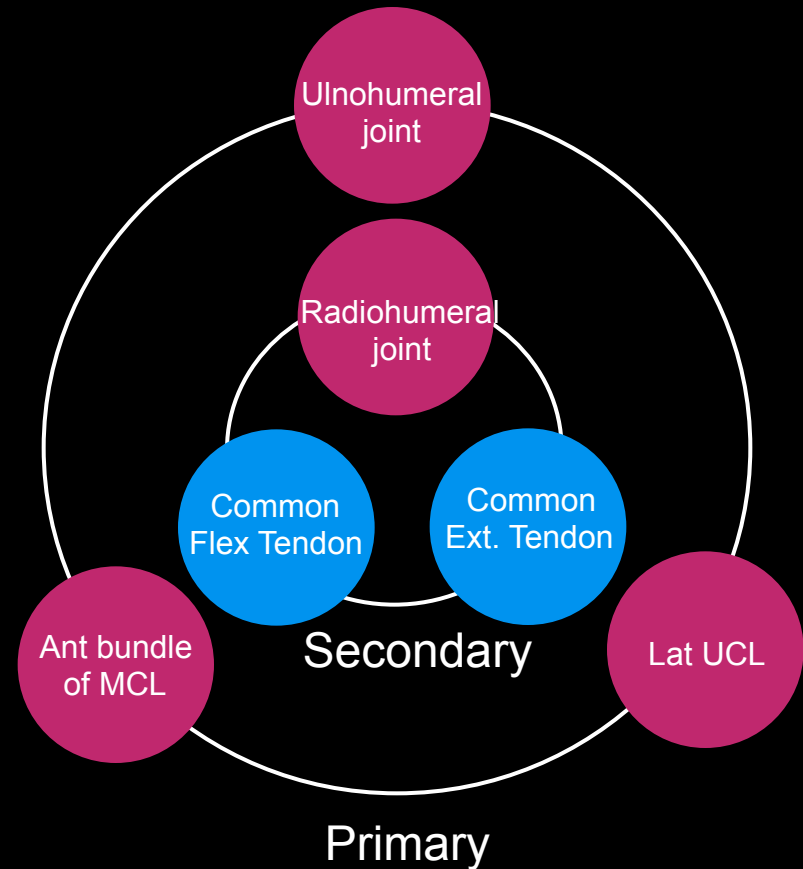
# Elbow Stabilizer

## Main

- Ulnohumeral joint
- Anterior bundle of MCL
- Lateral MCL

## Secondary

- Radiohumeral joint
- Common flexor-pronator
- Common extensor



# Stabilizer

## Main

- Ulnohumeral joint
- Anterior bundle of MCL
- Lateral UCL

## Secondary

- Radiohumeral joint
- Common flexor-pronator
- Common extensor



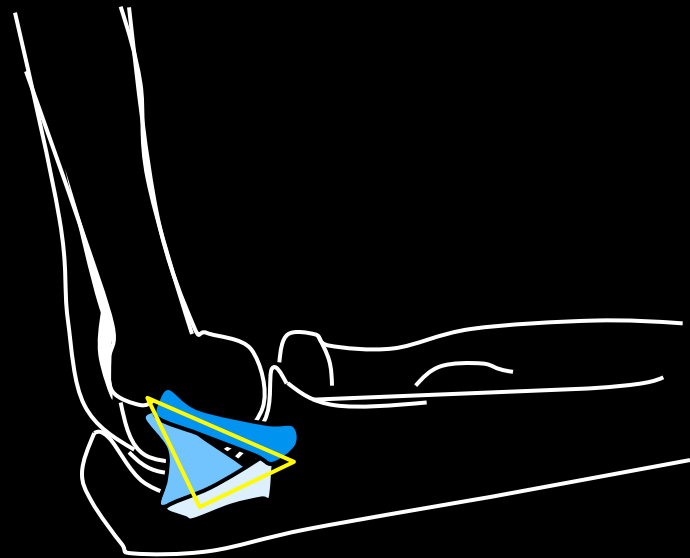
# Ligaments

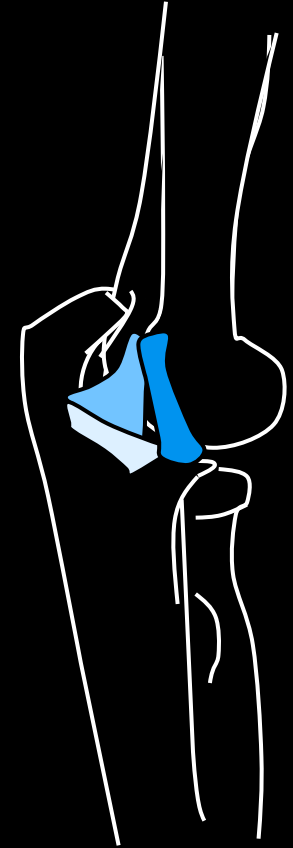
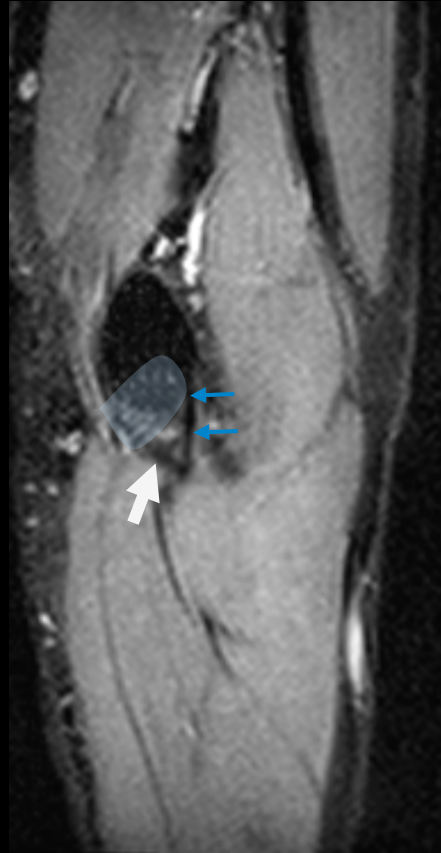
## **Medial collateral ligament**

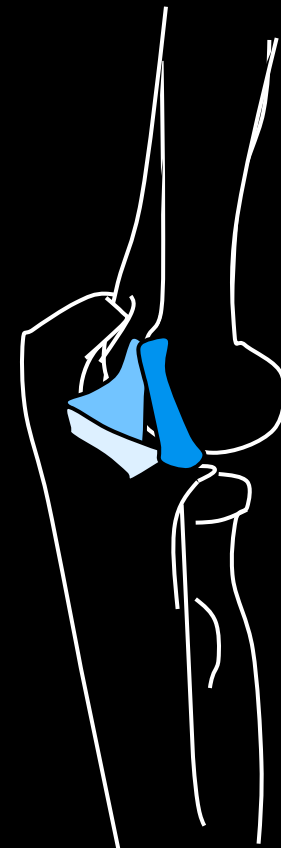
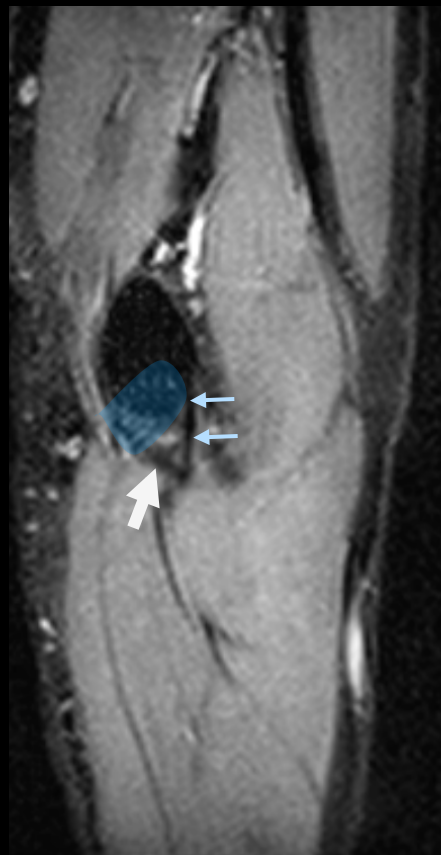
Anterior bundle

Posterior bundle

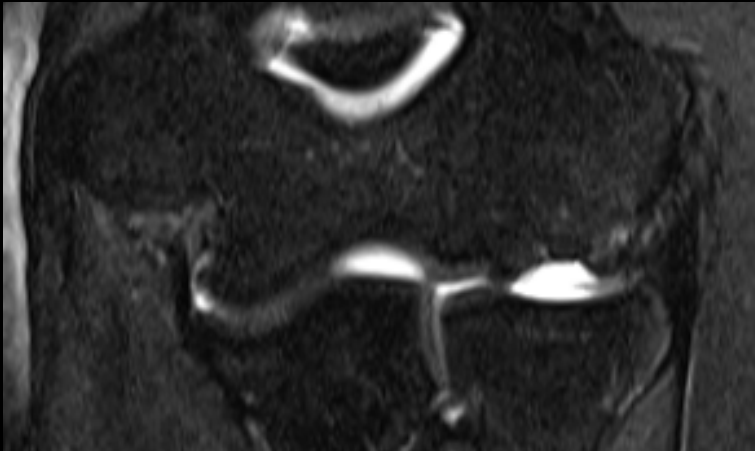
Transverse bundle



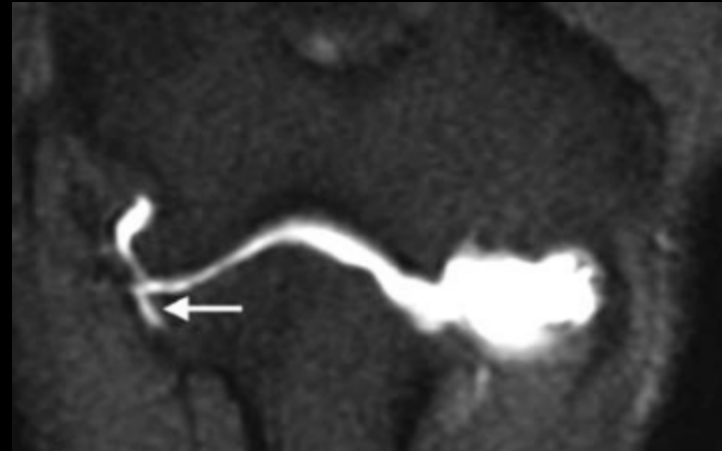




# Distal Insertion of the Anterior Bundle

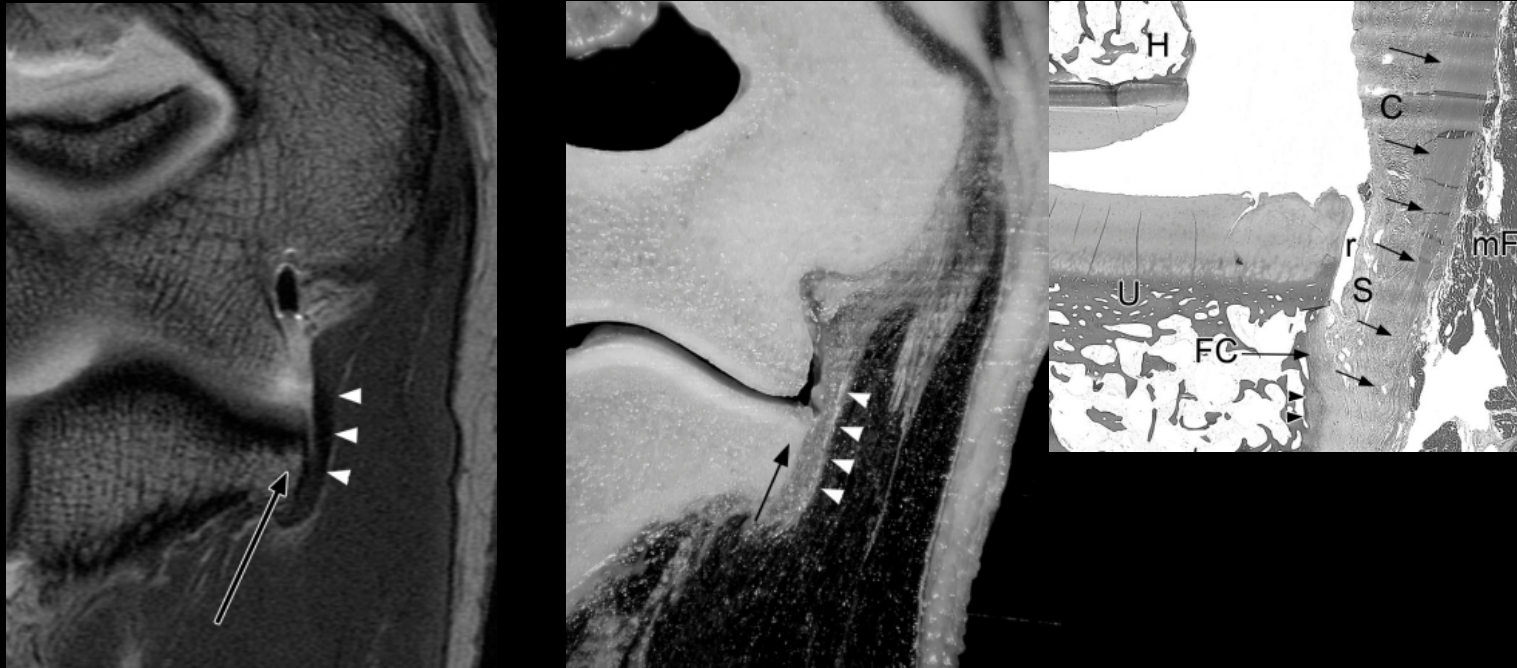


Proximal ins: Collateral ligament recess  
Distal ins: Tightly attached to sublime tubercle



T- sign: Partial undersurface tear  
of anterior bundle of MCL

# Distal Insertion of the Anterior Bundle





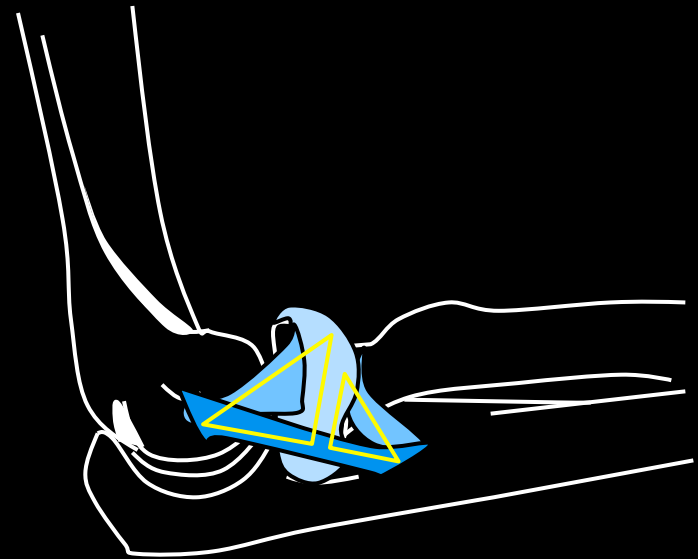
# Lateral collateral ligament

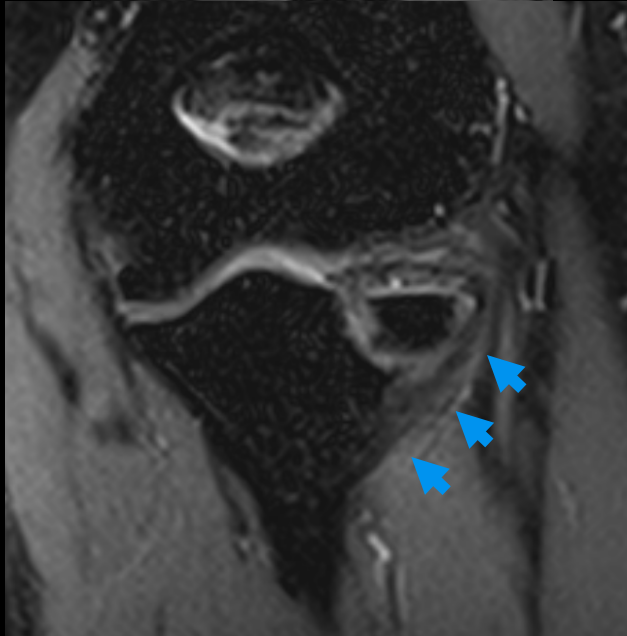
Annular lig

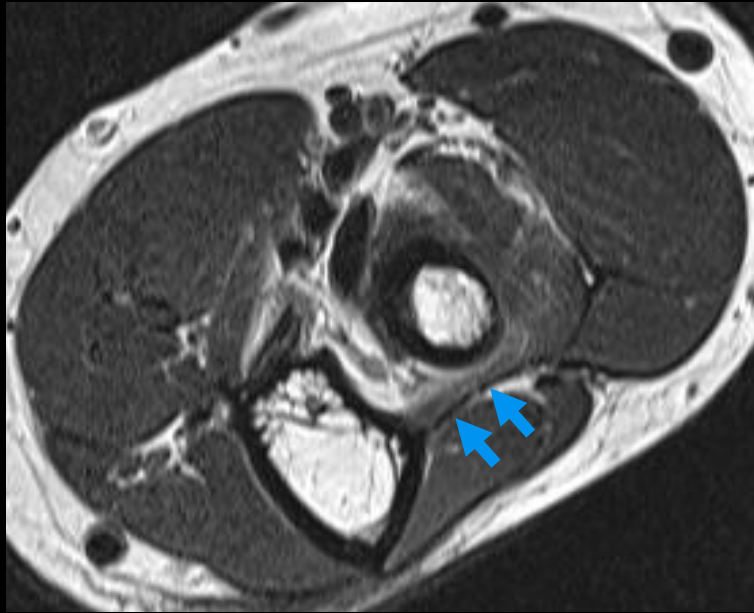
Radial collateral lig

Lat ulnar collateral lig (LUCL)

Accessory lig (accessory LUCL)







# Muscles

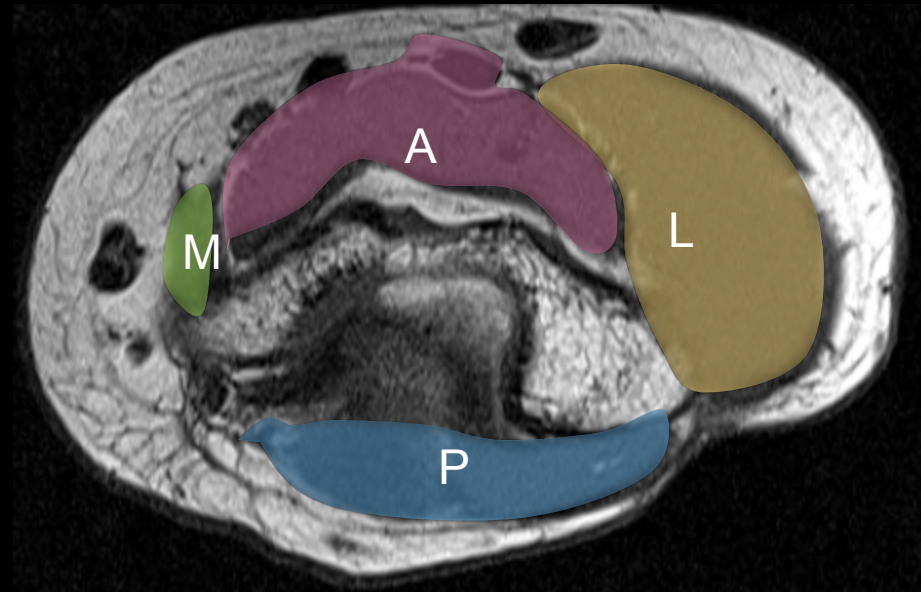
## Four anatomic divisions

Anterior: Biceps brachii, Brachialis

Posterior: Triceps, Anconeus

Medial: Pronator teres, Flexors

Lateral: Supinator, BR, Extensors



# Medial: Flexor-pronator muscle groups

Pronator teres (PT)

Flex Carpi Radialis (FCR)

Palmaris longus (PL)

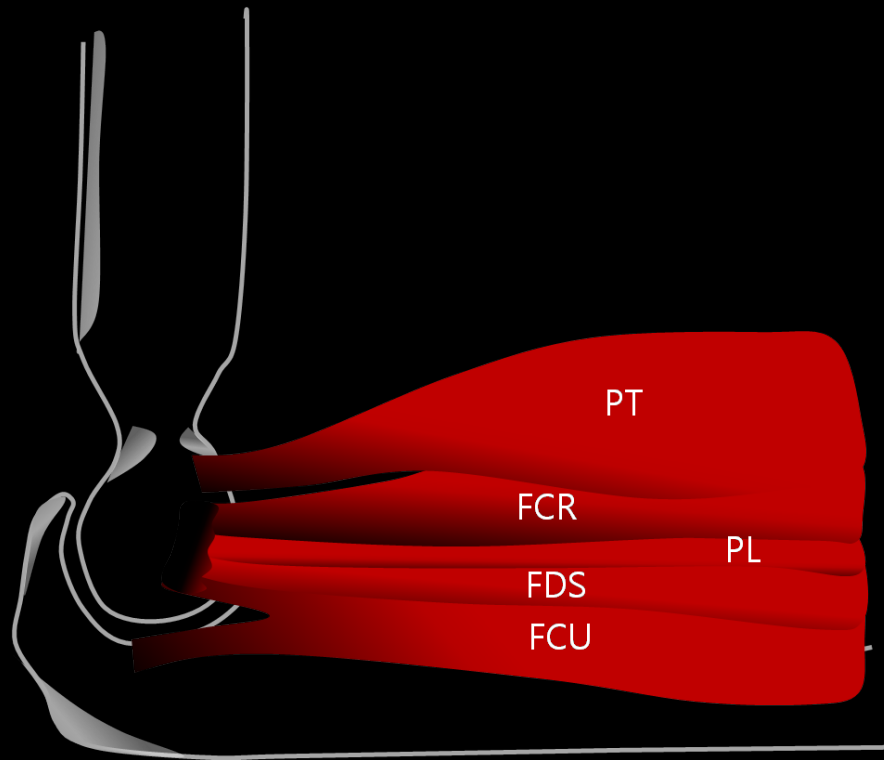
Flex Digitorum Superficialis (FDS)

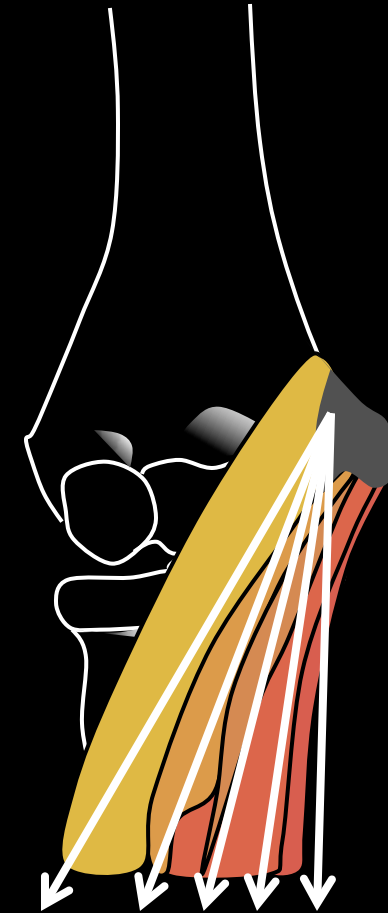
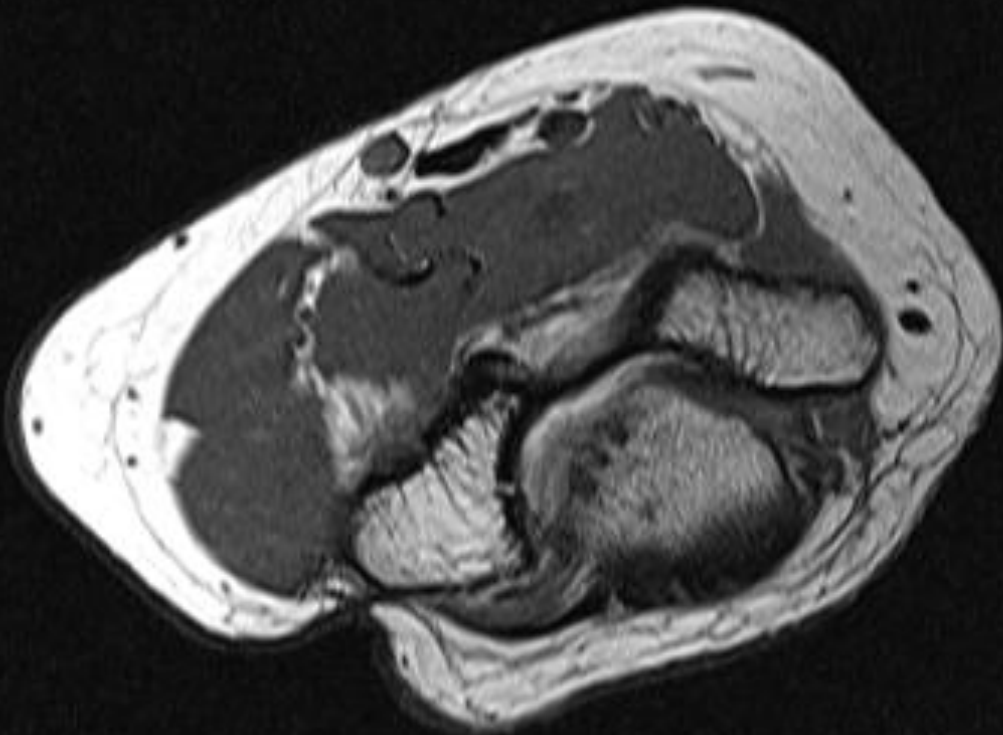
Flex Carpi Ulnaris (FCU)



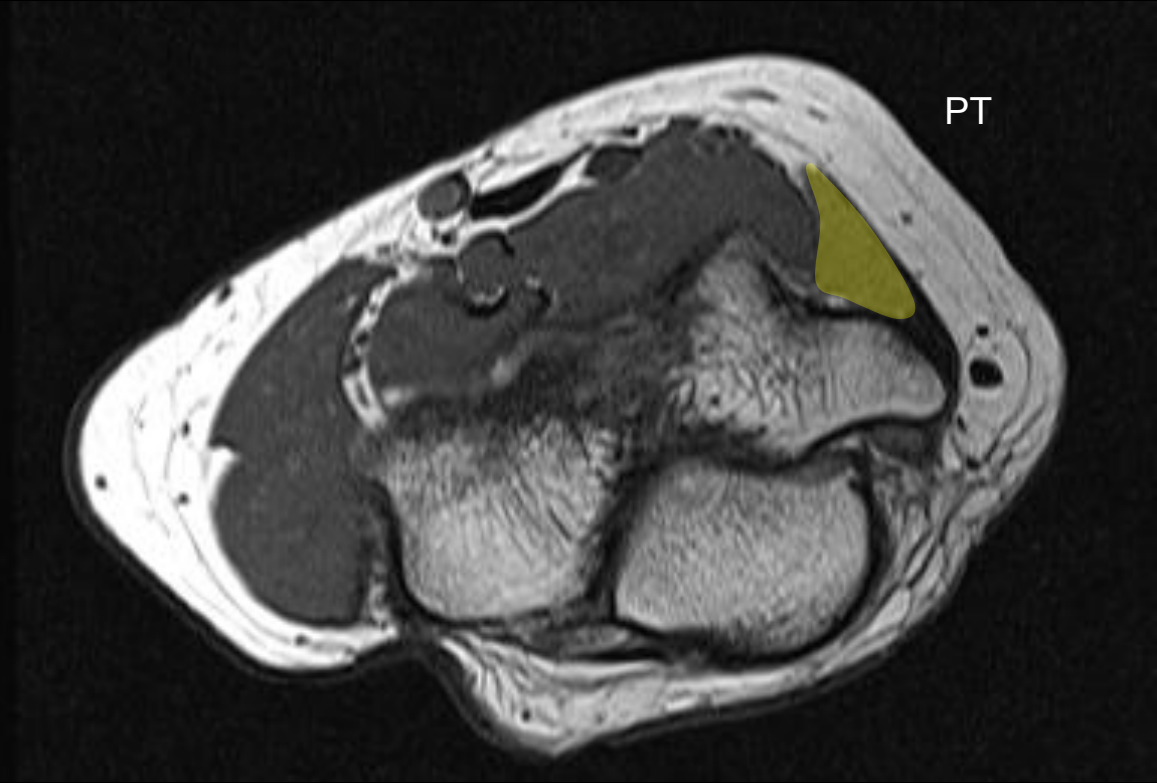
PT FCR PL FDS FCU

# Medial: Flexor-pronator muscle groups

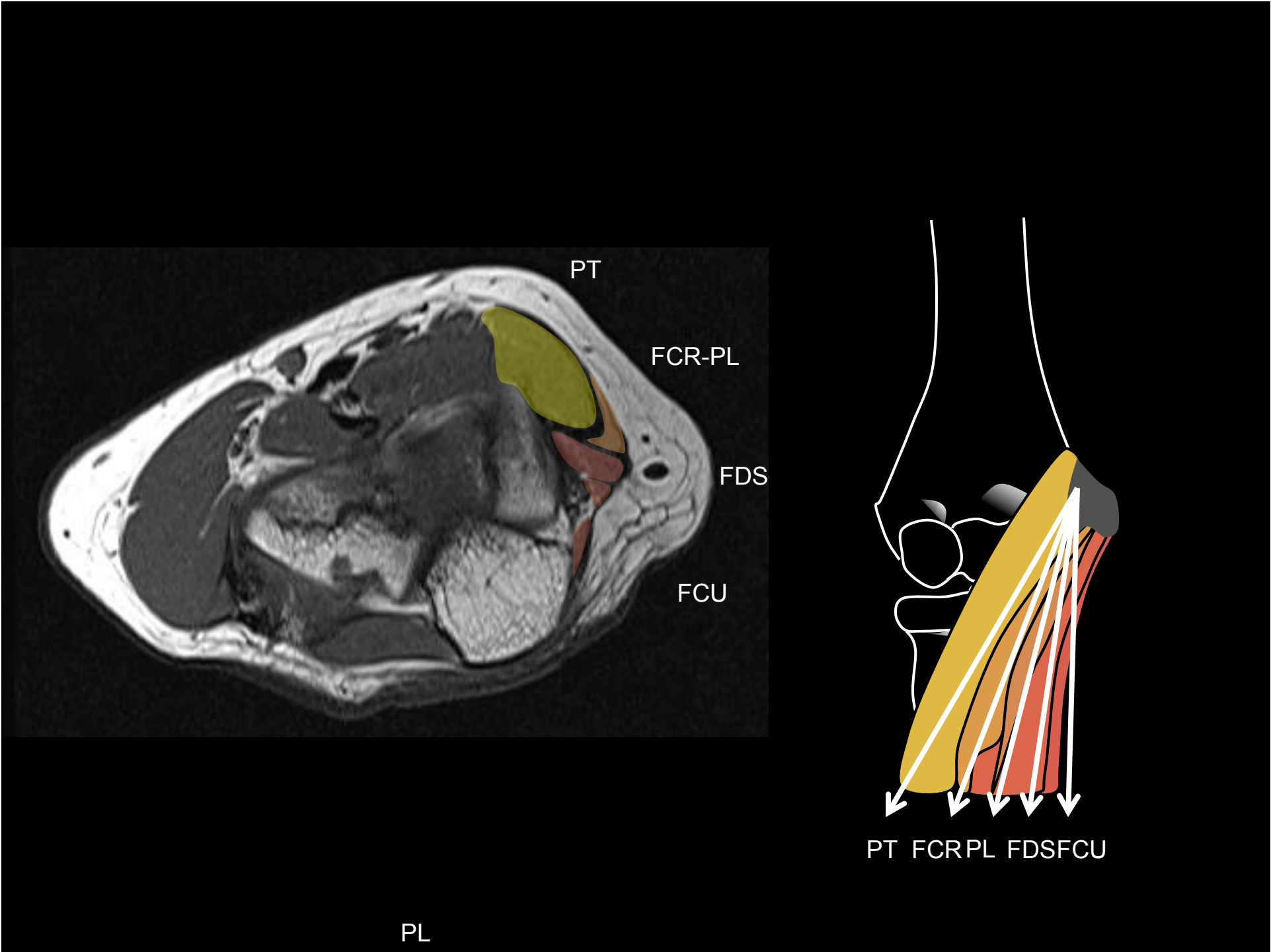




PT FCR PL FDS FCU







PT

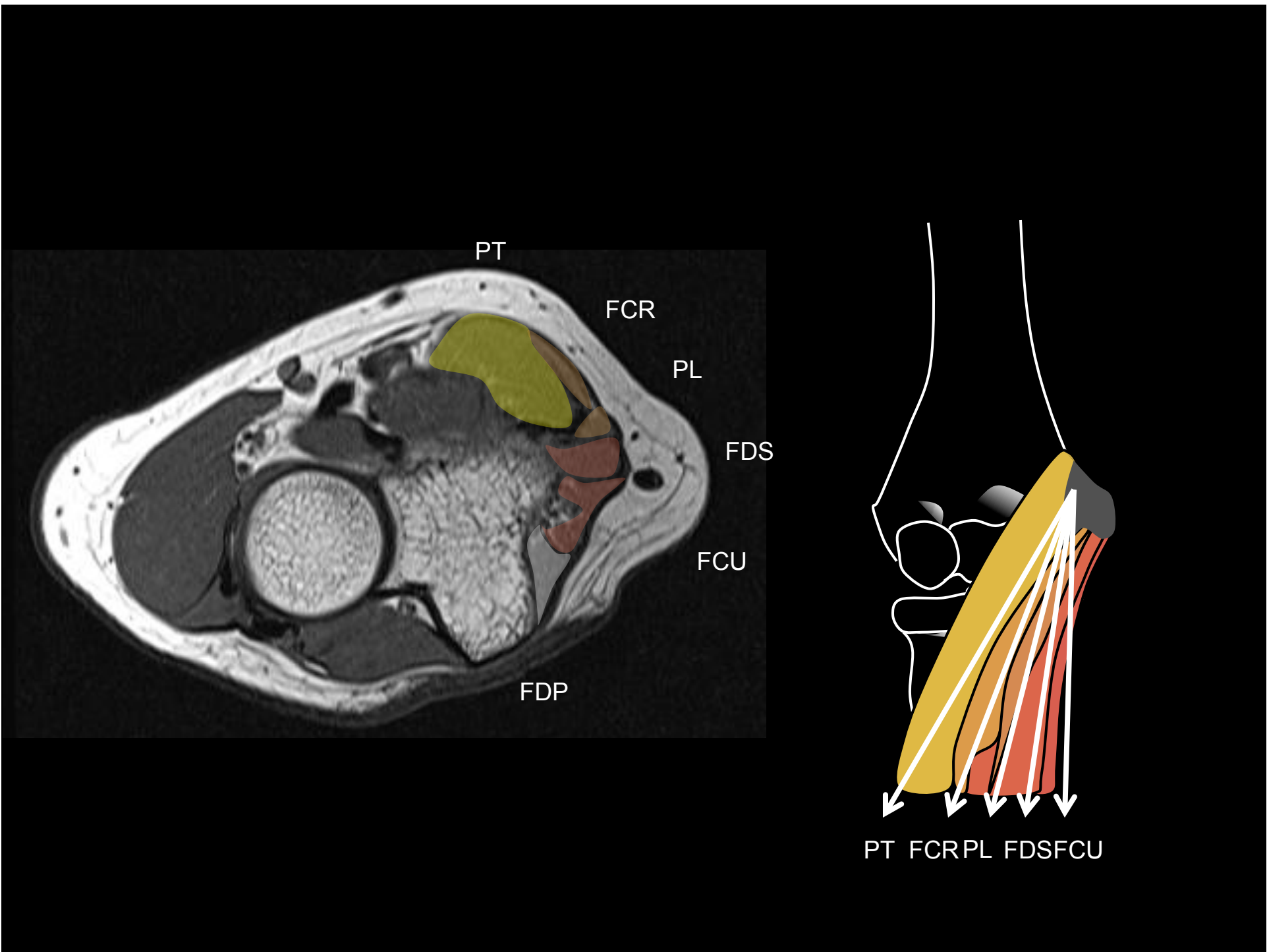
FCR-PL

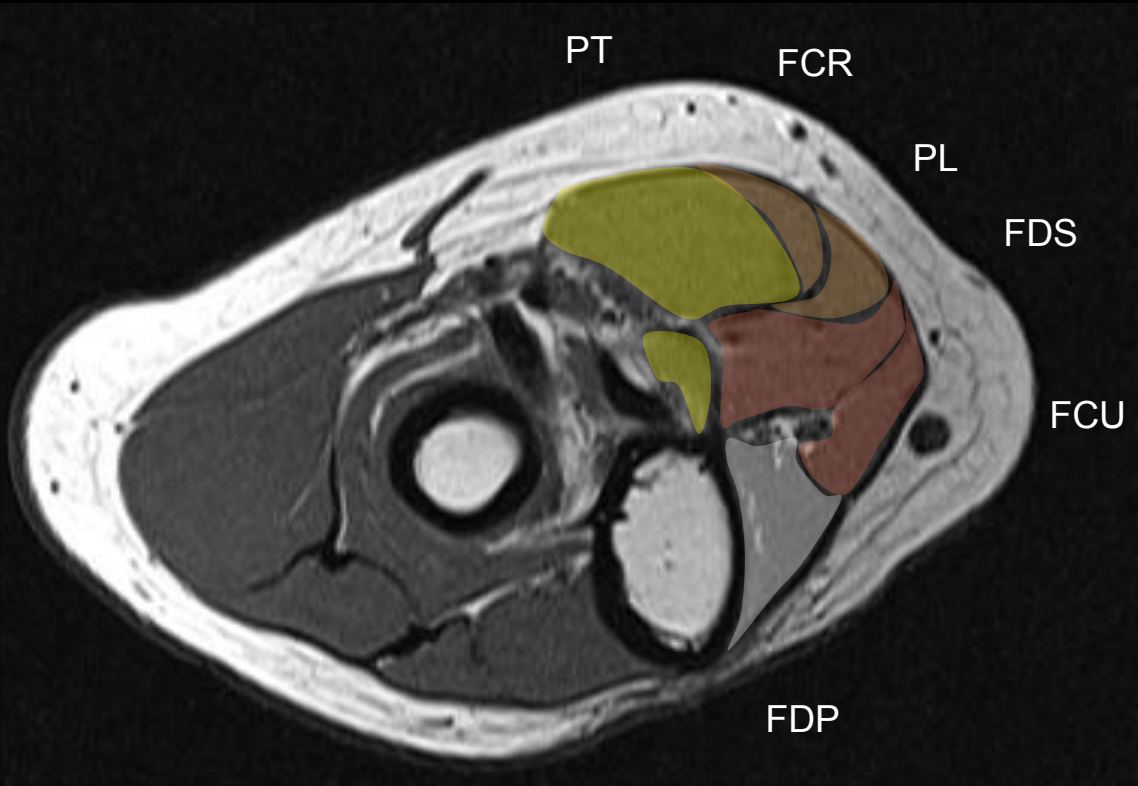
FDS

FCU

PL

PT FCRPL FDSFCU





# Lateral: BR-Extensor-Supinator

Brachioradialis (BR)

Ext Carpi Radialis Longus (ECRL)

Ext Carpi Radialis Brevis (ECRB)

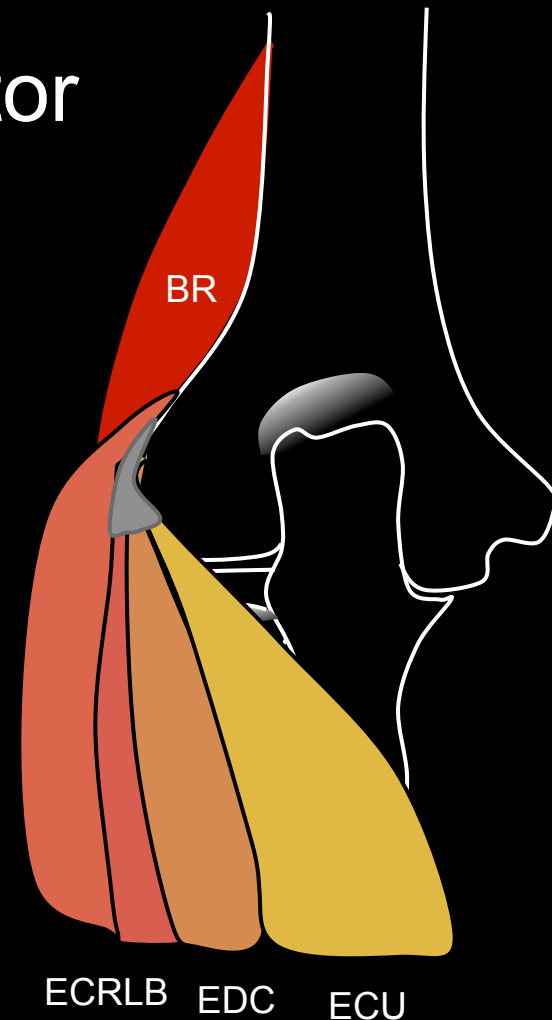
Ext Digitorum Communis (EDC)

Extensor digiti minimi (EDM)

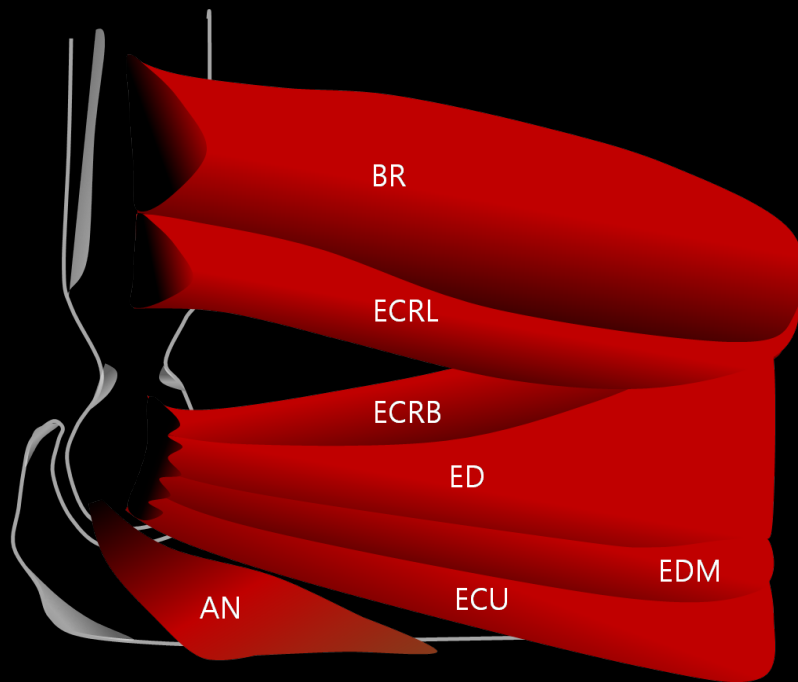
Ext Carpi Ulnaris (ECU)

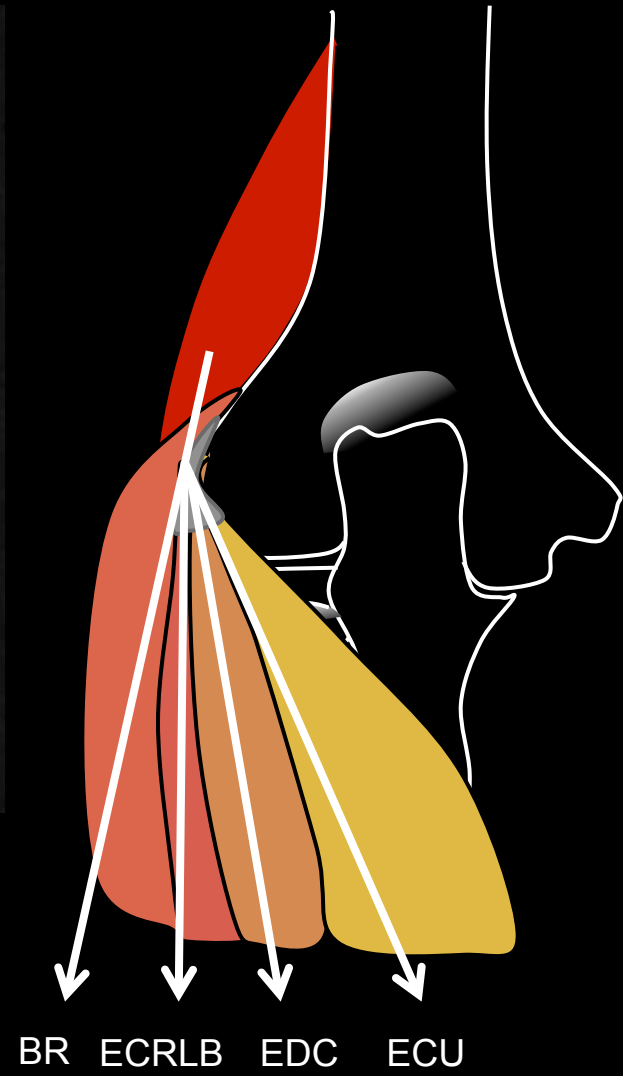
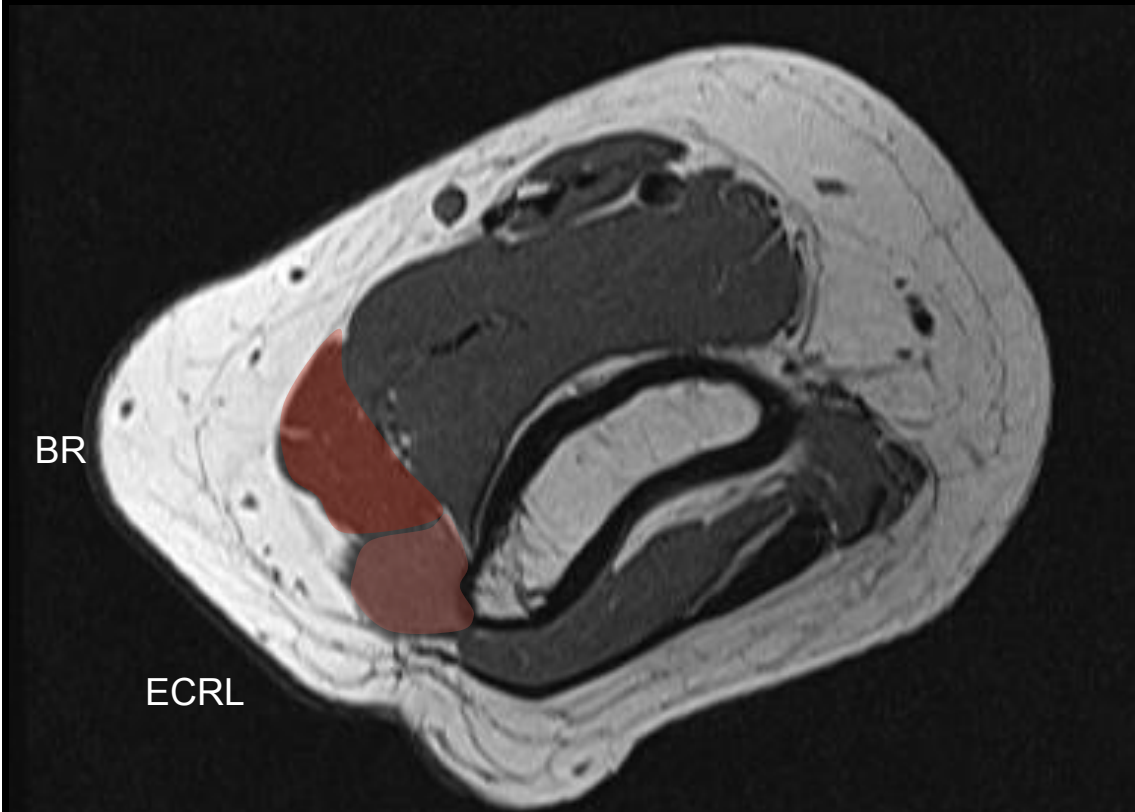
Supinator

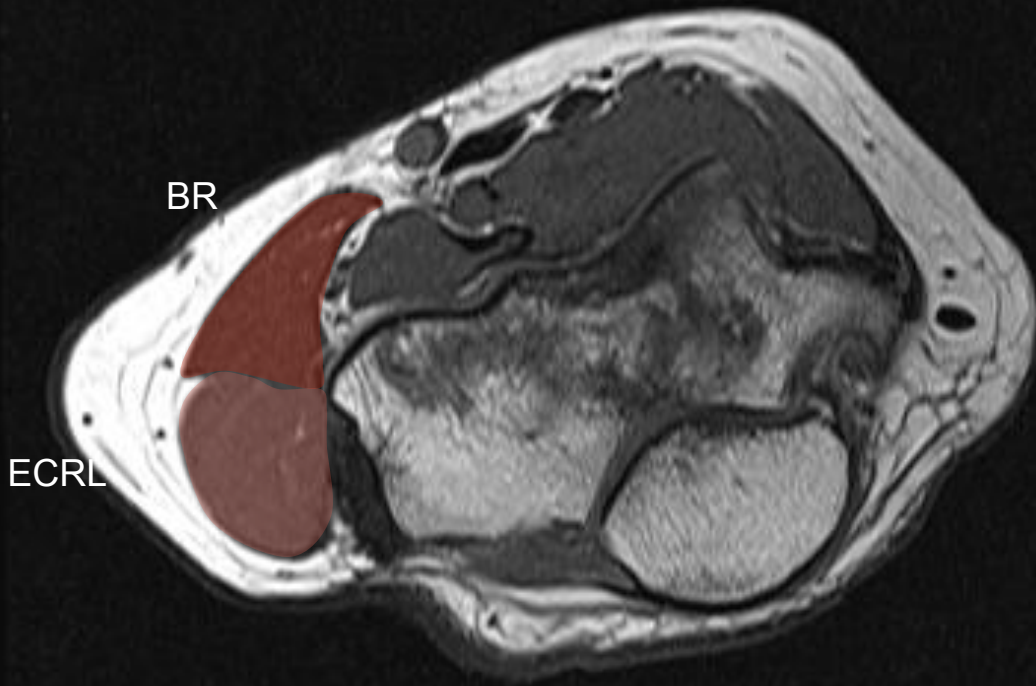
Common  
Extensor  
Tendon

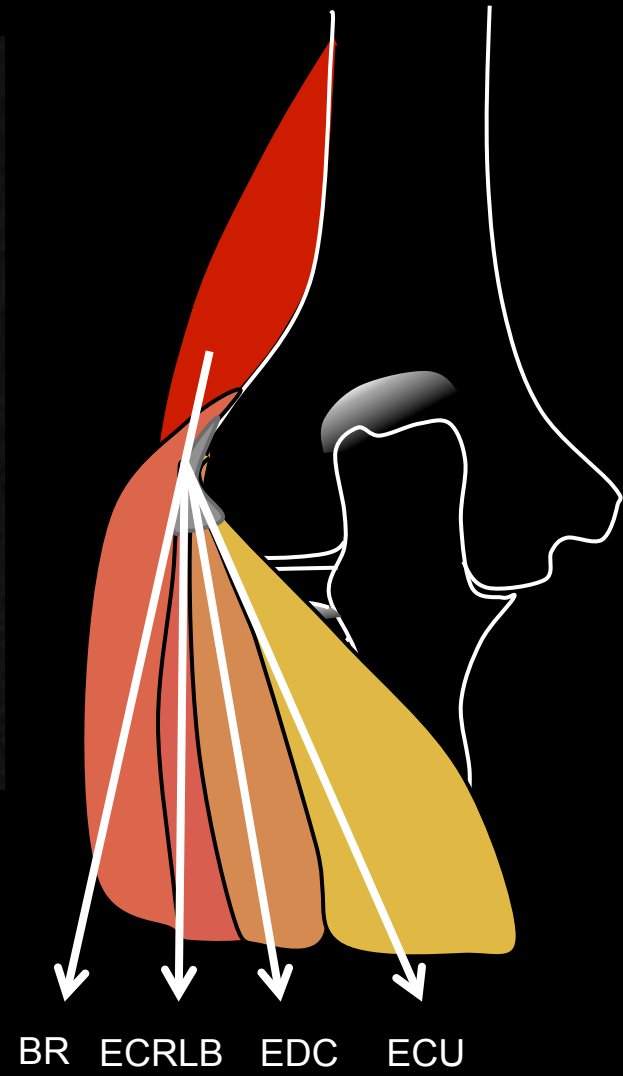
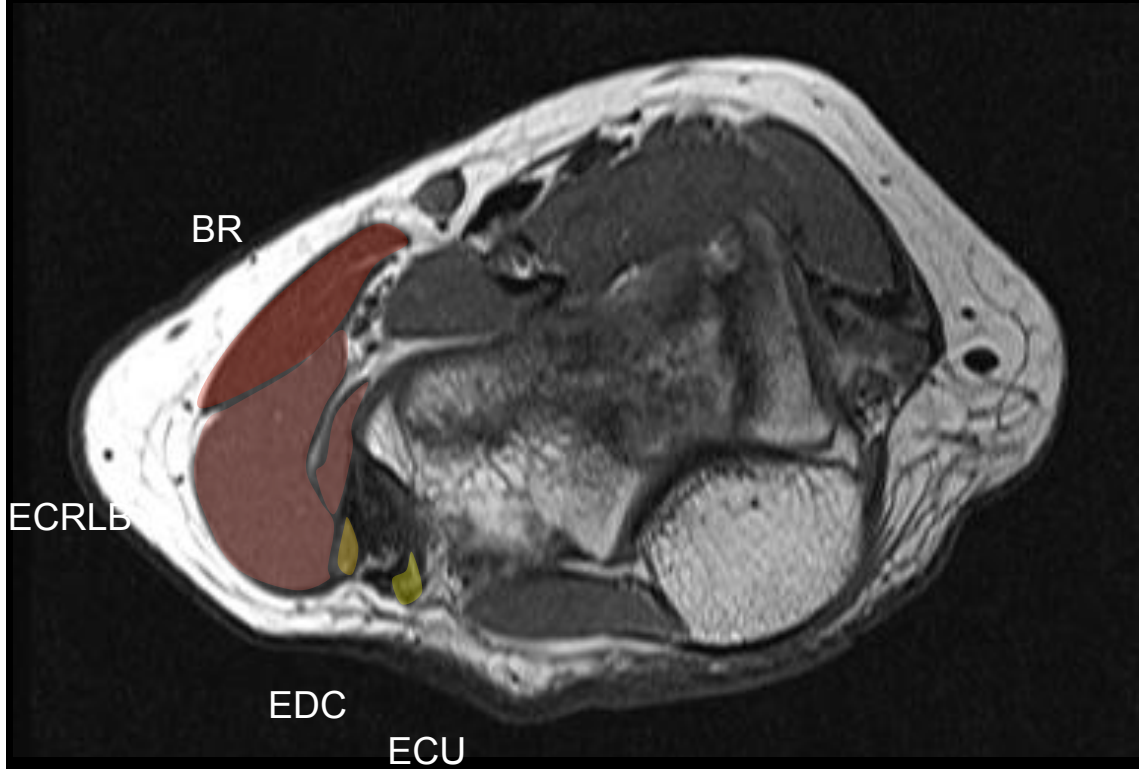


# Lateral: BR-Extensor-Supinator

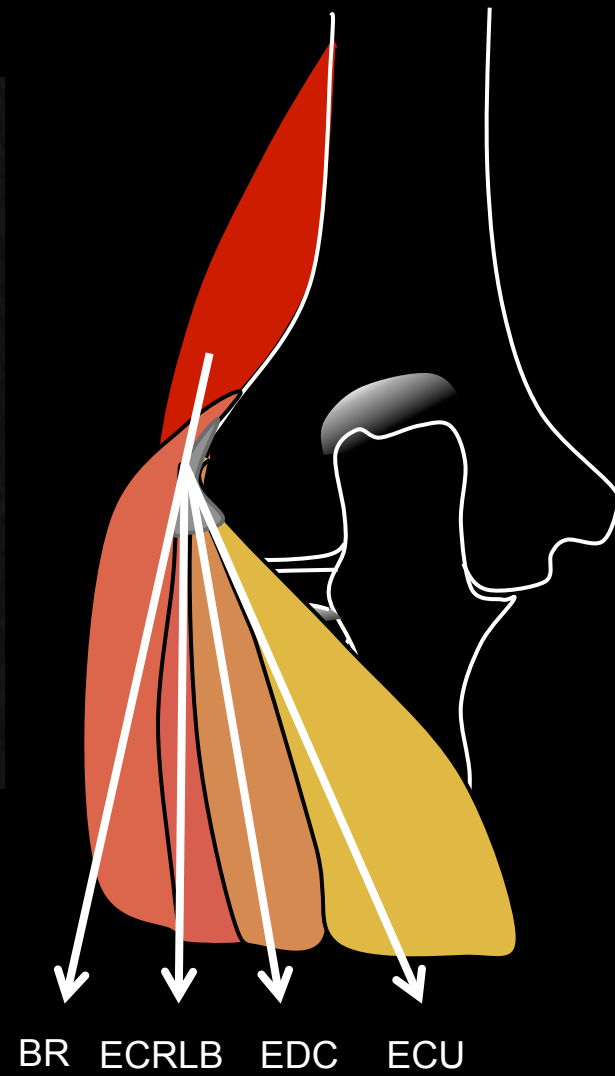
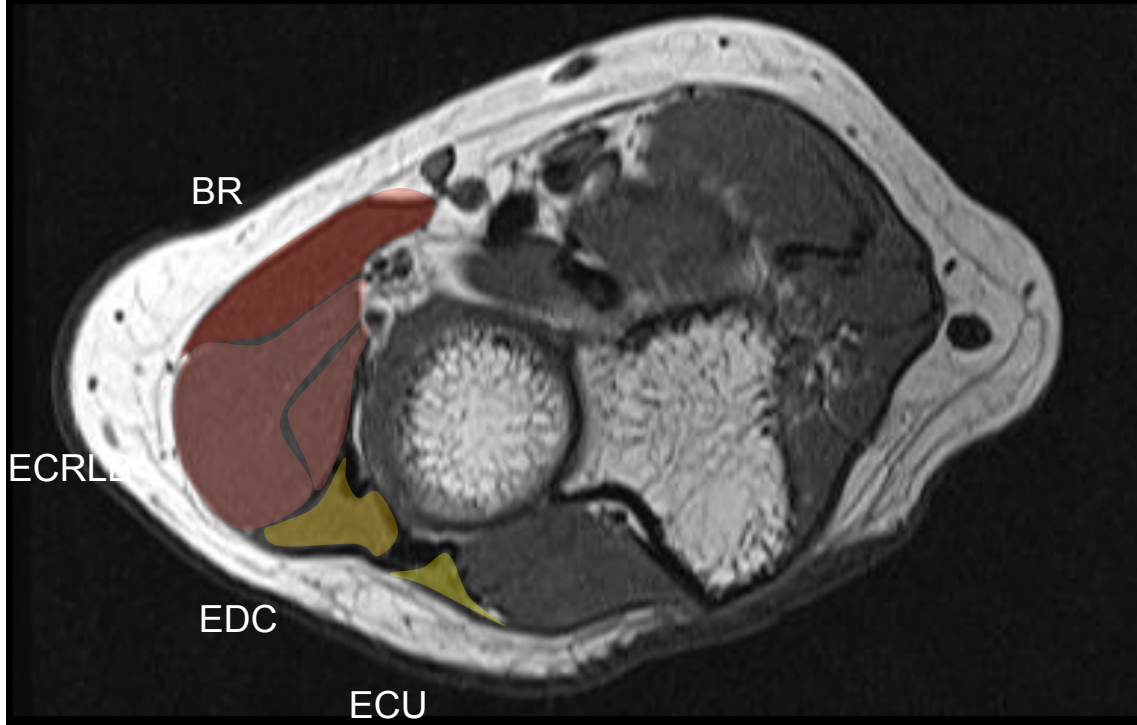


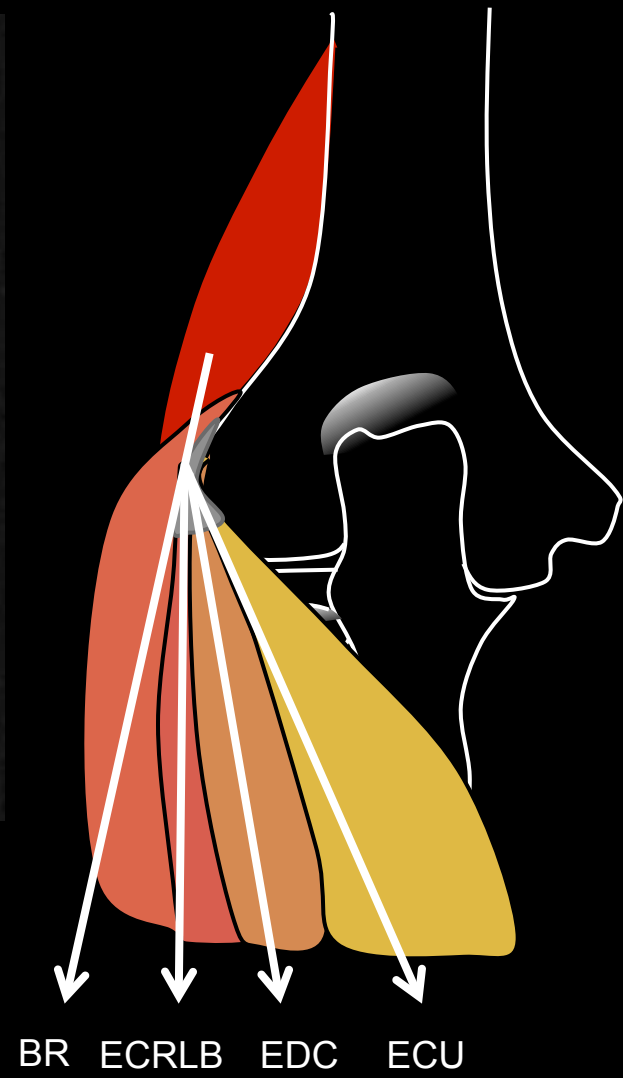
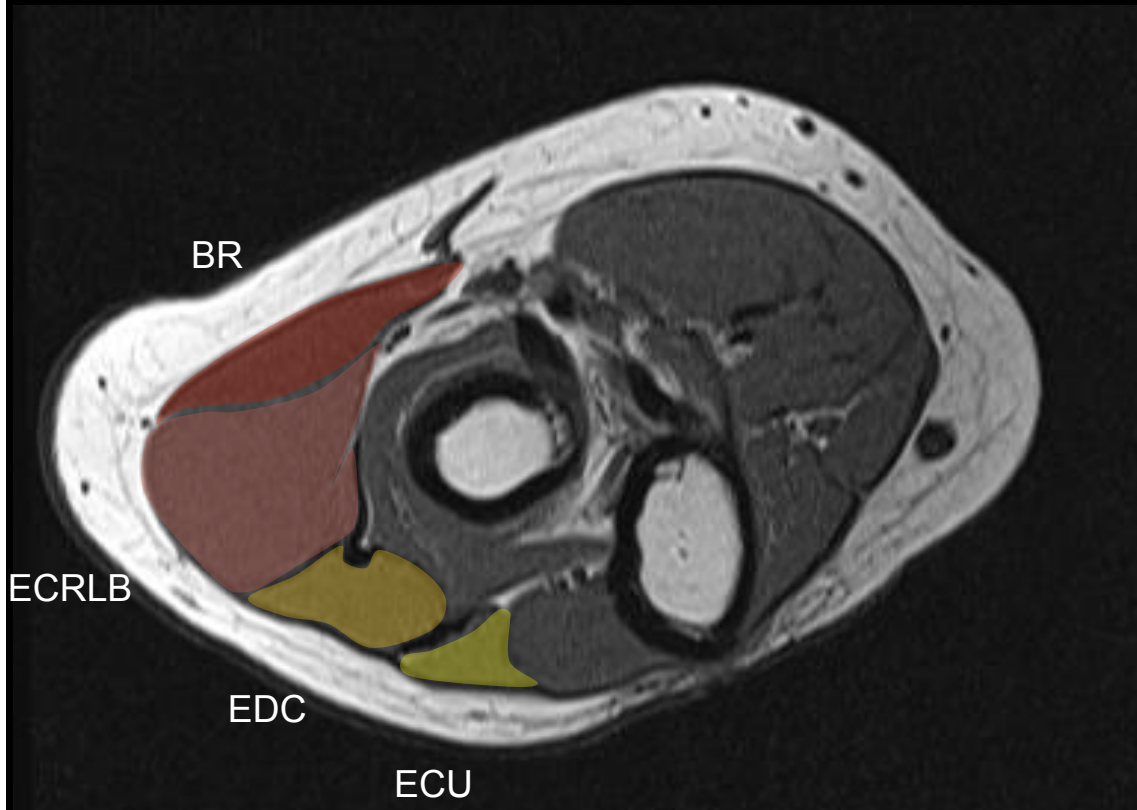












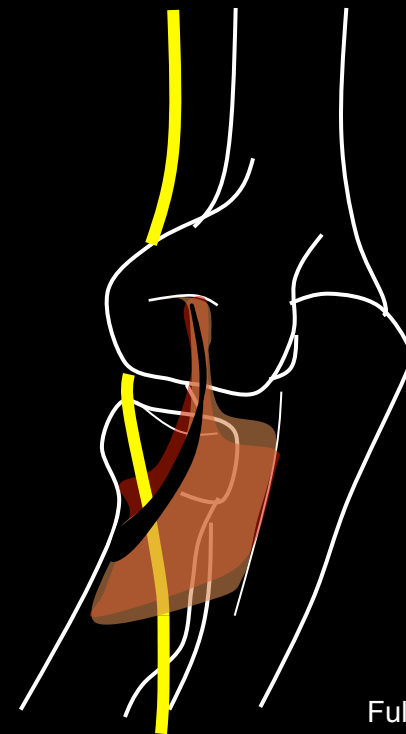
# Supinator

Ulnar and humeral heads

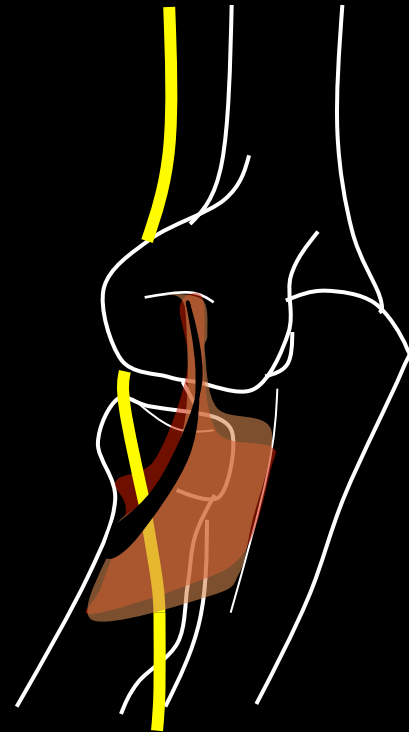
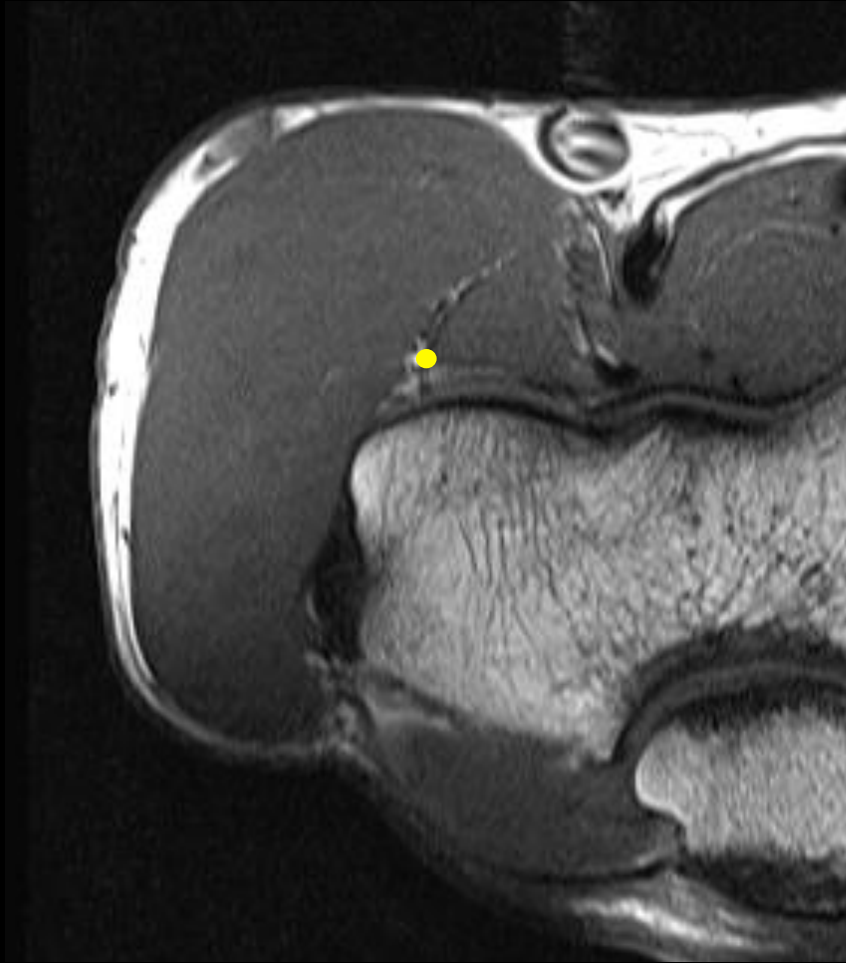
Superficial and deep layers

Proximal edge of superficial layer:

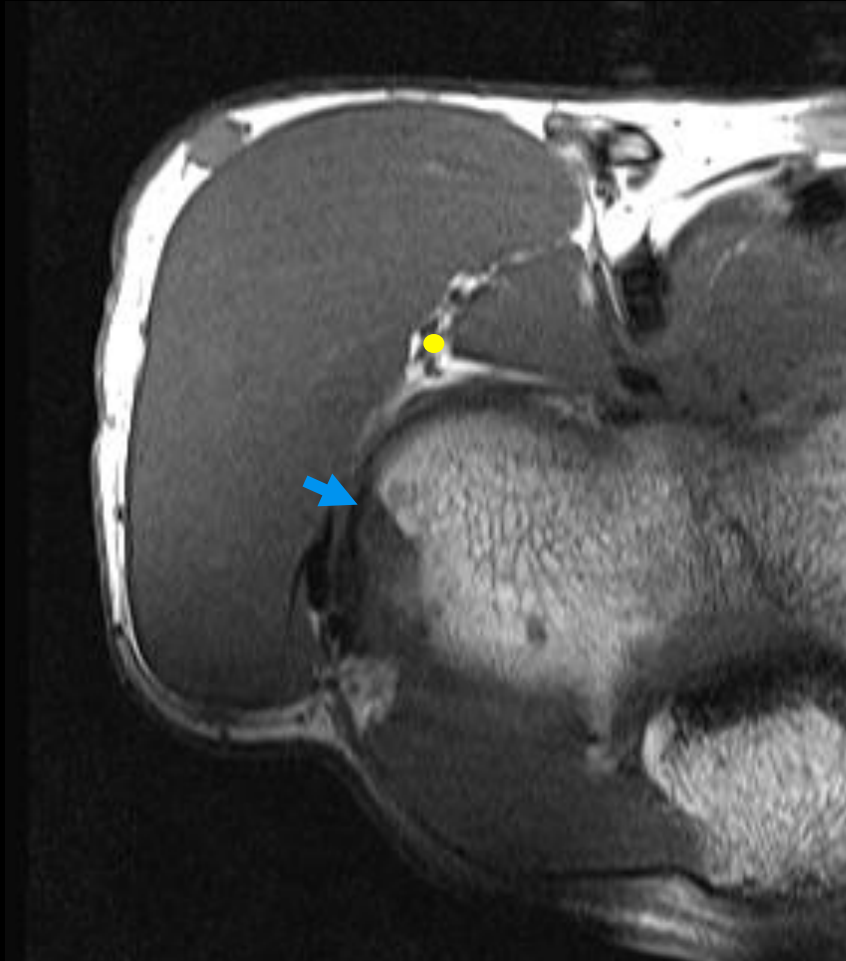
Arcade of Frohse



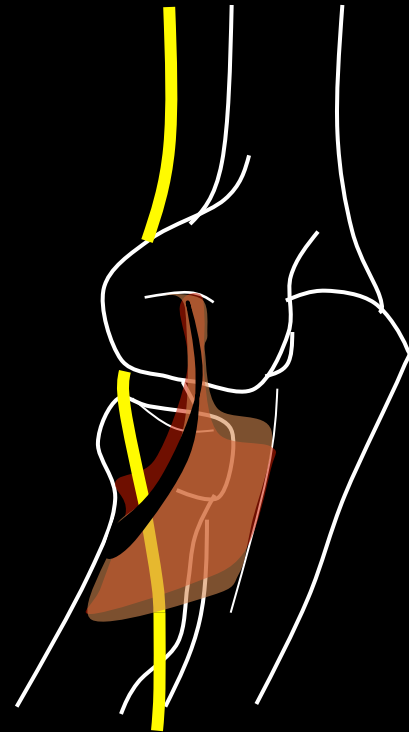
Full supination  
Posterolateral

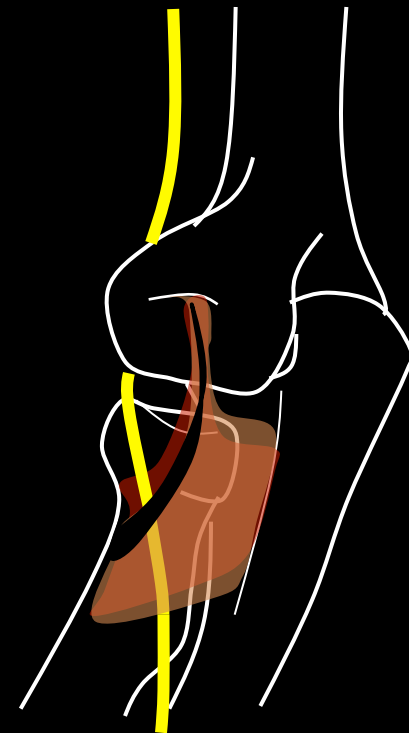
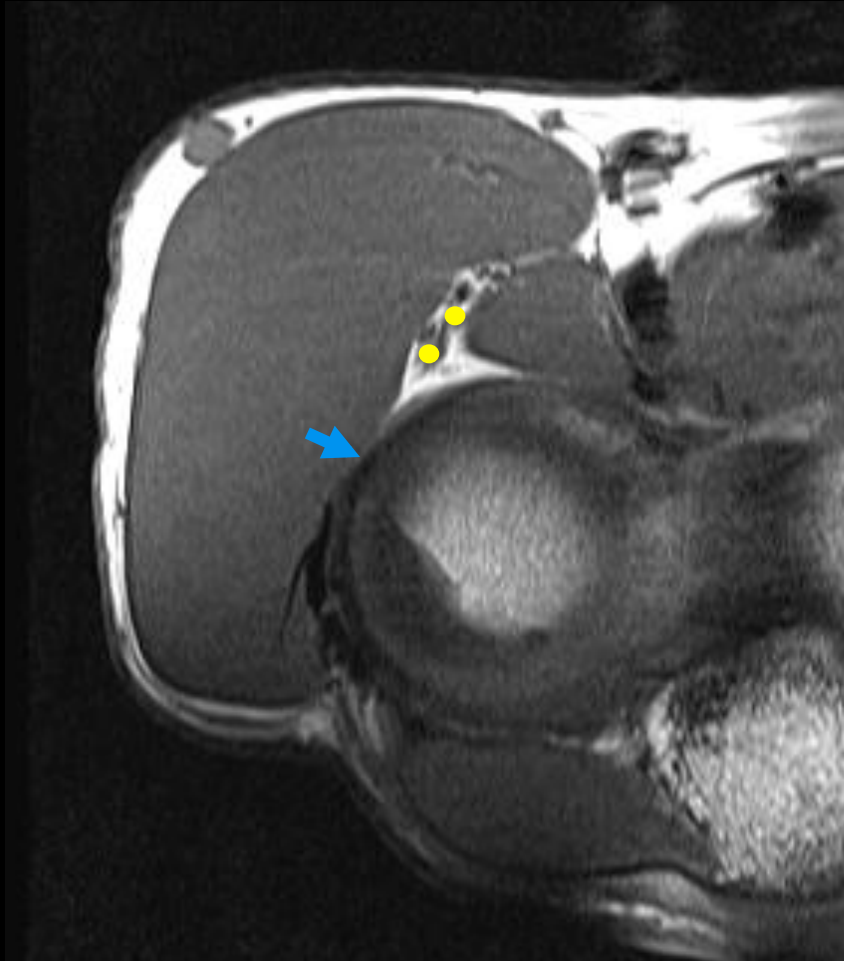


Common extensor Radial nerve

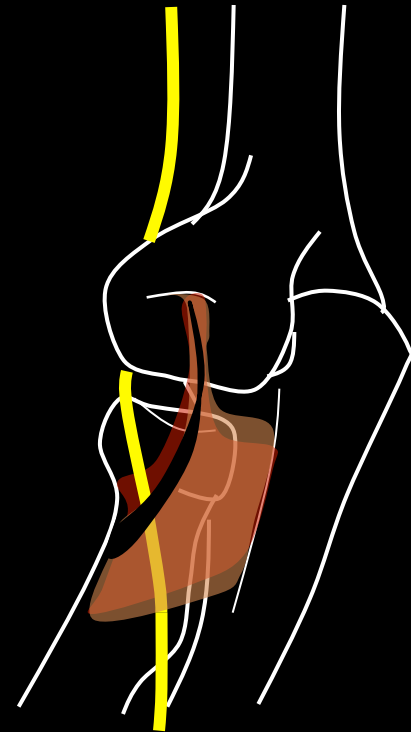
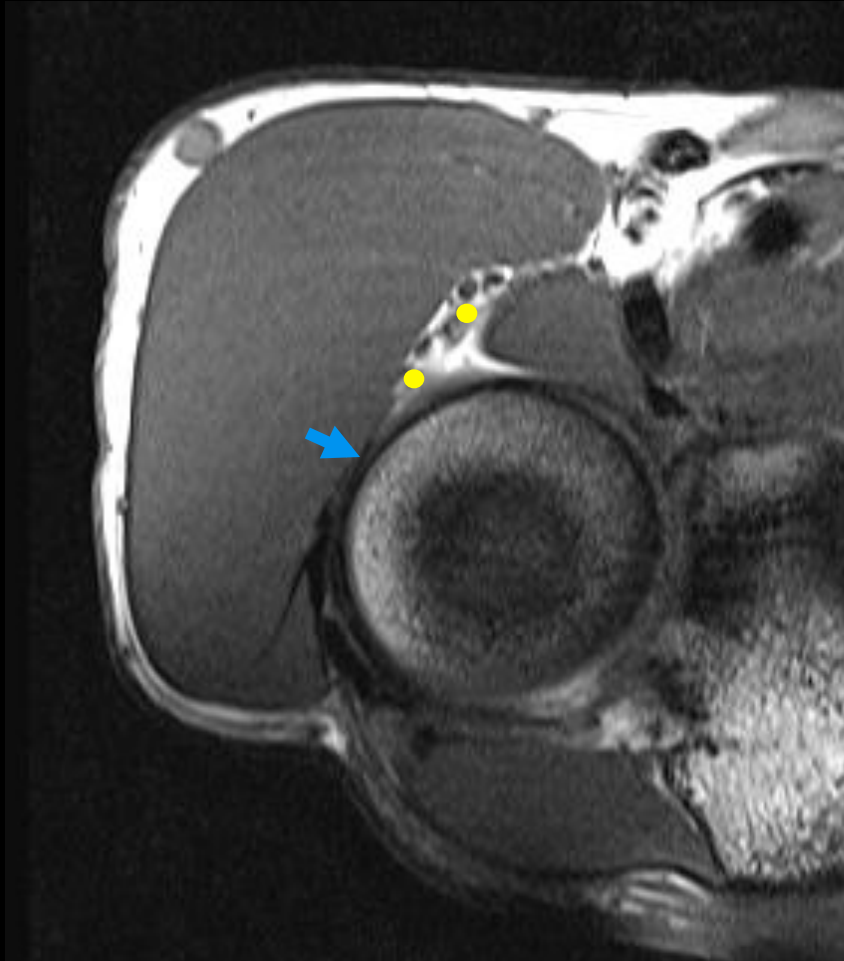


Humeral insertion of supinator

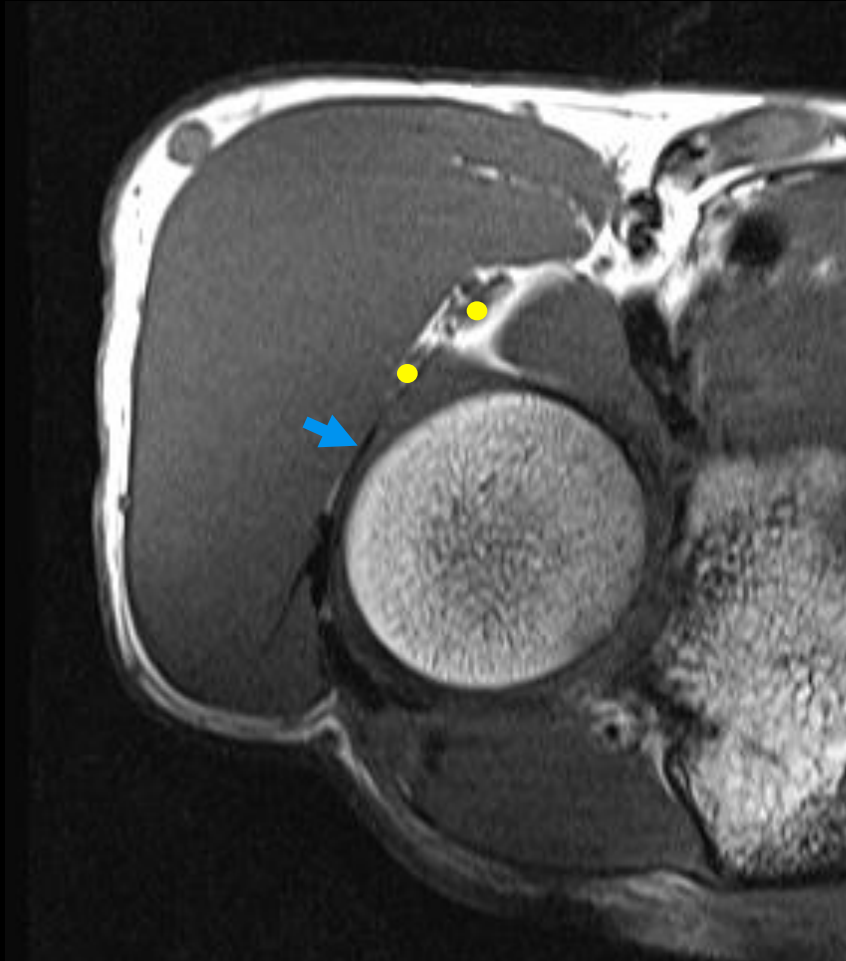




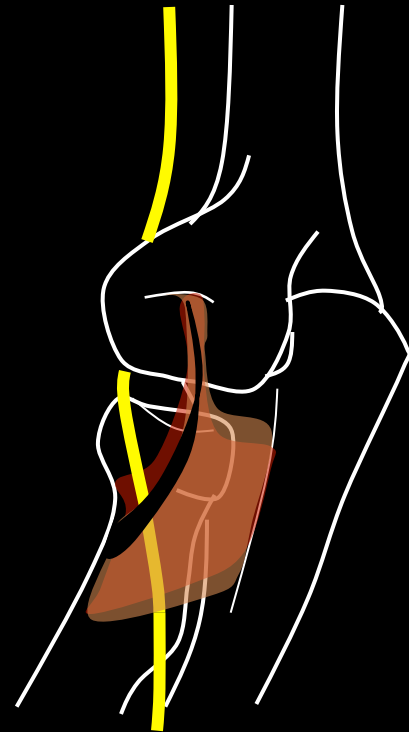
Capsular insertion of supinator  
Radial n and PIN



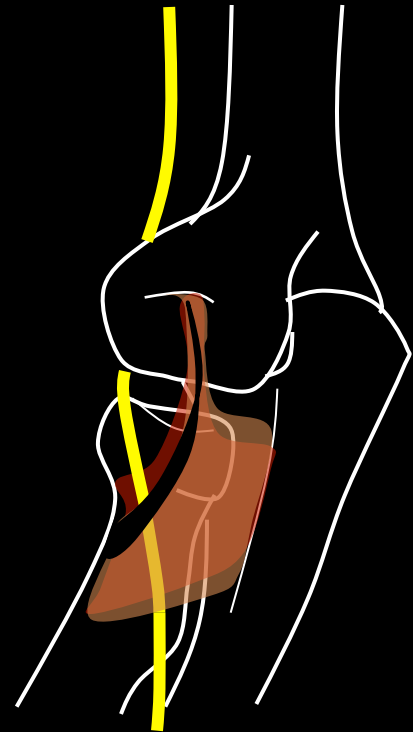
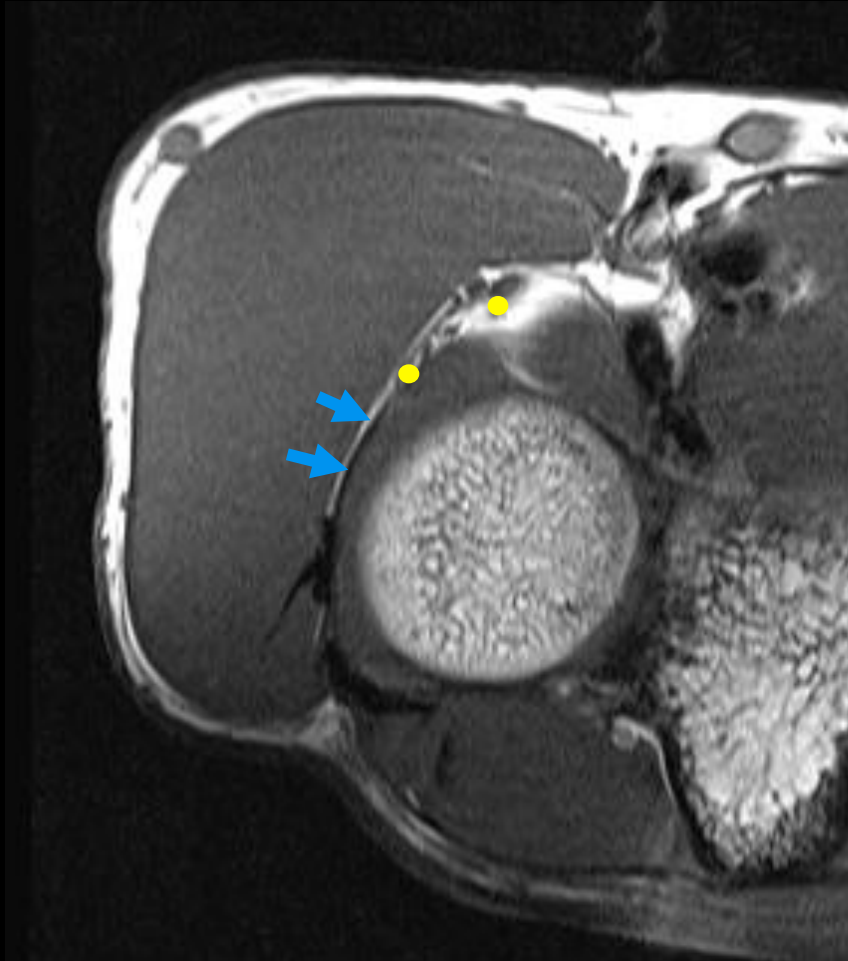
Capsular insertion of supinator  
Radial n and PIN

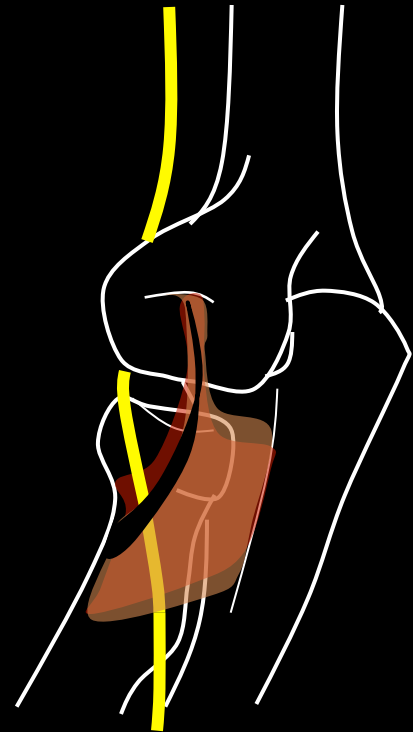
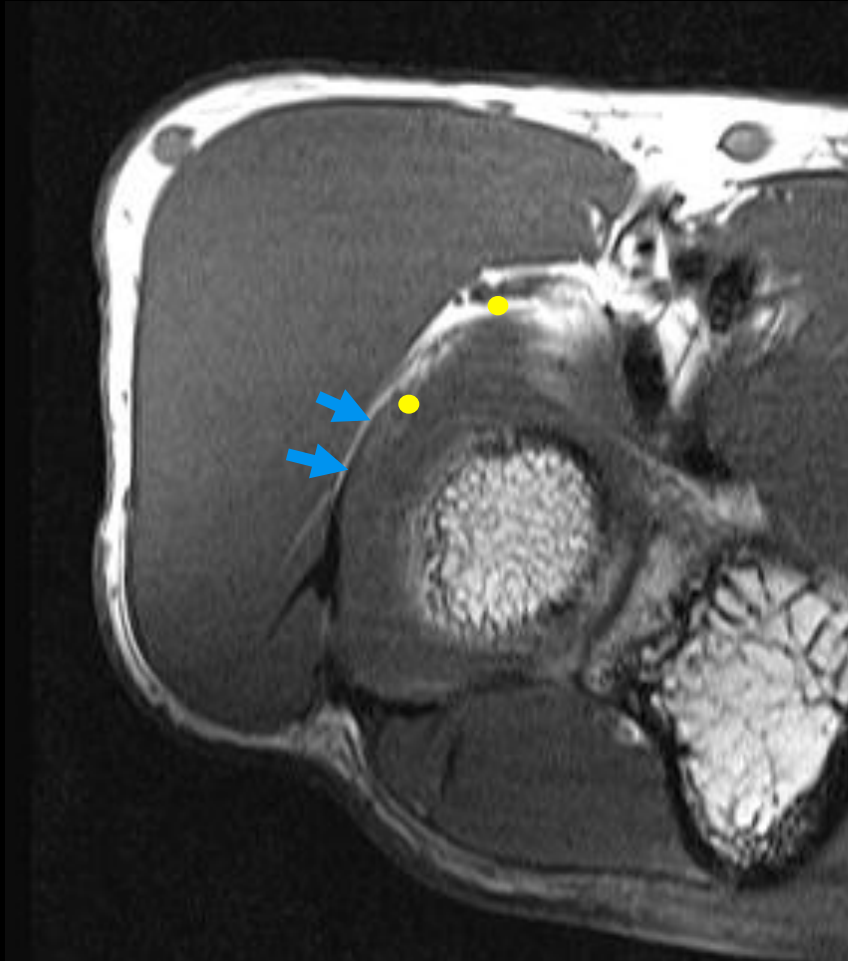


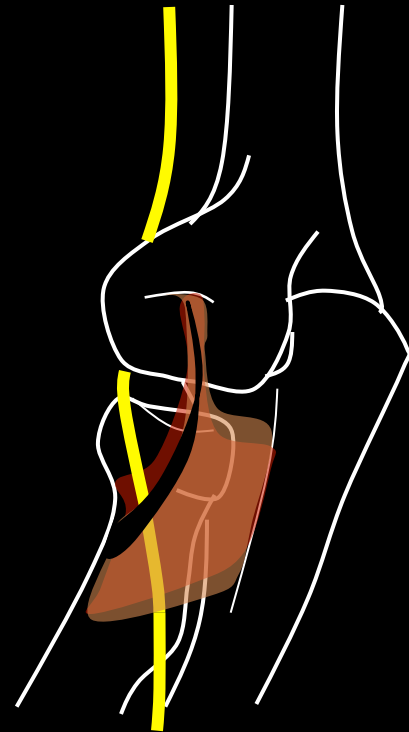
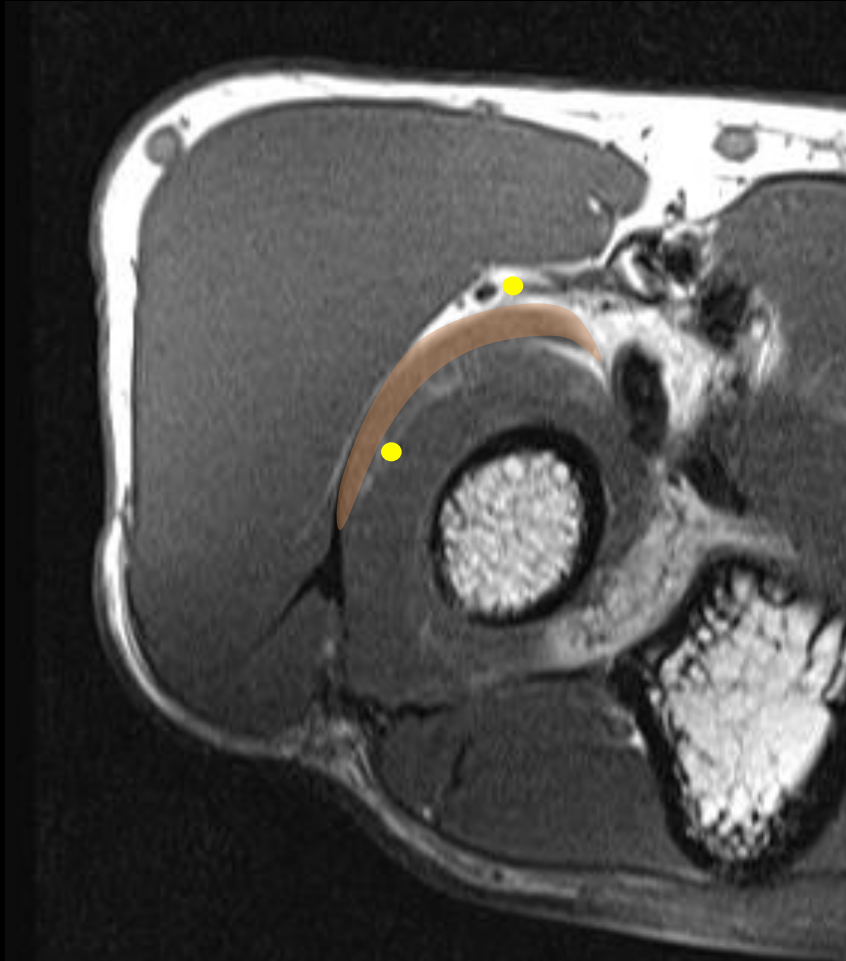
Arcade of Frohse



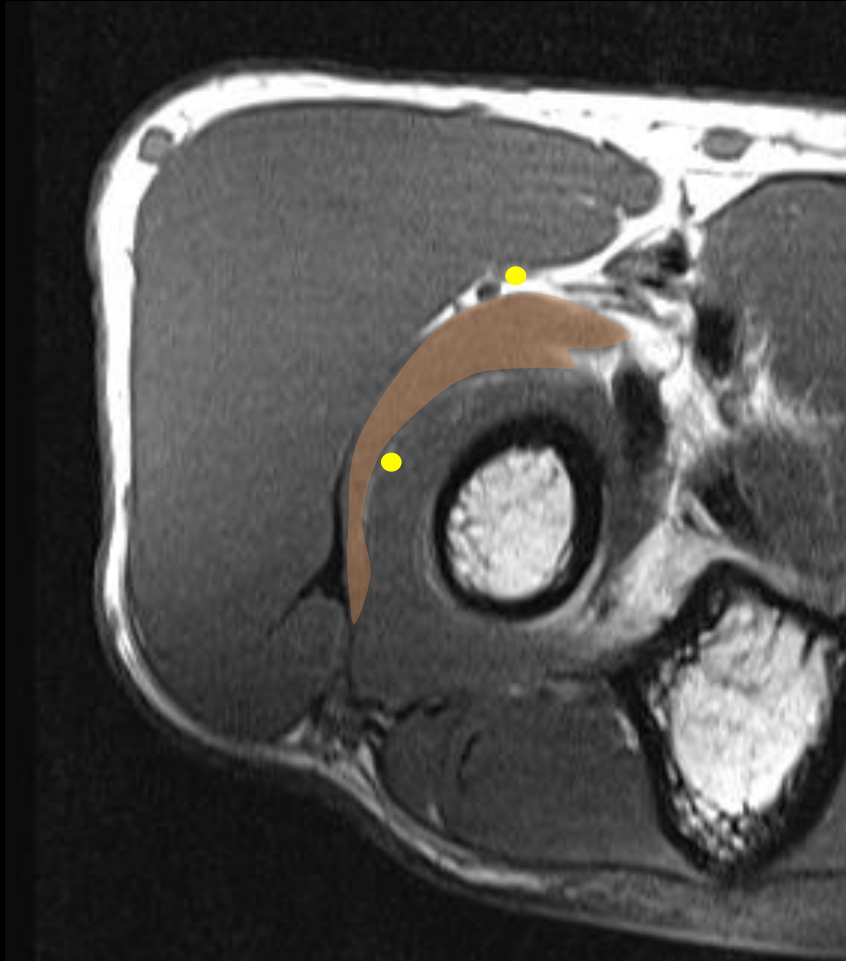




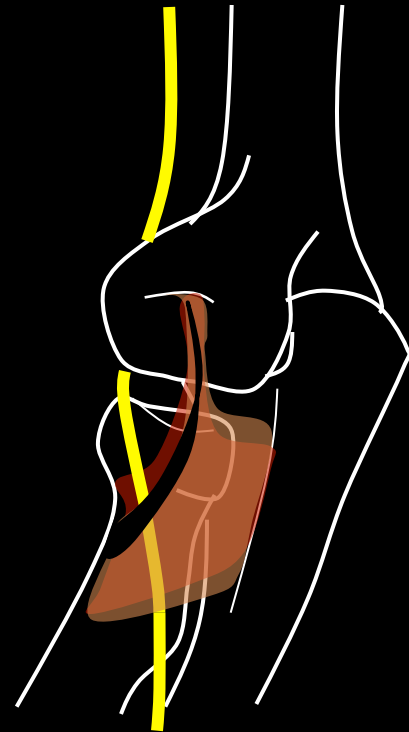


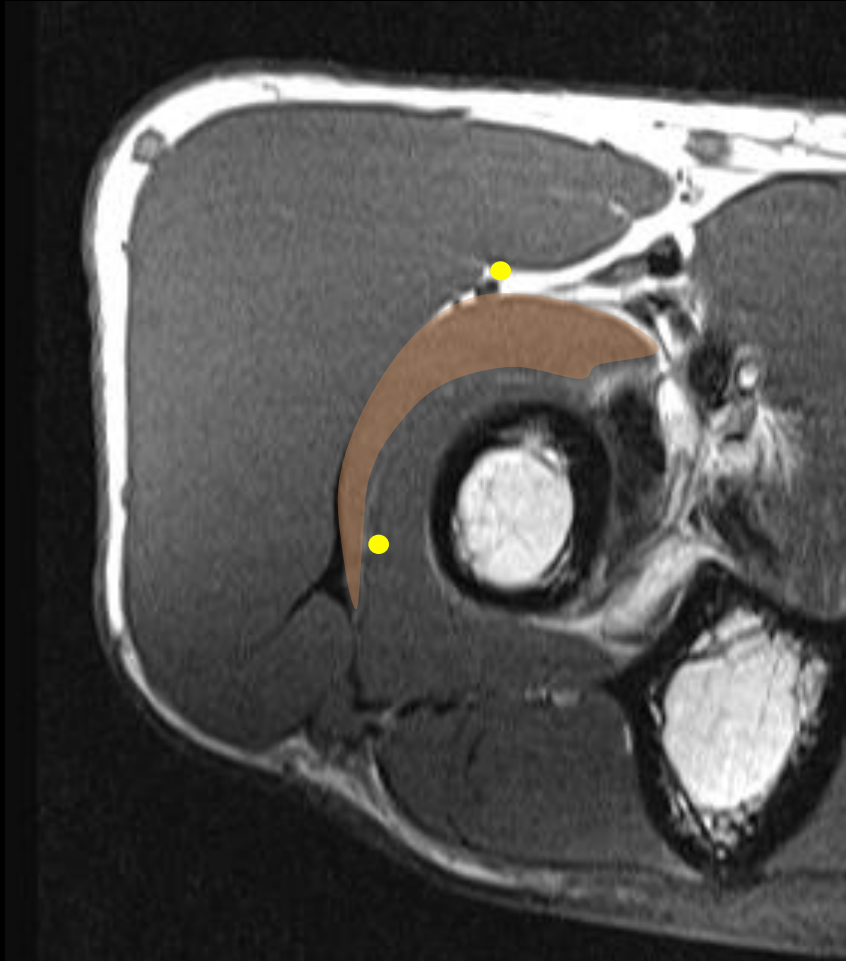


Superficial layer of supinator

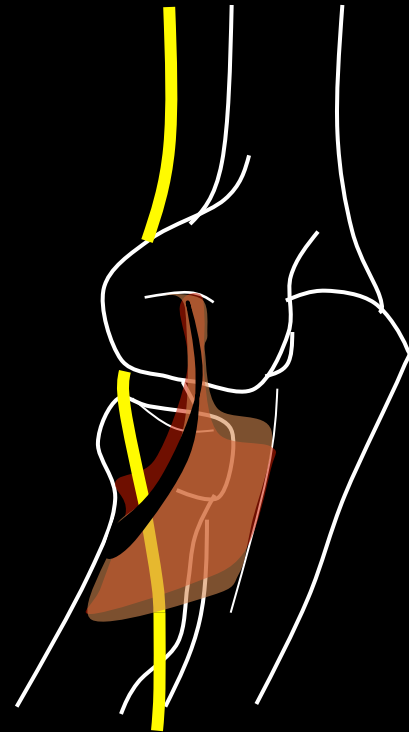


Superficial layer of supinator





Superficial layer of supinator

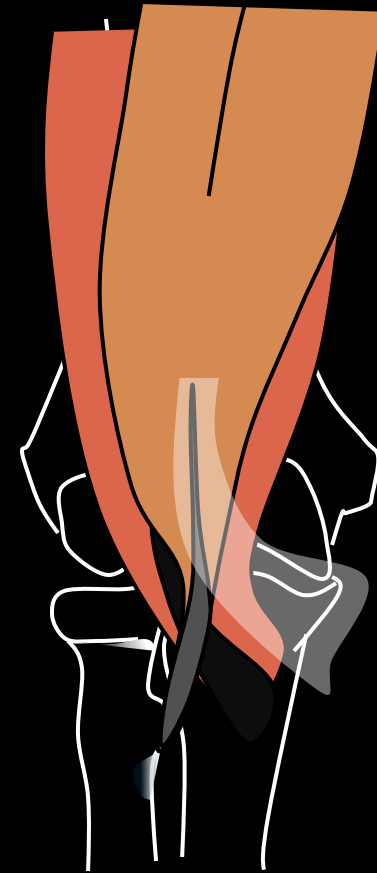


# Anterior muscle groups

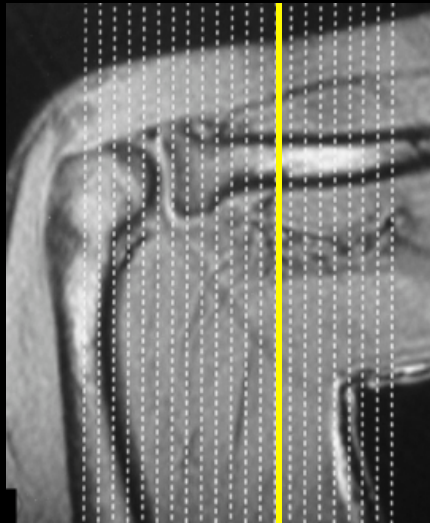
Brachialis

Biceps brachii

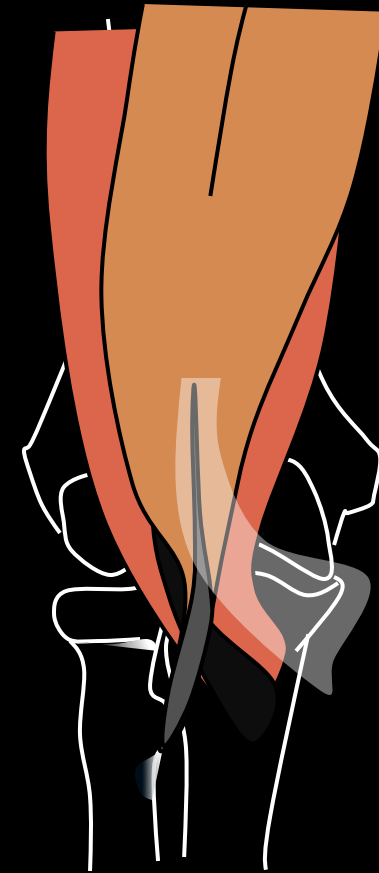
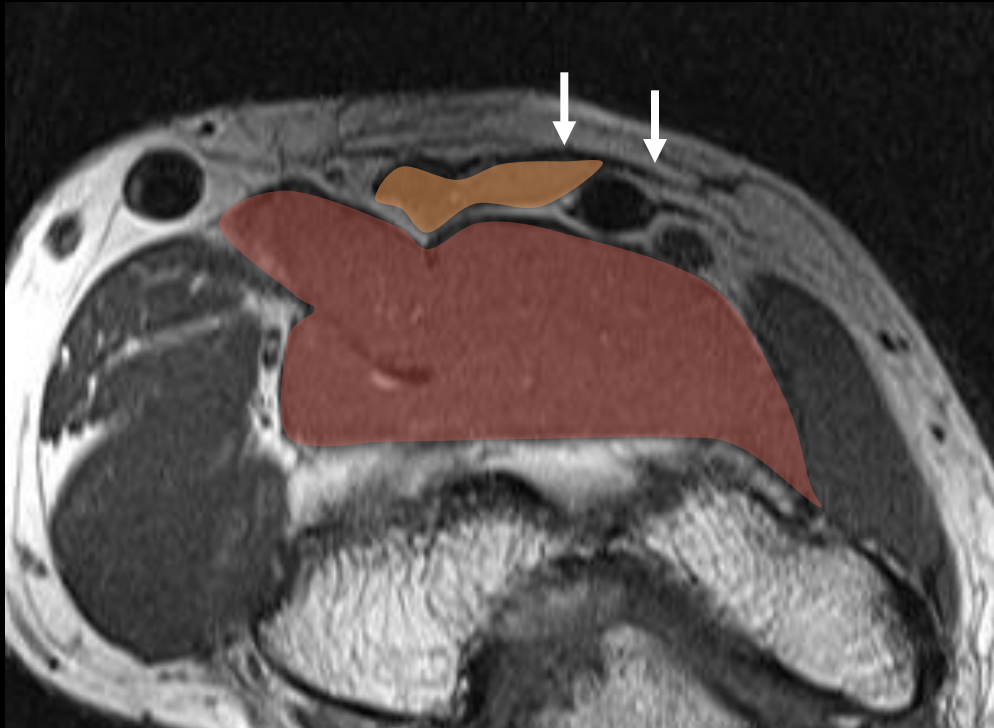
- bicipital aponeurosis  
(lacertus fibrosus)



# Flexed abducted supinated (FABS) position

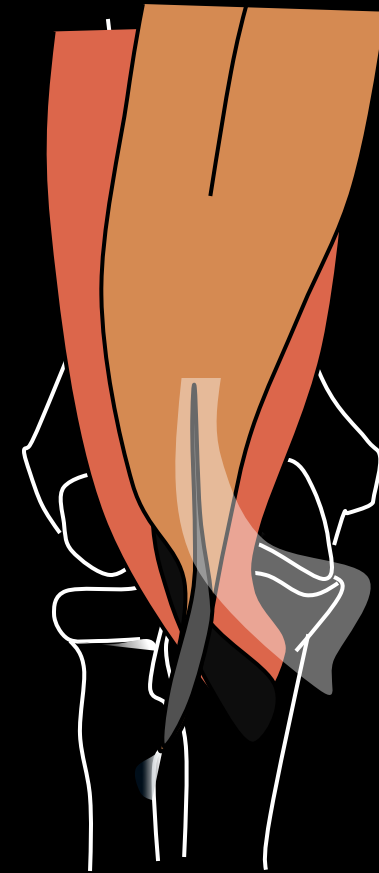
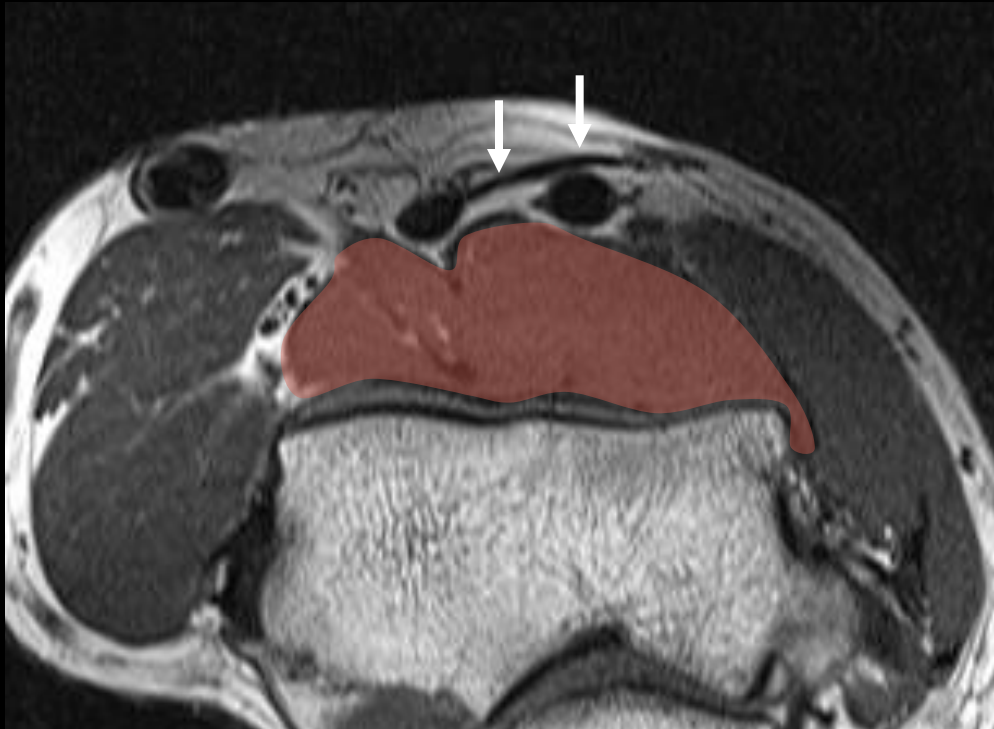


*AJR* 2004;182:944-946

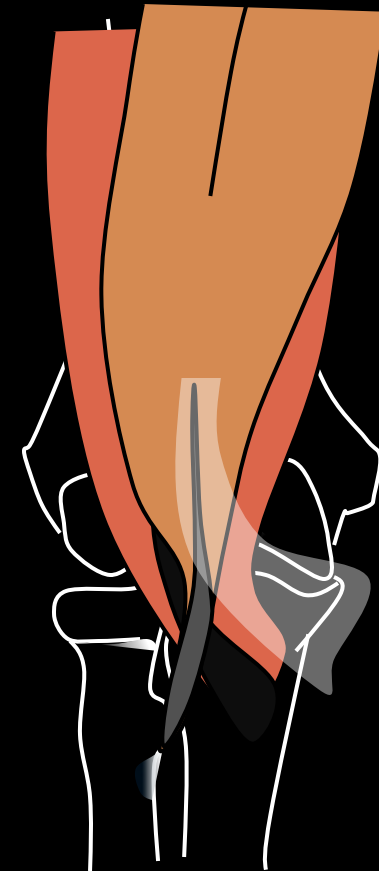
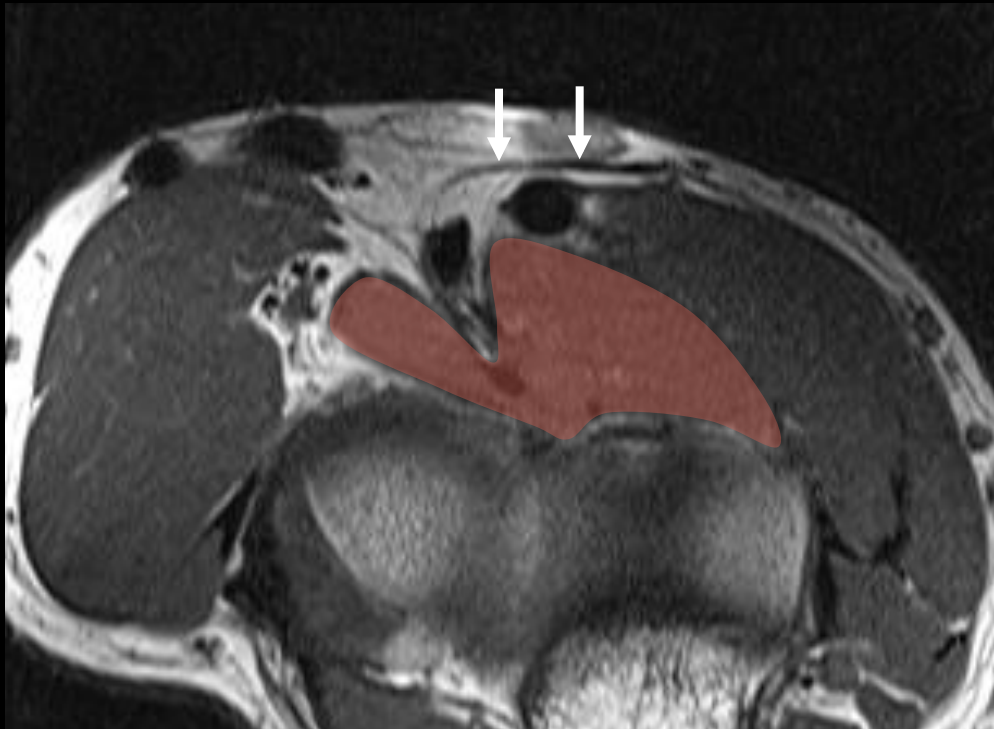


Bicipital aponeurosis

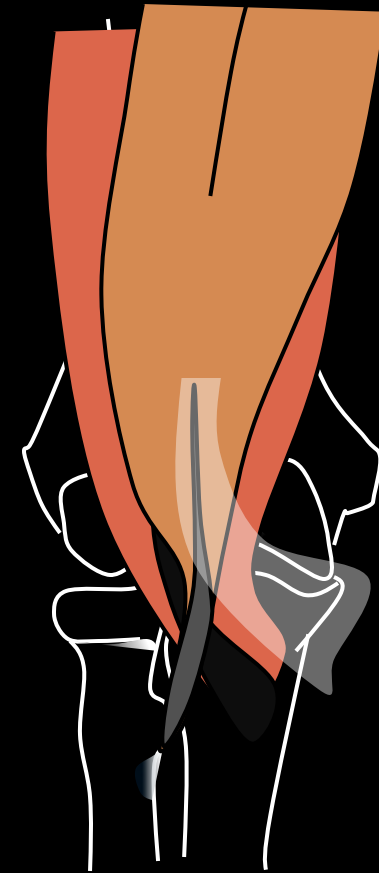
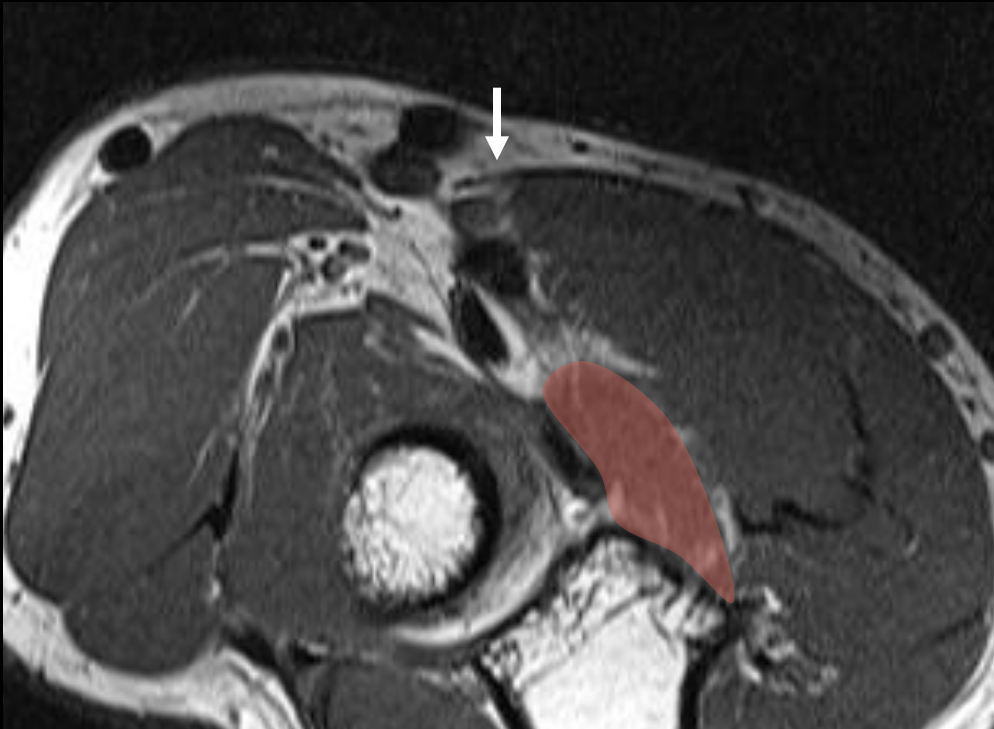




Bicipital aponeurosis



Bicipital aponeurosis



Bicipital aponeurosis

# Posterior

## Triceps

Long head

Lateral head

Medial head

## Anconeus



# Posterior

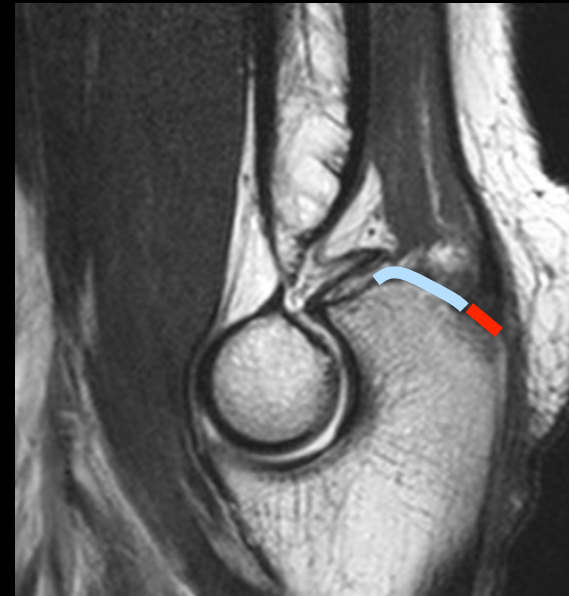
## Triceps

Long head

Lateral head

Medial head

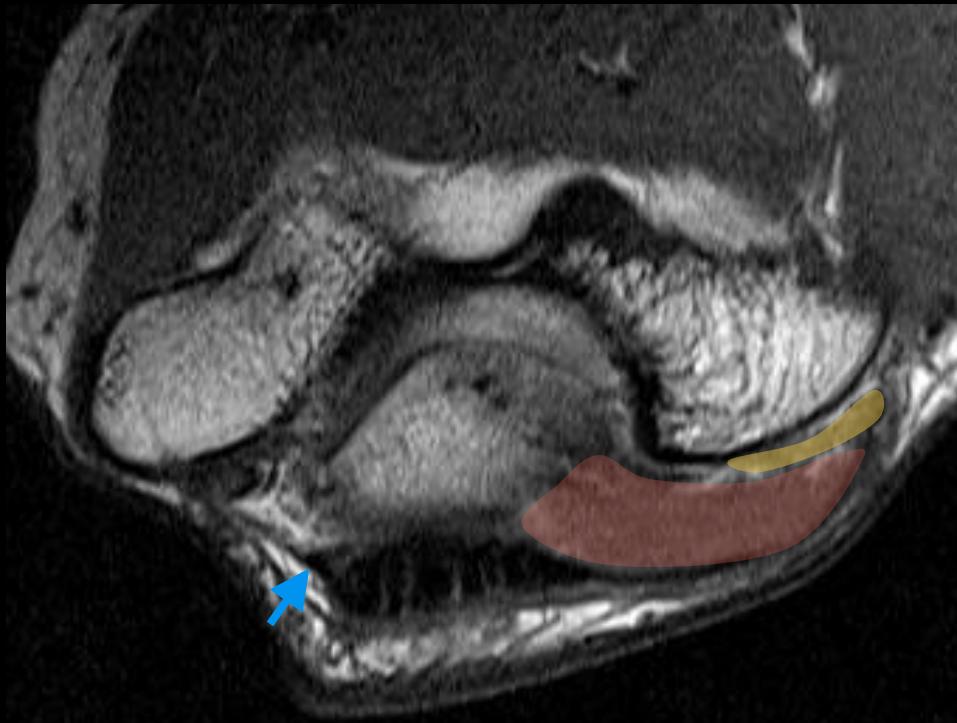
## Anconeus



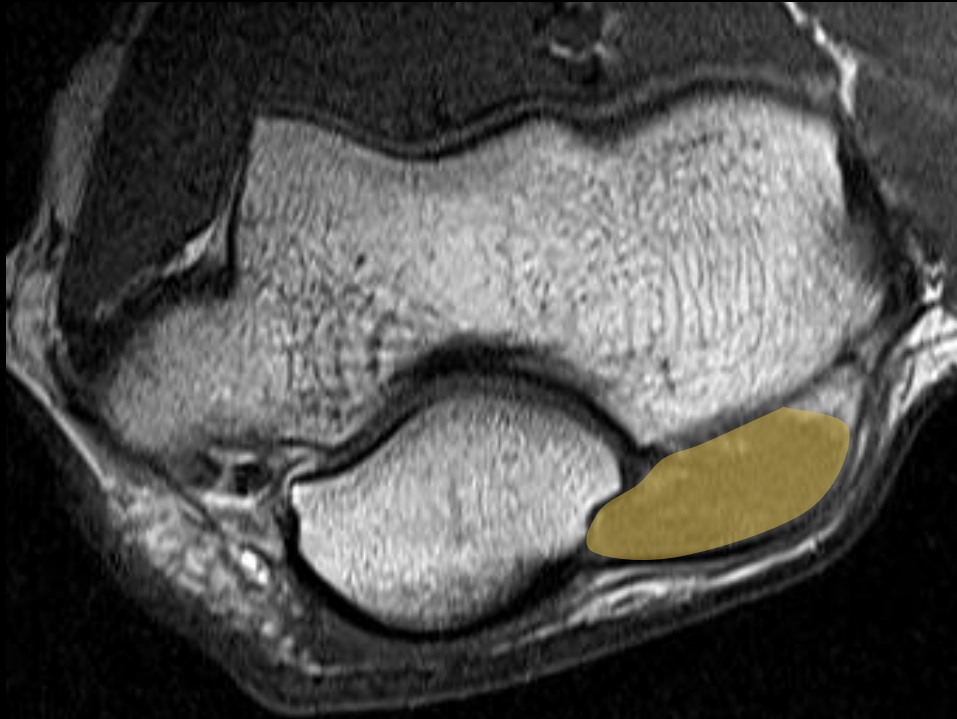


Medial head of Triceps





Medial head of Triceps and Anconeus



Anconeus





# Nerves

