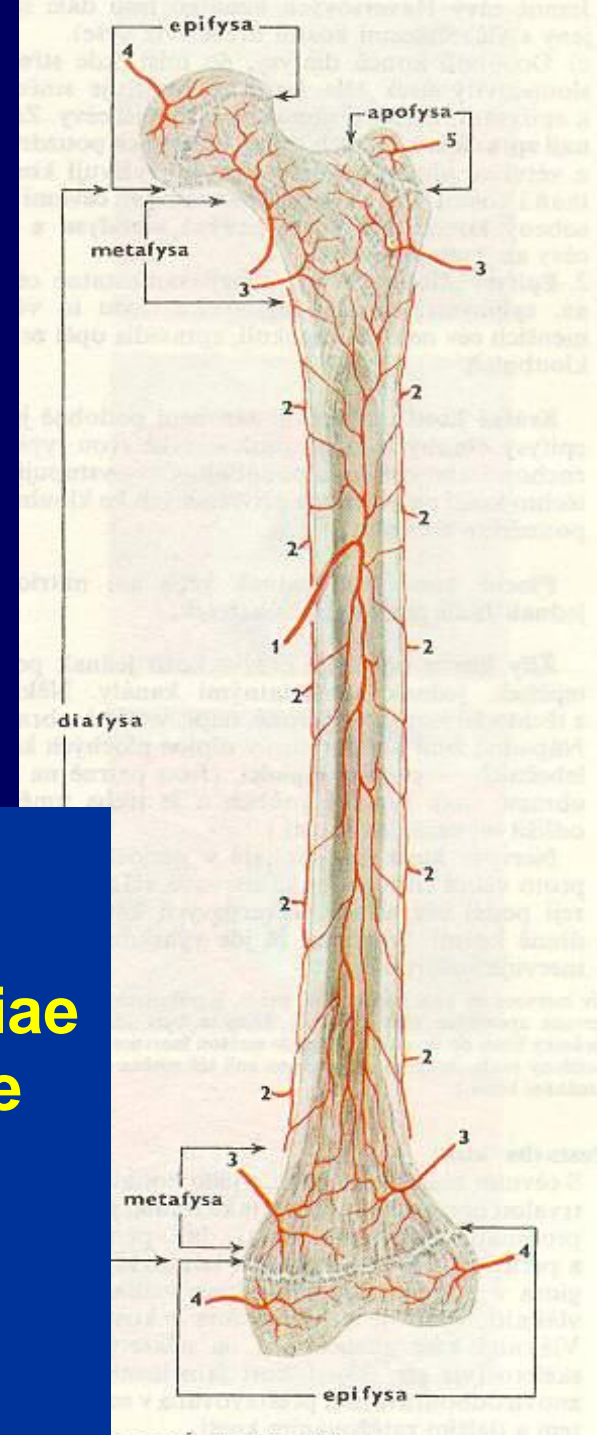
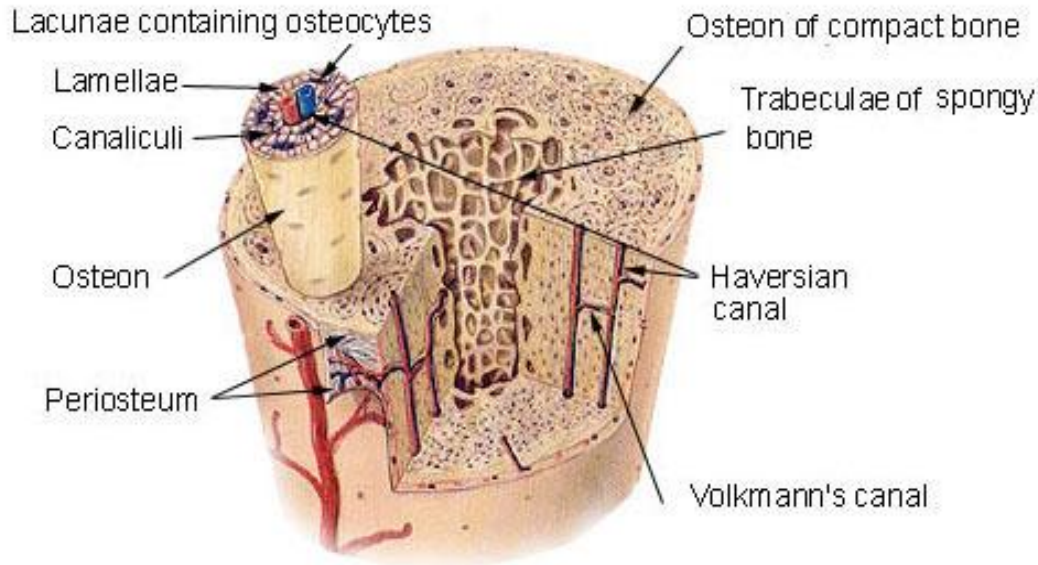


ÚZIS ČR : v roce 2008 nově zaznamenáno 154 případů polydaktylie, 142 případů syndaktylie a 41 případů redukčních defektů končetin.

Vrozené vady končetiny se objevují samostatně i jako součásti syndromů a tvoří zhruba 10% ze všech vrozených vad

## Compact Bone & Spongy (Cancellous Bone)



a. nutricia  
aa. metaphysariae  
aa. epiphysariae  
periostální aa.

## Fracture types

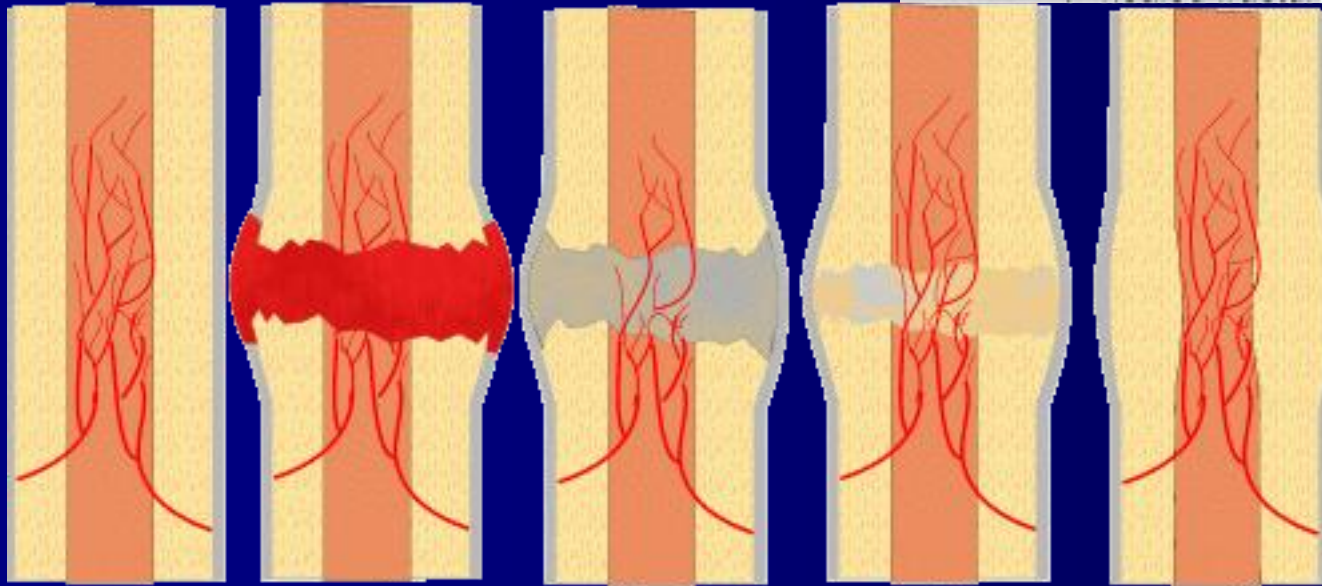
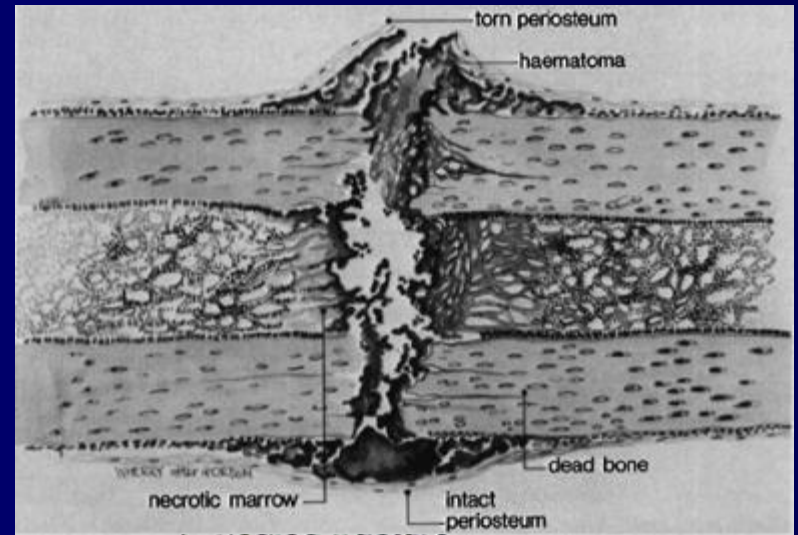


Oblique

Comminuted

Spiral

Compound



haematom,  
vazivový  
kalus

chrupavčitý  
kalus

kostní kalus

remodeláče

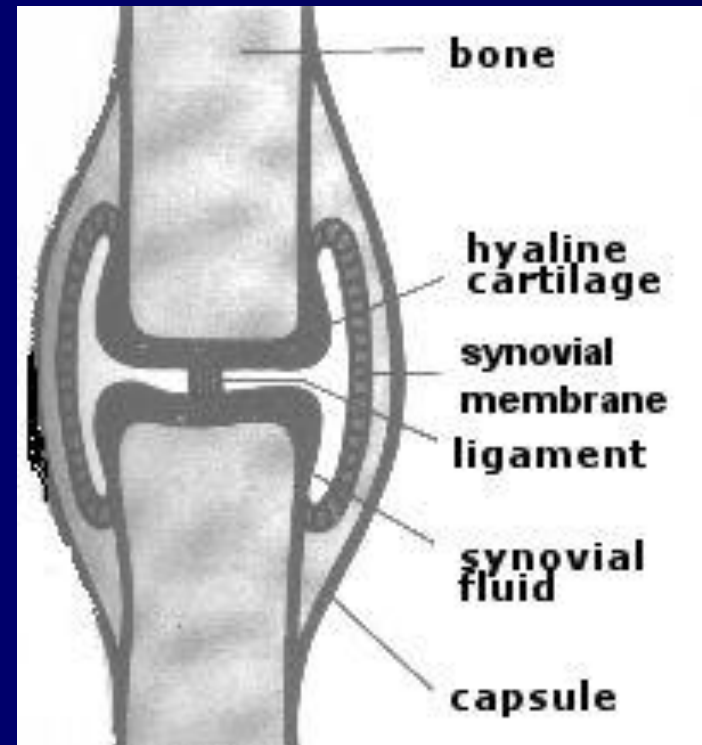
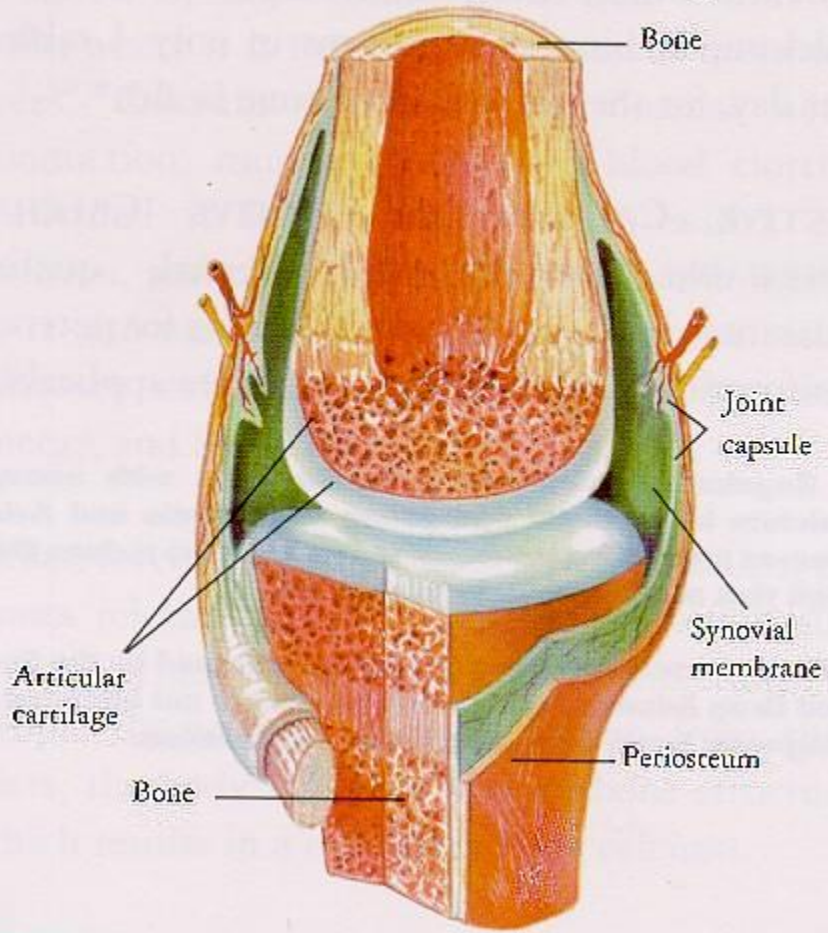
# Klinický případ

**37 letý muž, který utrpěl frakturu T+F před 14 měsíci**



**Pakloub (pseudoarthrosis)(non-union)**  
zhruba v 2-10% všech frct. tibie

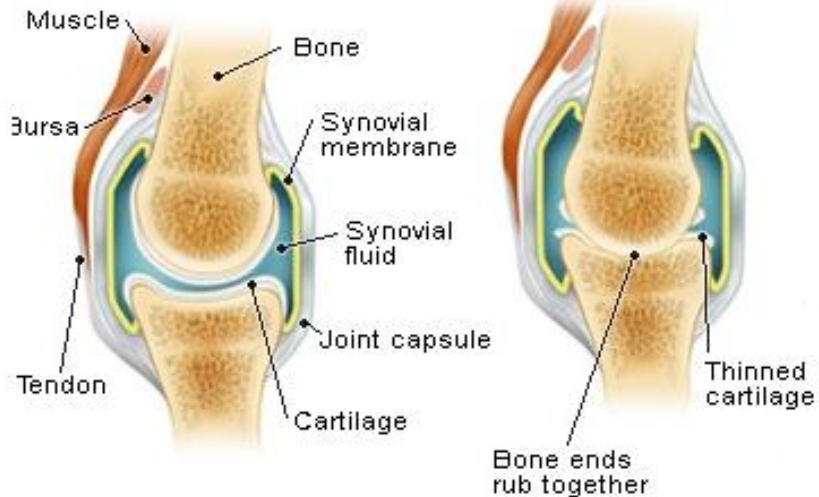
## Structure of a synovial joint



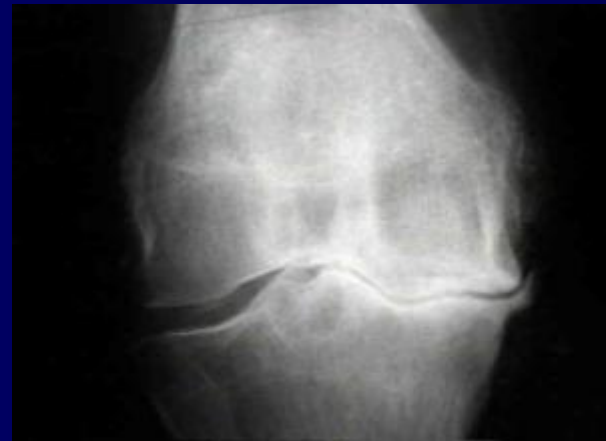
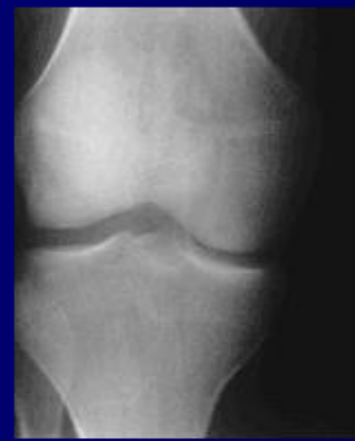
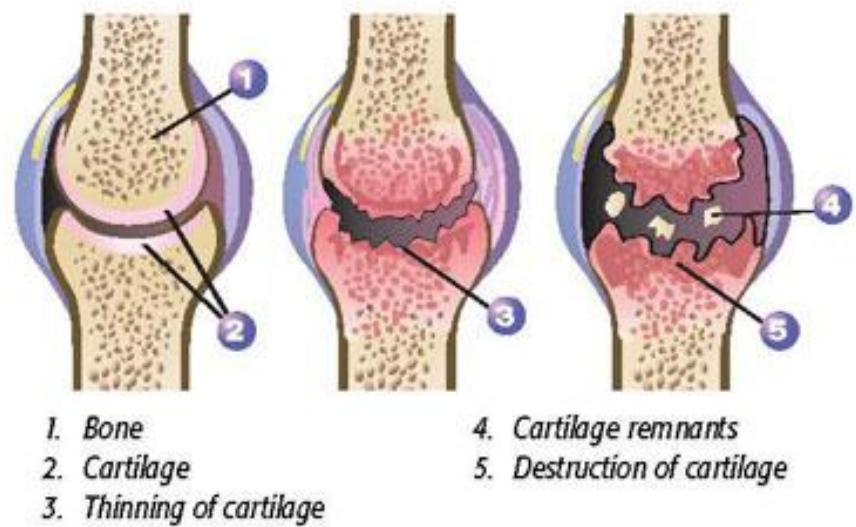
flexe/extense  
abdukce/addukce  
rotace  
circumdukce

# Osteoarthritis

## Normal Joint



## Evolution of Osteoarthritis



# Klinický případ

• 8 letý chlapec s bolestí ramena po pádu na nataženou HK

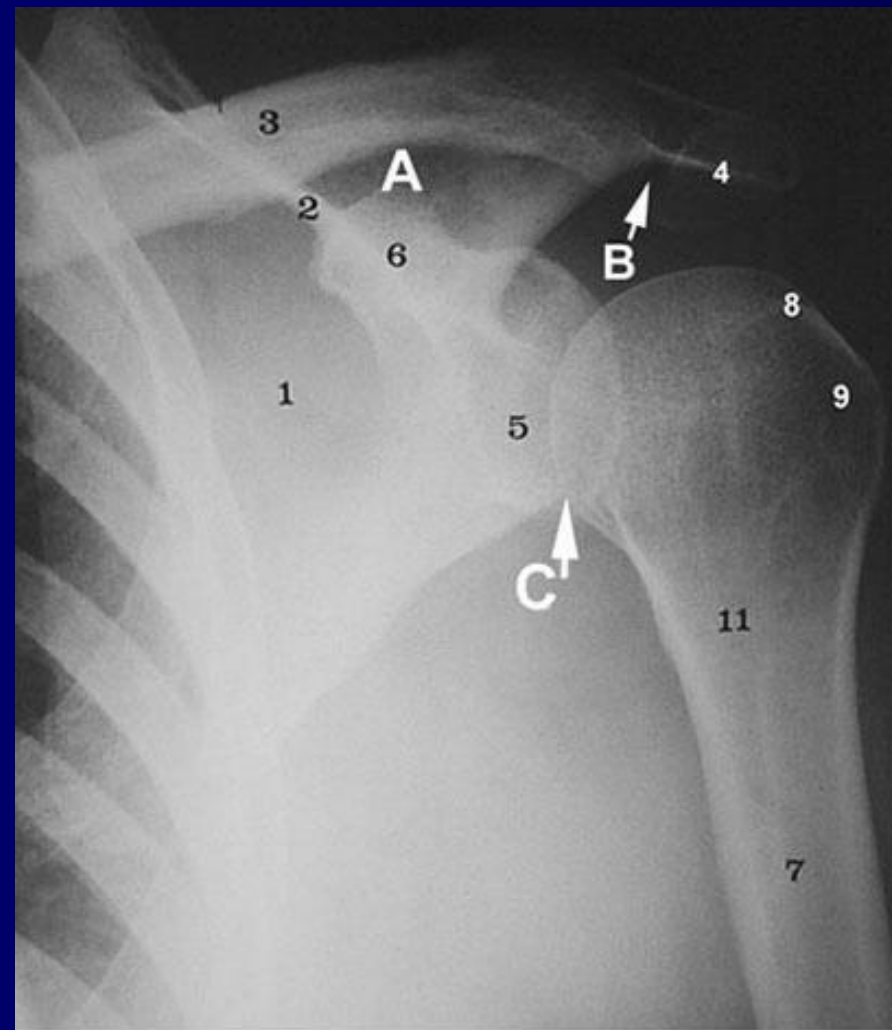


Separace v epifyzární (růstové) chrupavce

komplikace: zpomalení x urychlení růstu

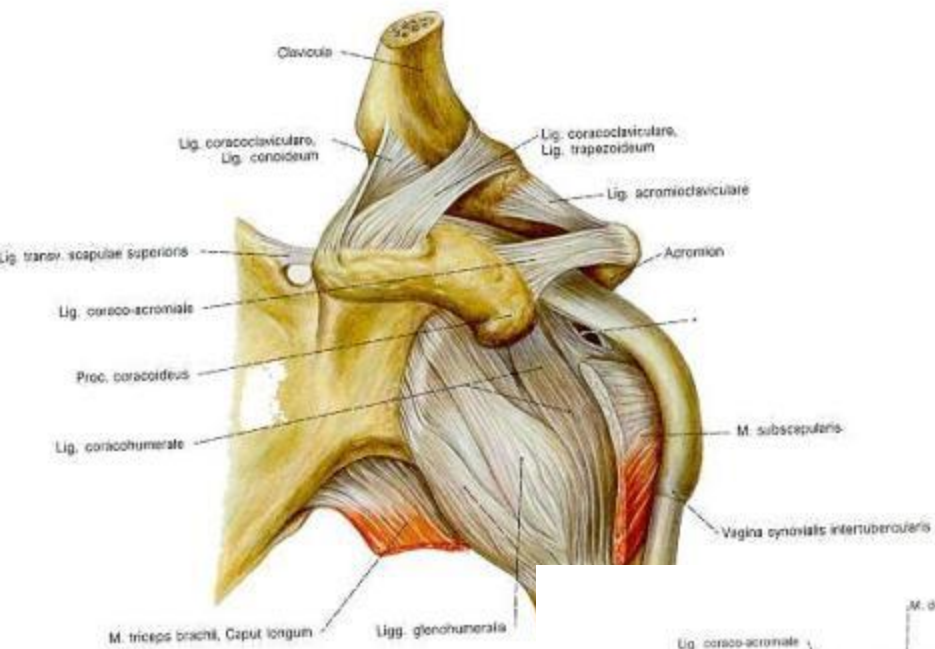


posun epifýzy mediálně a proximálně (černá šipka) a rozšíření linie fýzy (bílá šipka).

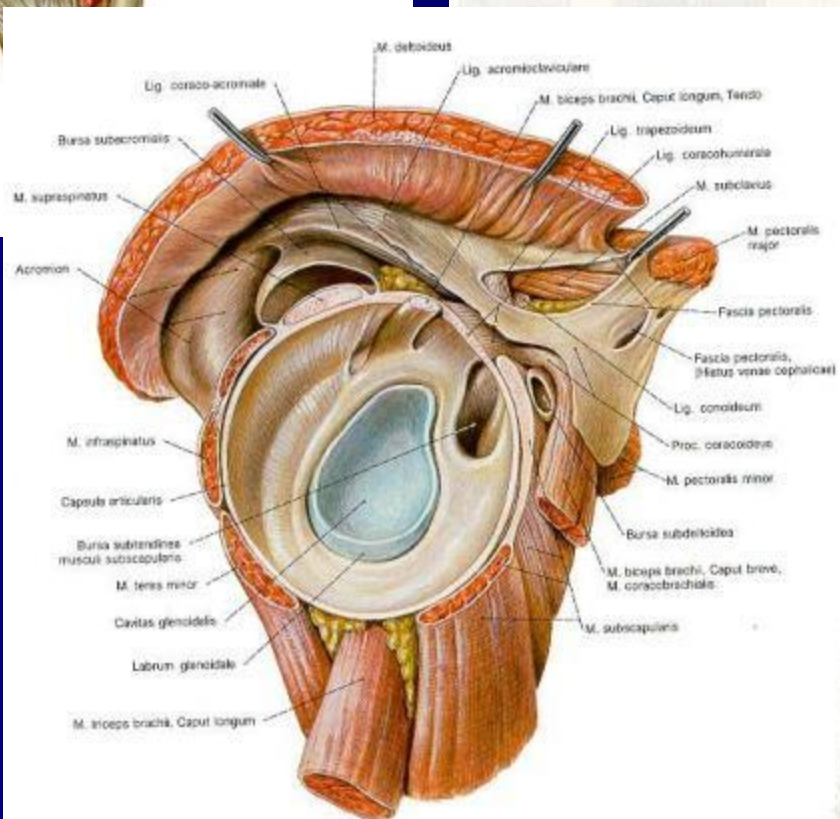
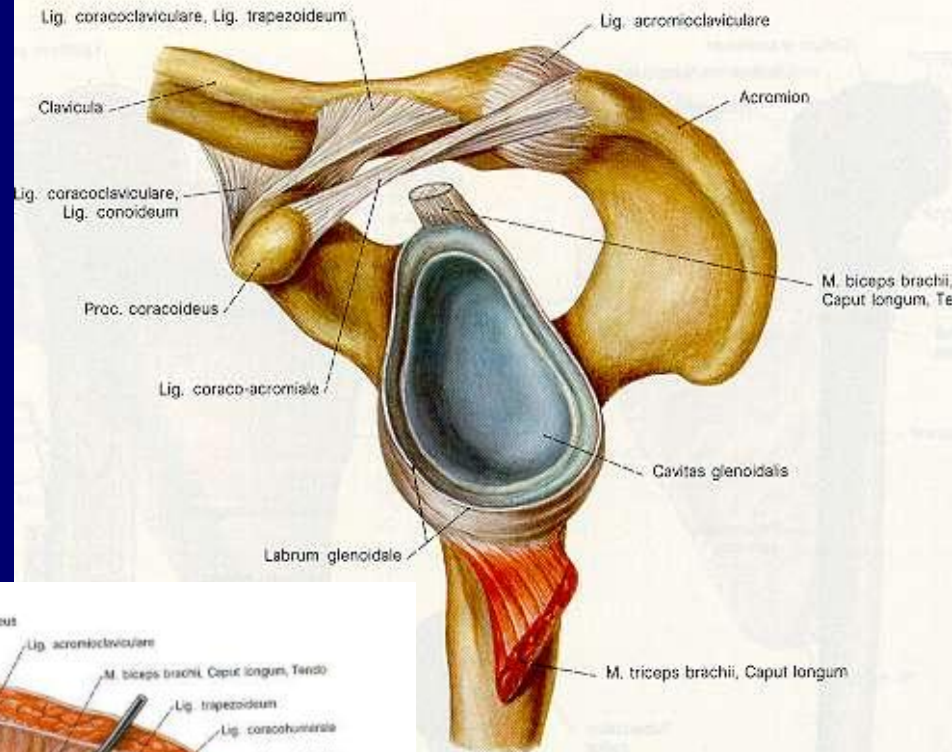


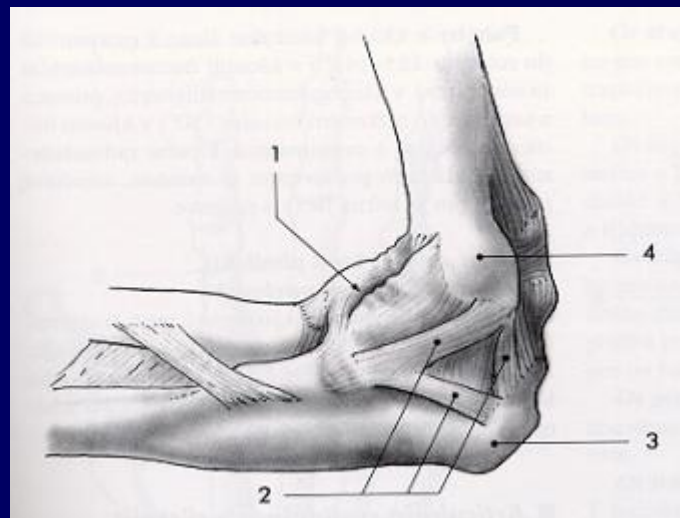
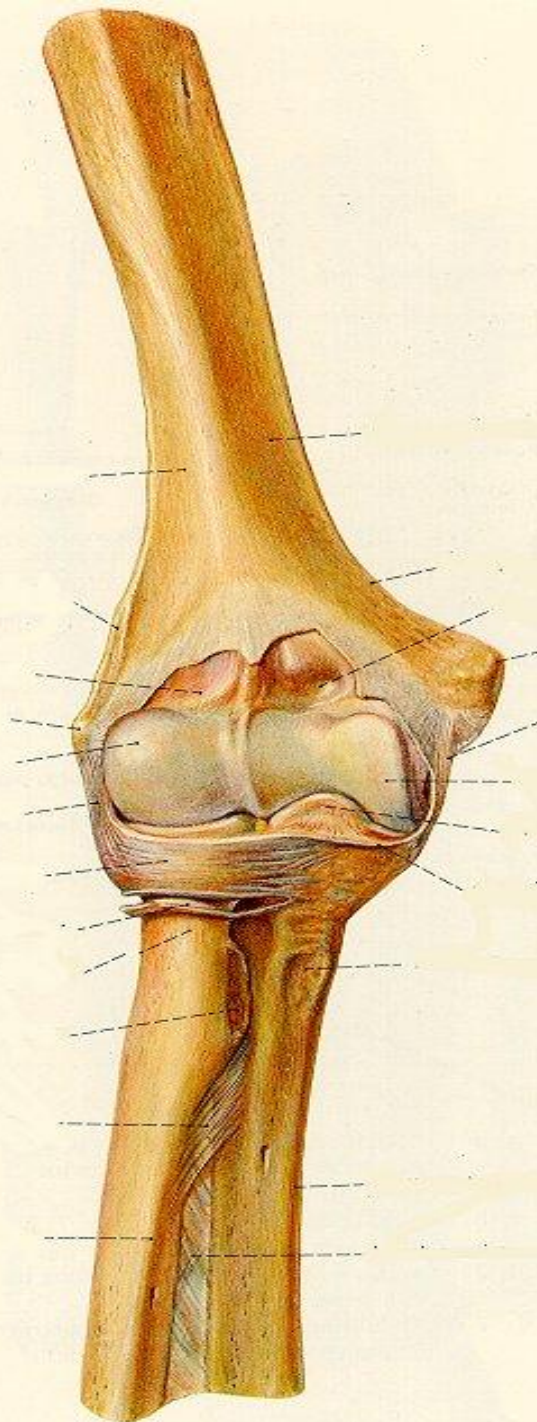
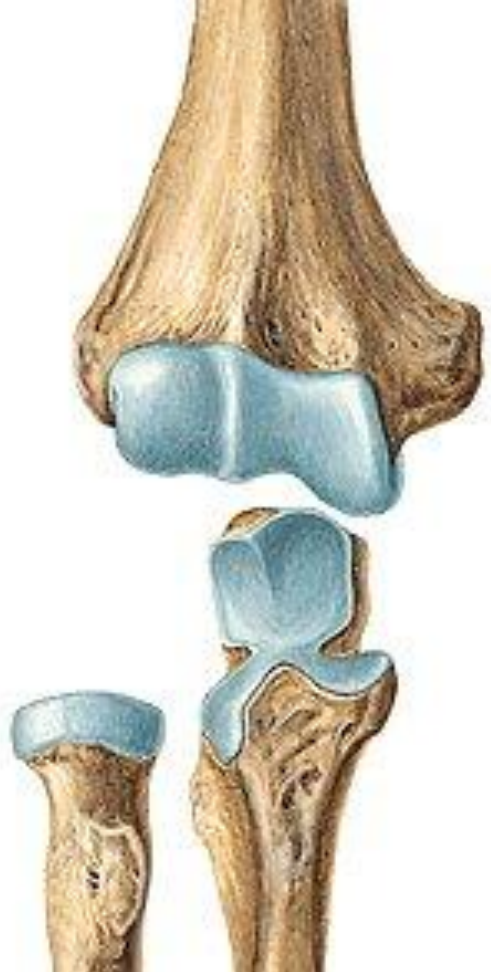
- 1 scapula 2 scapular spine 3 clavicle
- 4 acromion process 5 glenoid fossa
- 6 coracoid process 7 humerus
- 8 anatomical neck of humerus
- 9 greater tuberosity
- 10 lesser tuberosity
- 11 surgical neck of humerus
- A coracoclavicular joint
- B acromioclavicular joint
- C glenohumeral joint





44. Left articulo (capitis) humeri and articulo ioclavicularis. Anterior view.  
 ing into bursa subacromialis:



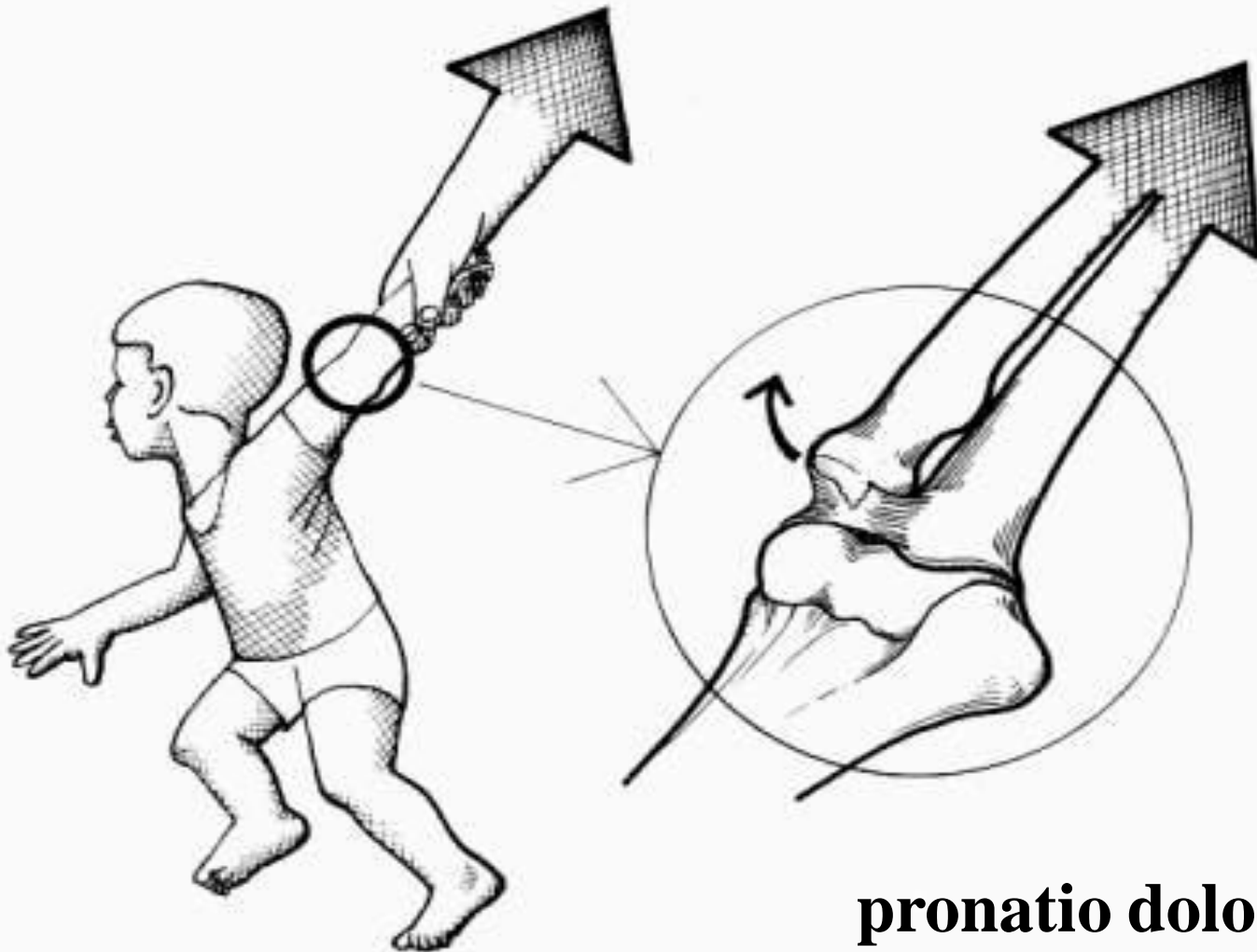




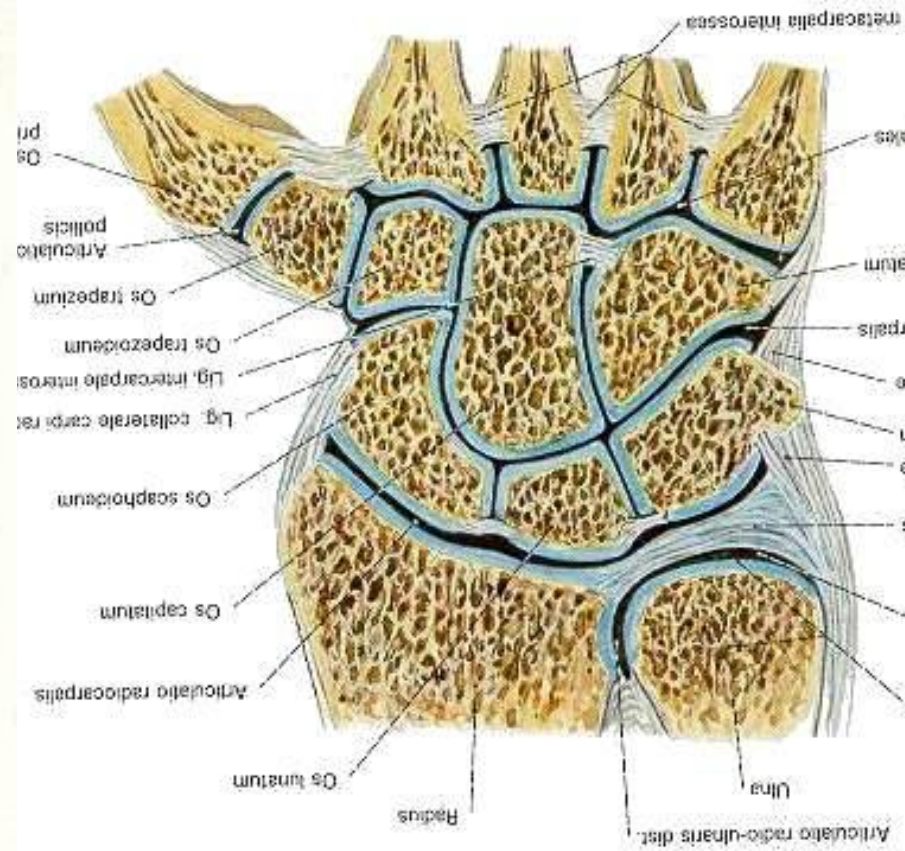
**pronatio dolorosa**

# Klinický případ

2,5letý chlapec se při přecházení na přechodu náhle zastavil, matka ho před příjíždějícím autem strhla na chodník; předloktí v pronaci, loket pro bolest nepohyblivý palpační bolest a otok s maximem v mediální části lokte



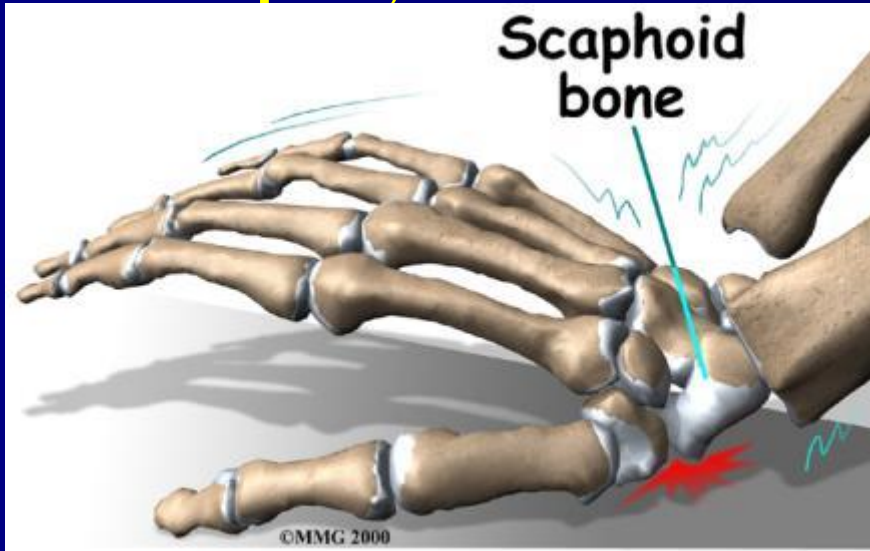
**pronatio dolorosa**





# Klinický případ

•45 letá žena upadla na nataženou HK, přichází s otokem a bolestí zápěstí, s maximem na radiální straně



•frct. ossis scaphoidei  
– nejčastější frct. zápěstí



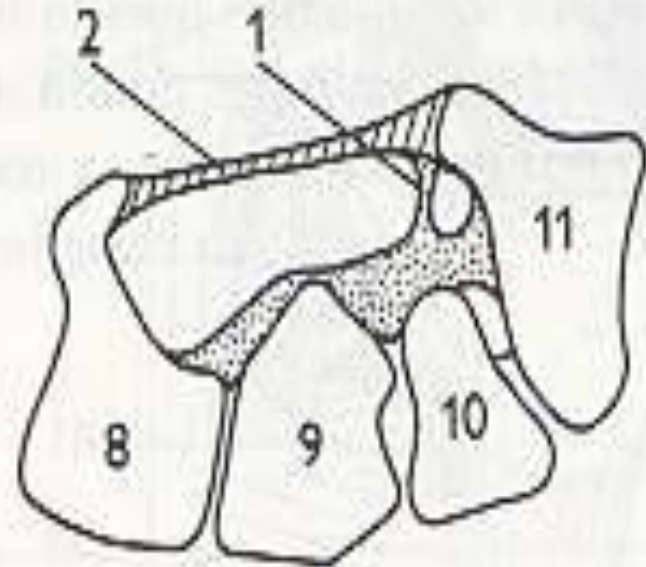
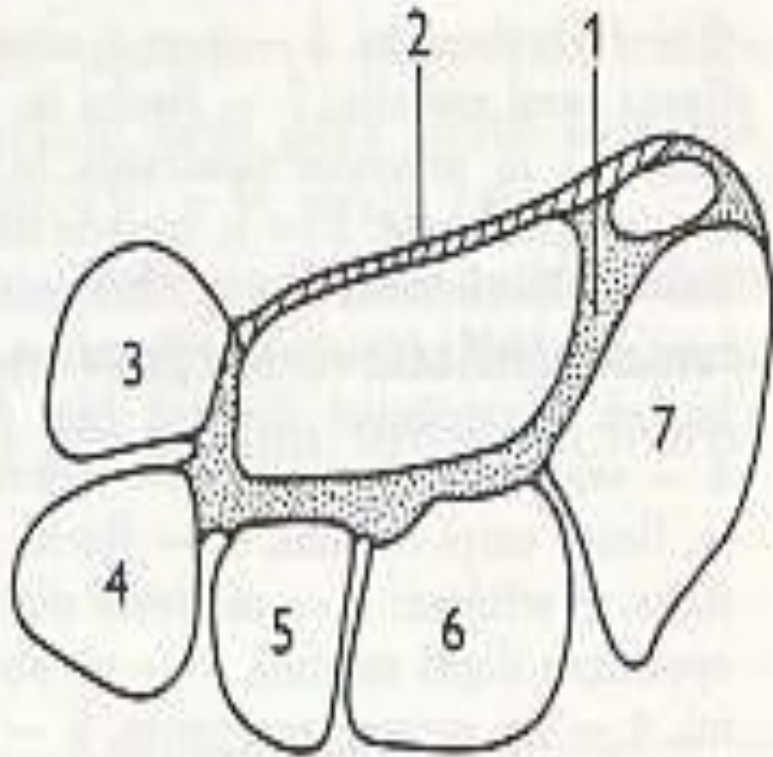
## Komplikace:

vznik pakloubu (až 10%)  
avaskulární nekróza (15-30%)

kolaps prox  
scaphoideu

drá šipka) jako následek fraktury os  
(ka)

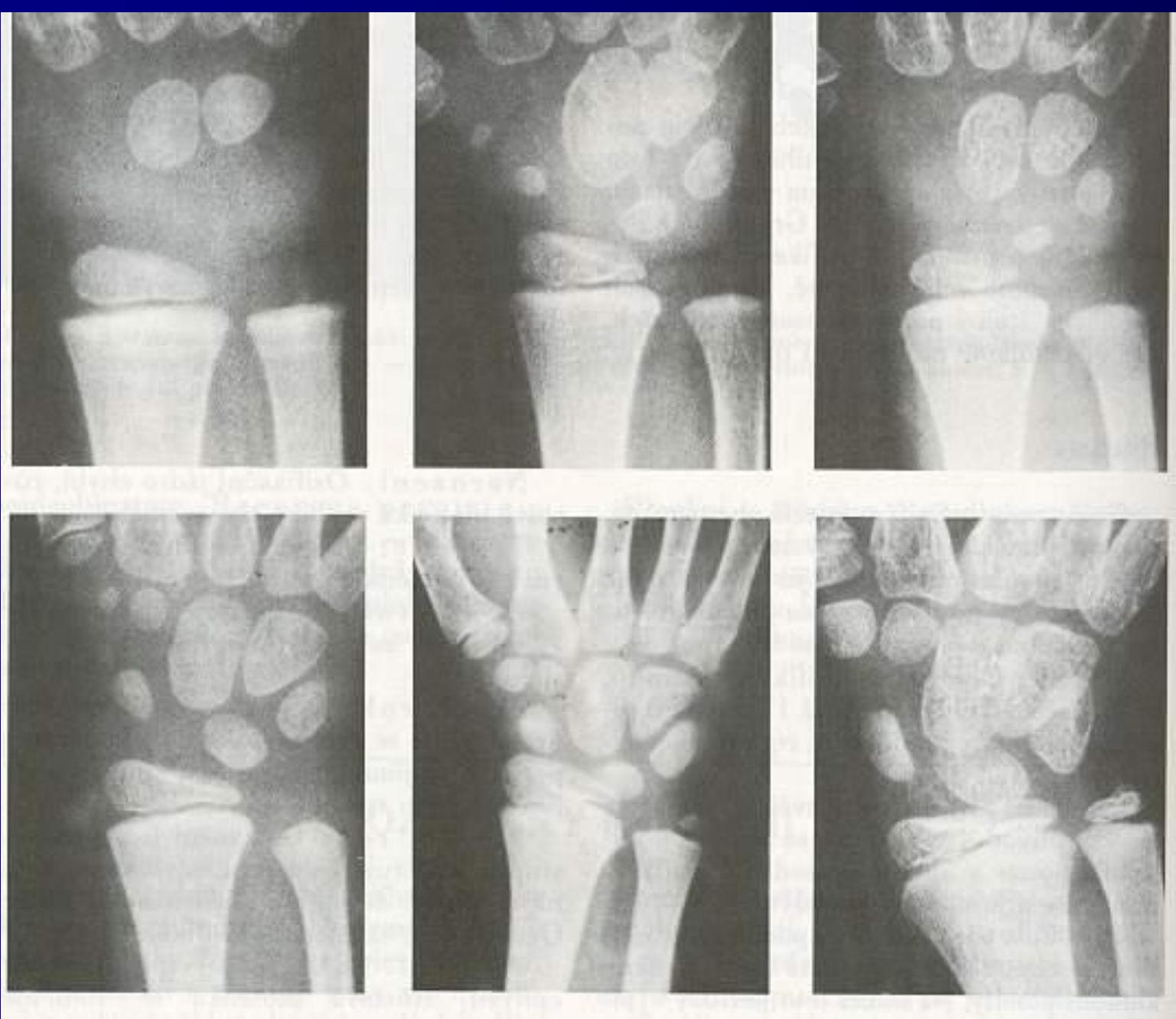
# canalis carpi



osteofibrosní tunel vytvořený sklenutím karpu a napnutým lig. carpi transversum (retinaculum transversum)

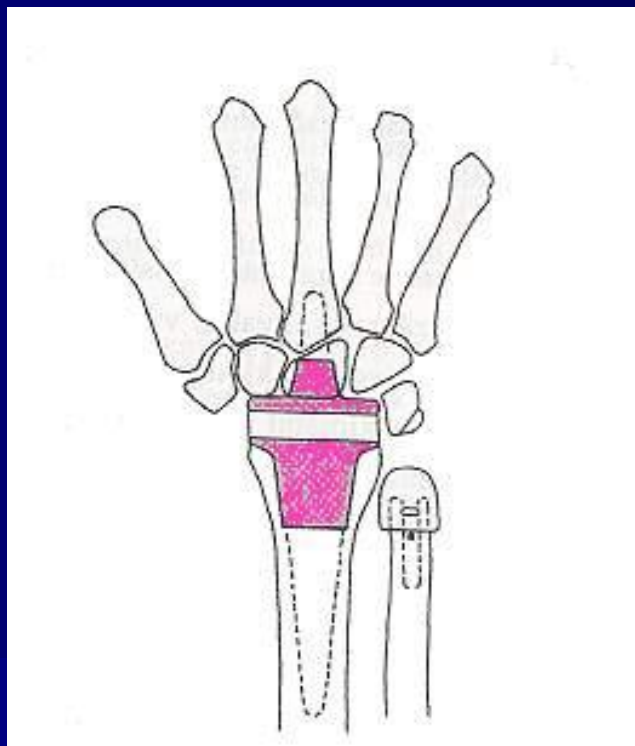
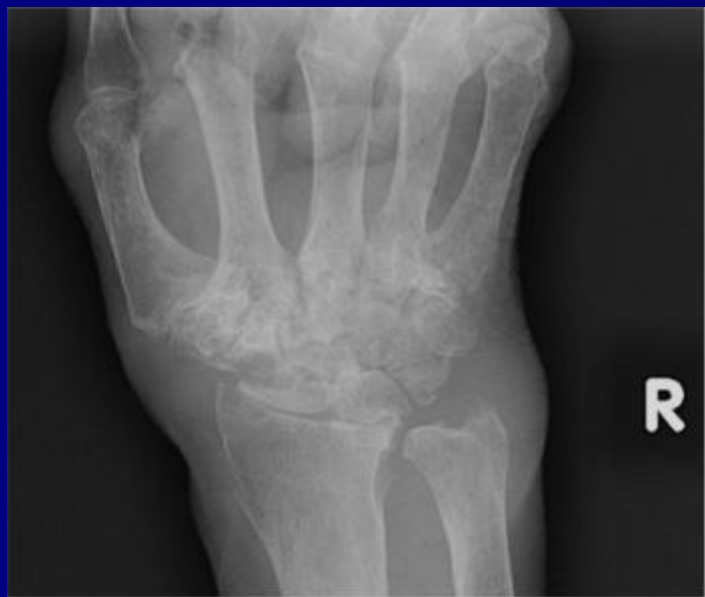
**úžinové syndromy (n. medianus)**





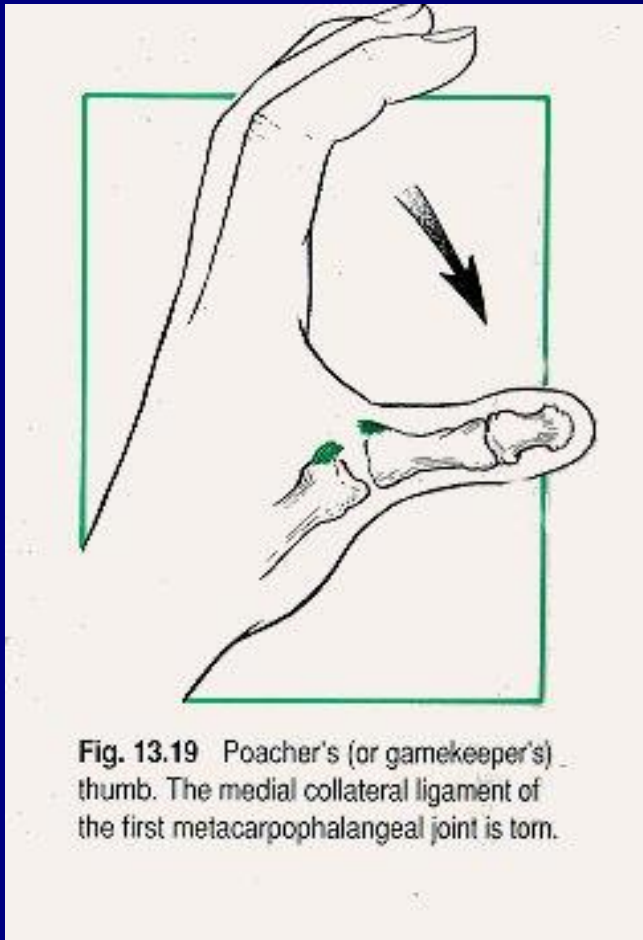
postupná osifikace, kostní věk

# revmatoidní artritida

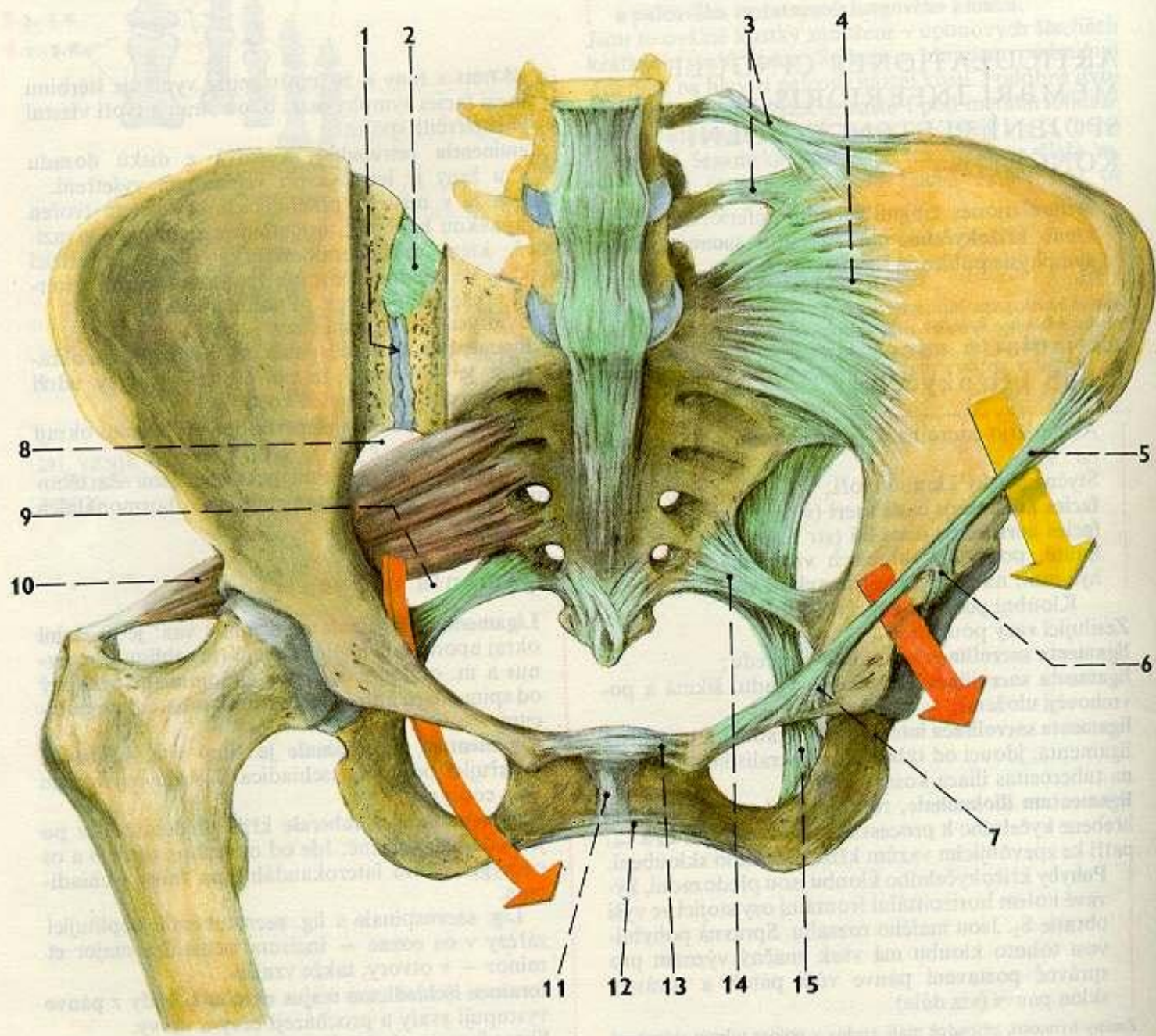


# Klinický případ

**22 letá lyžařka: pád na nataženou HK s abdukovaným palcem (zachycen v poutku hůlky); otok a bolestivost při bazi palce**



**zranění lig. colaterale ulnare MTC-Ph kloubu palce**

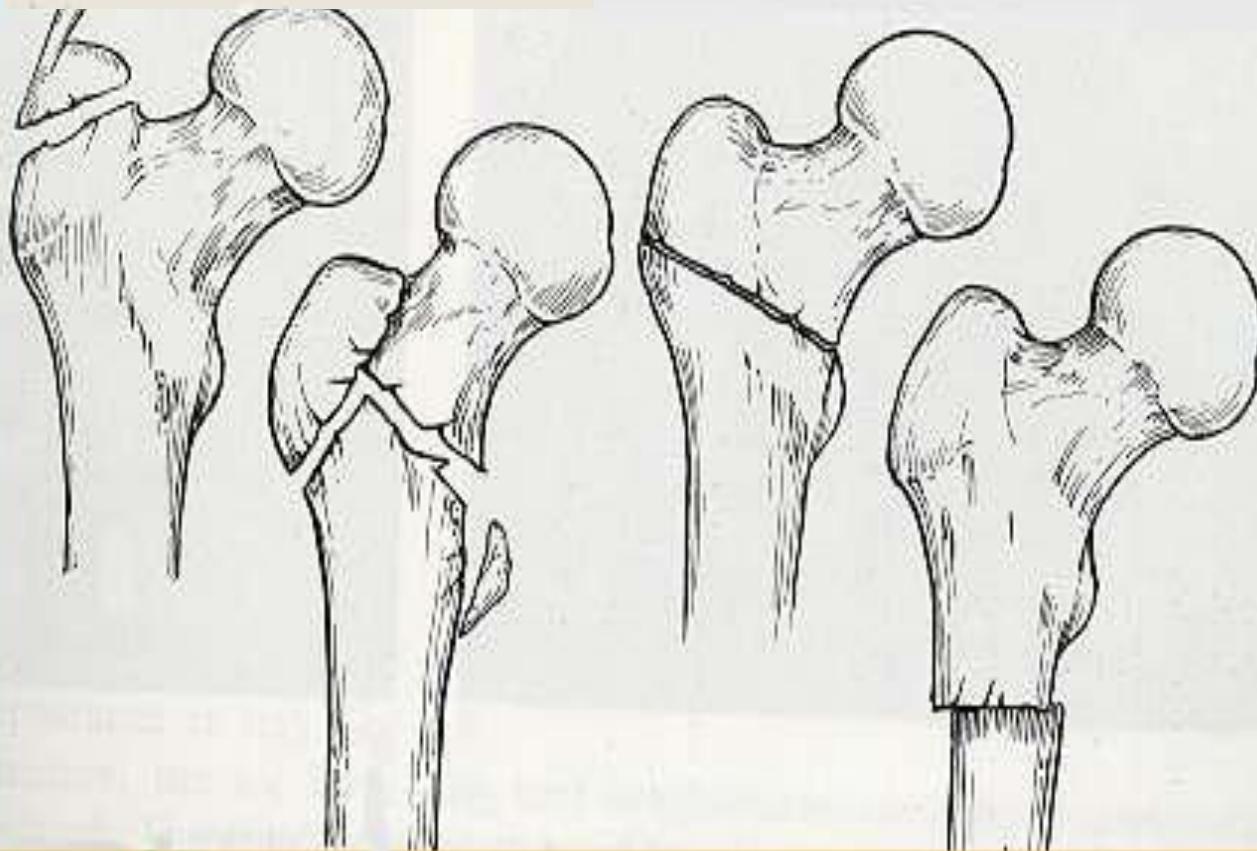


# kolodíafysární úhel

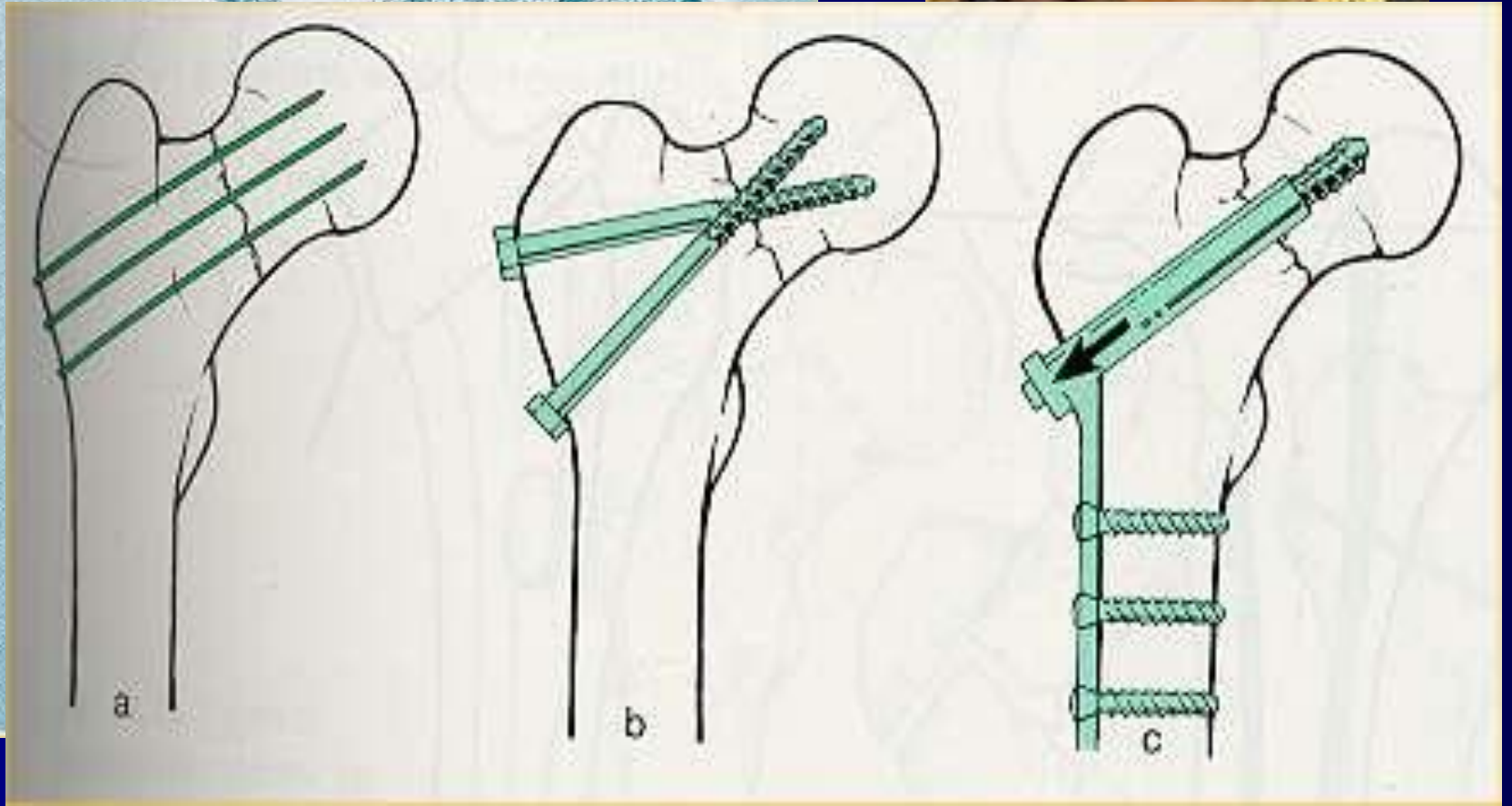
130

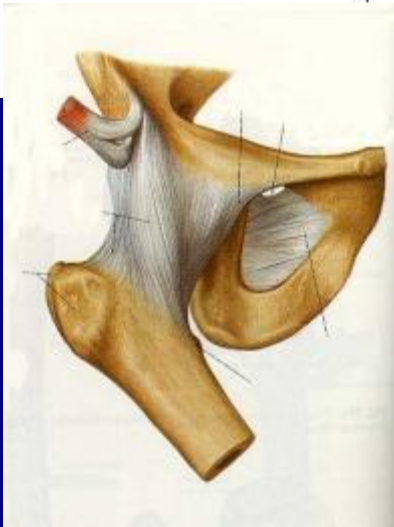
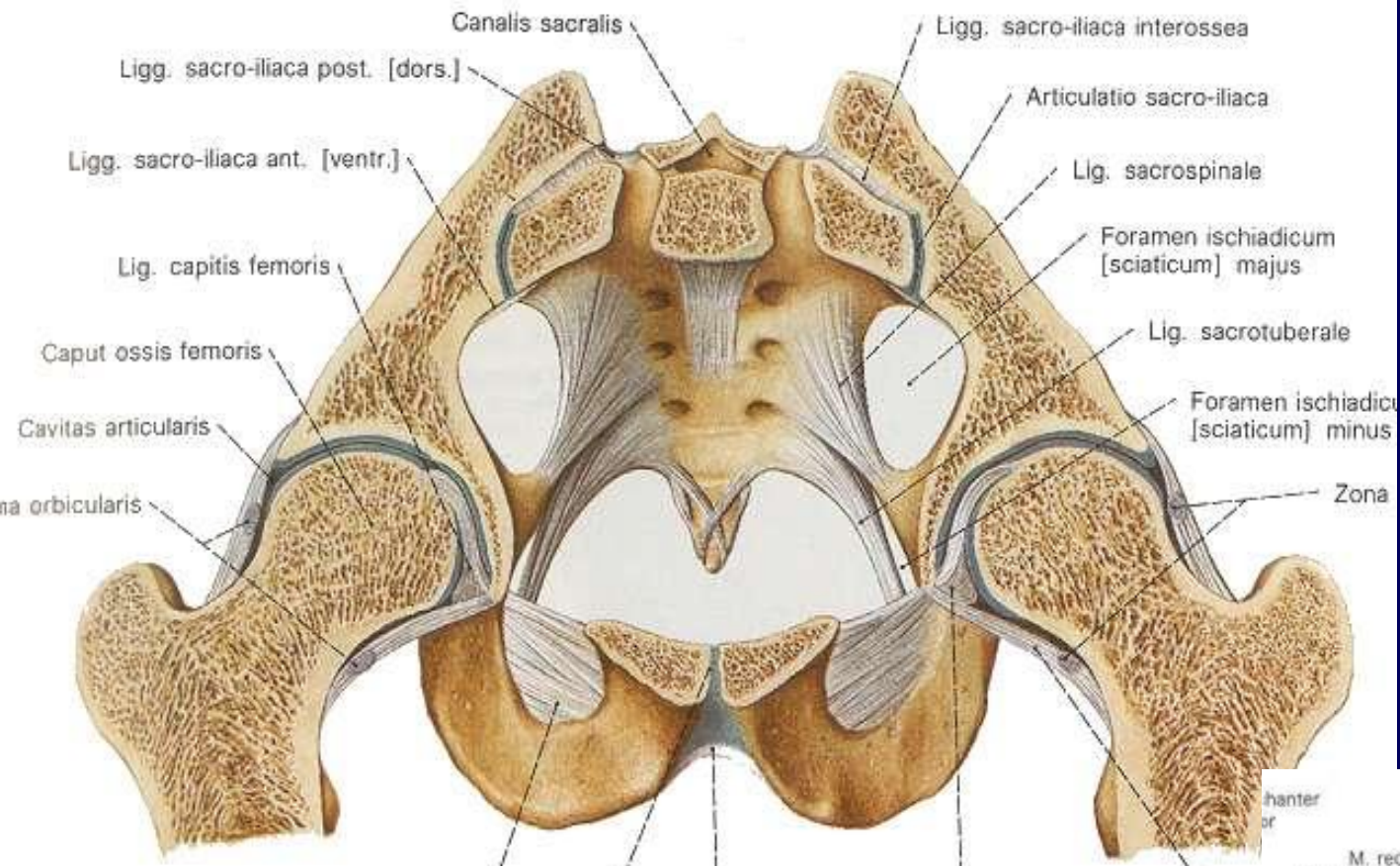


coxa valga

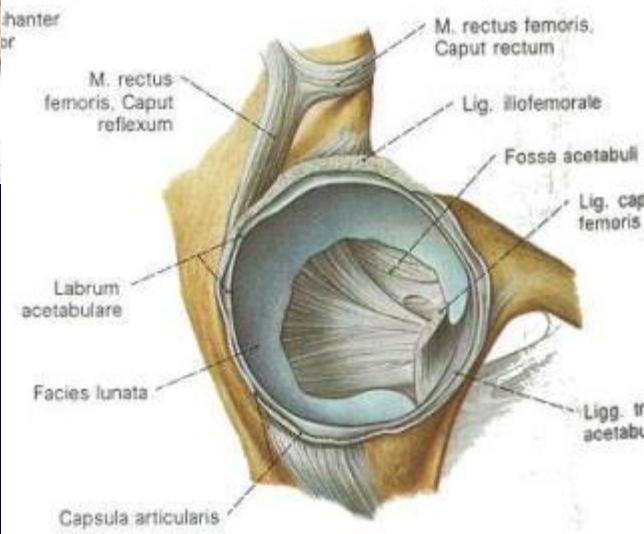


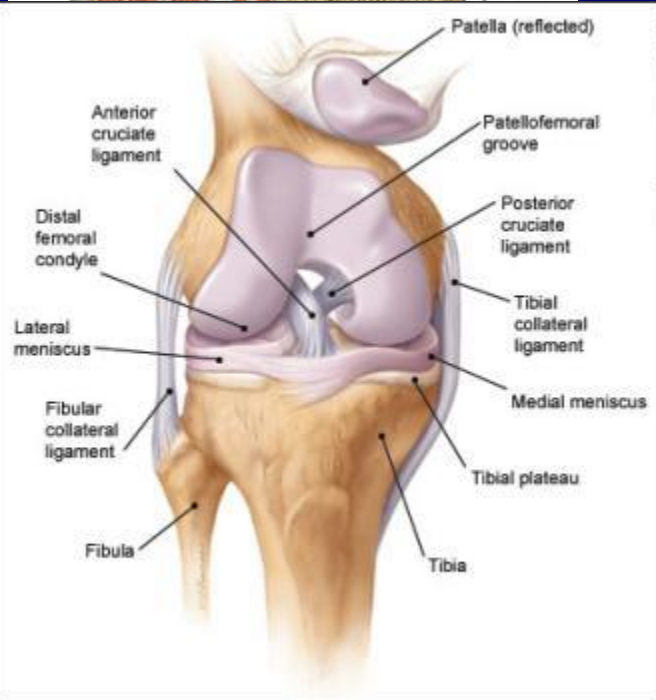
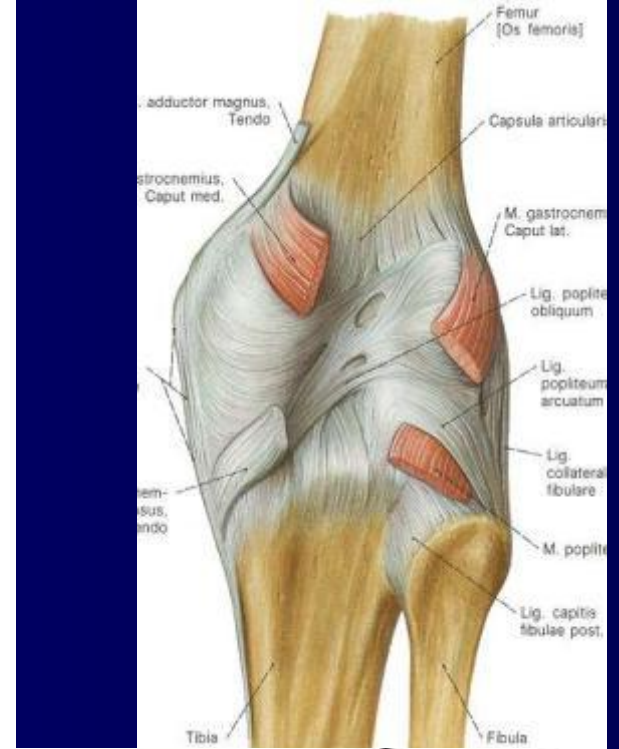
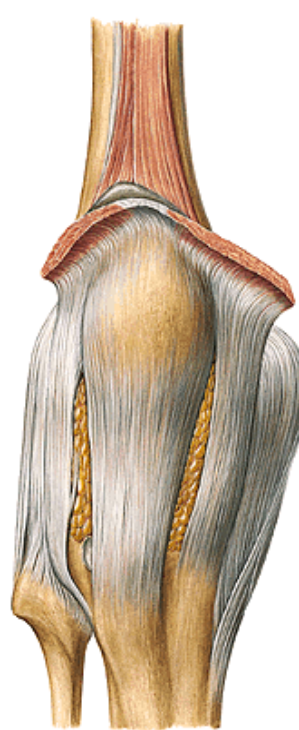
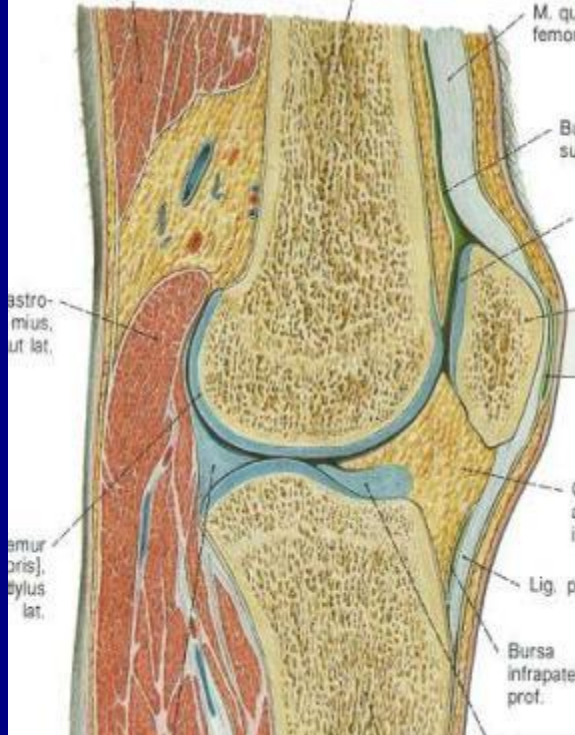
coxa vara



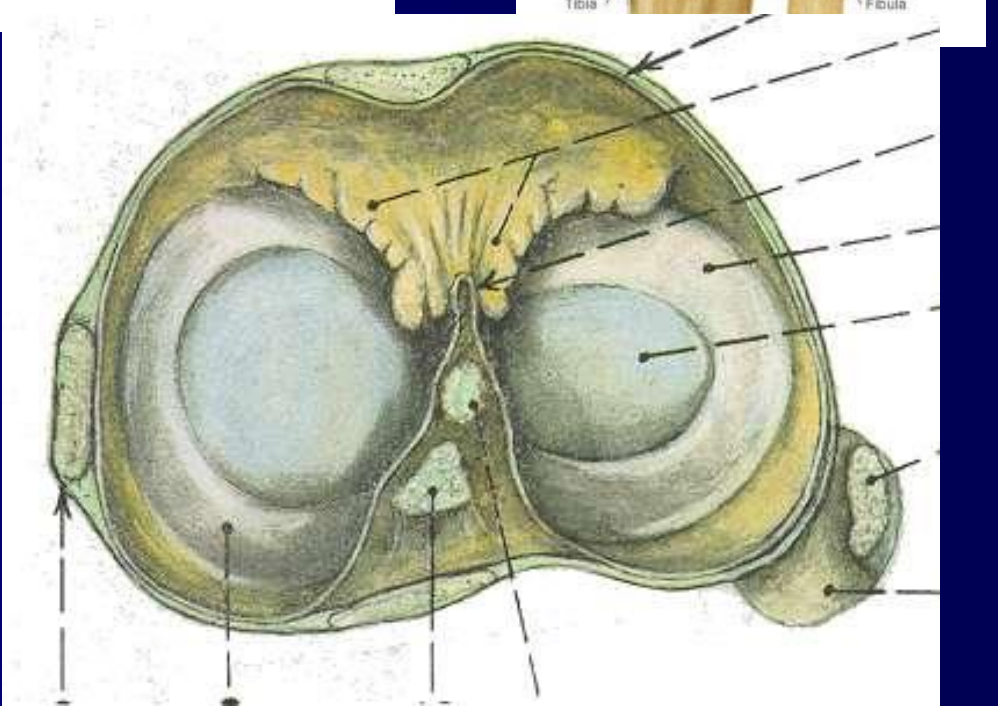


Lig. capitis femoris

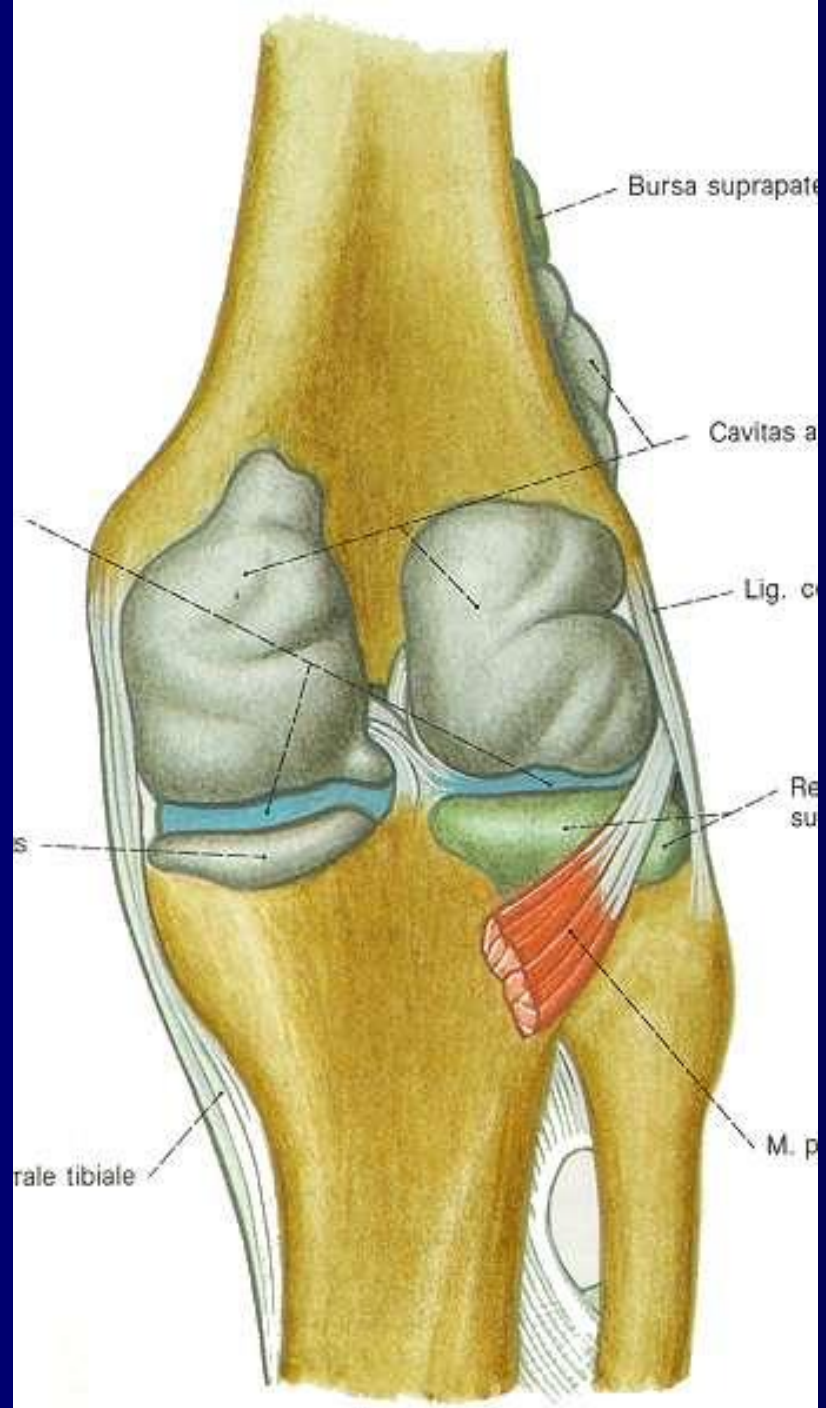
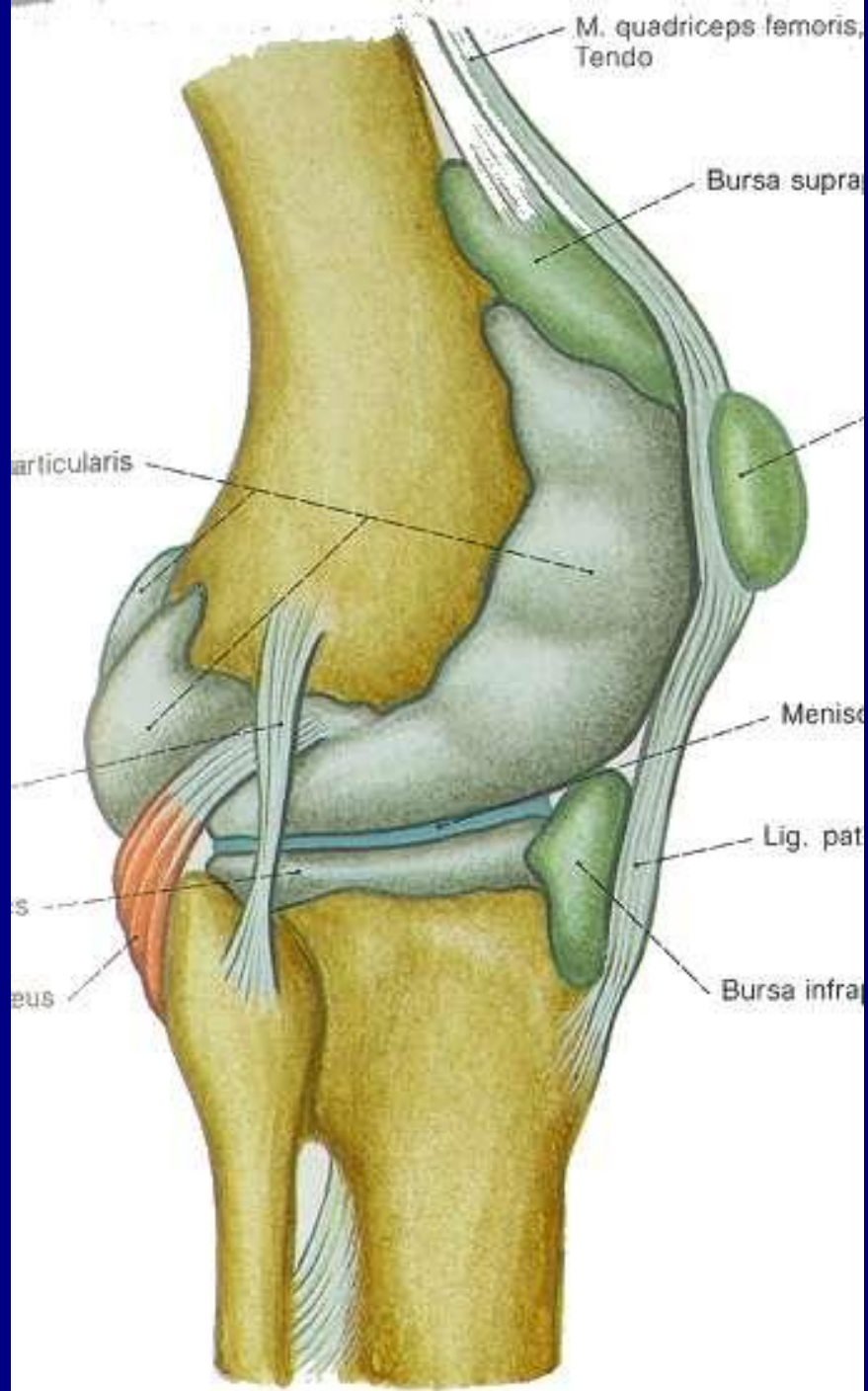




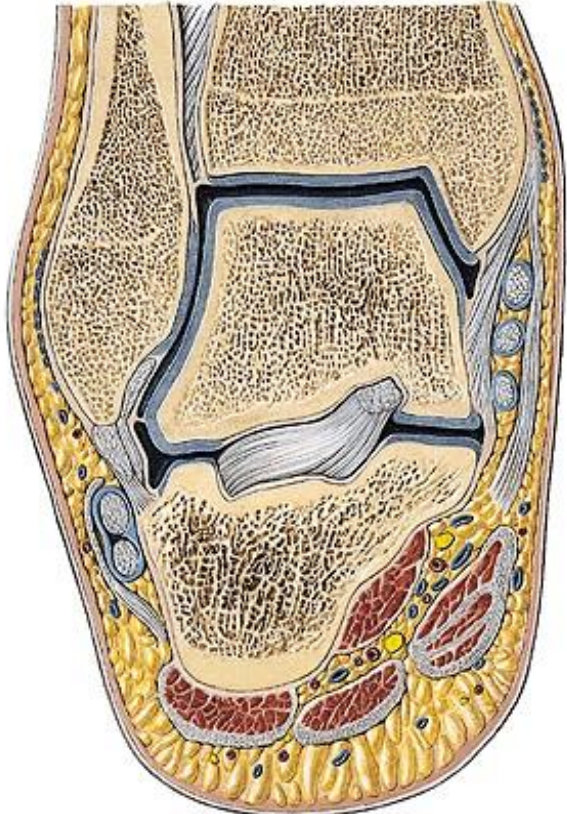
Copyright © 2003 Christy James

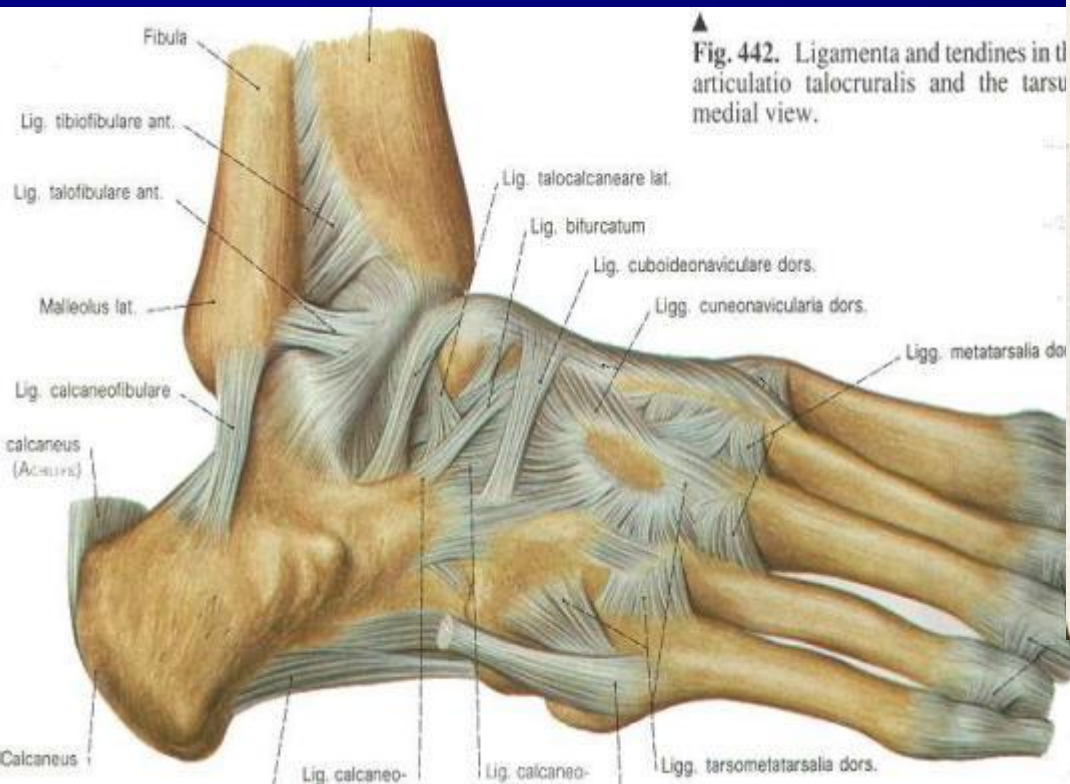




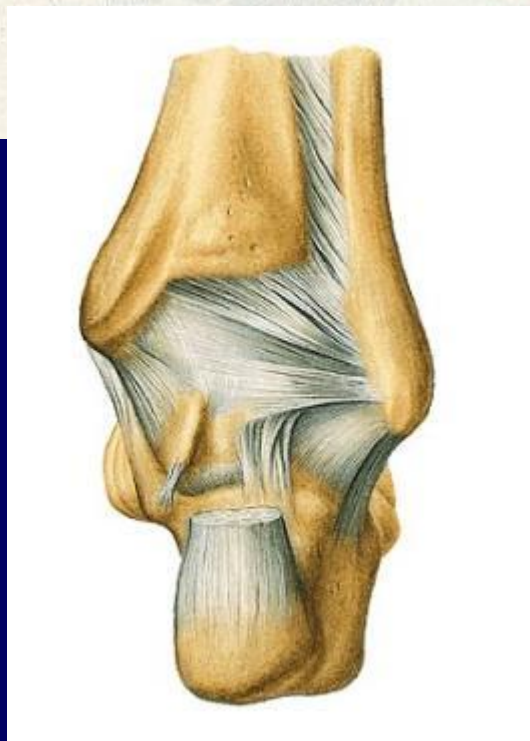
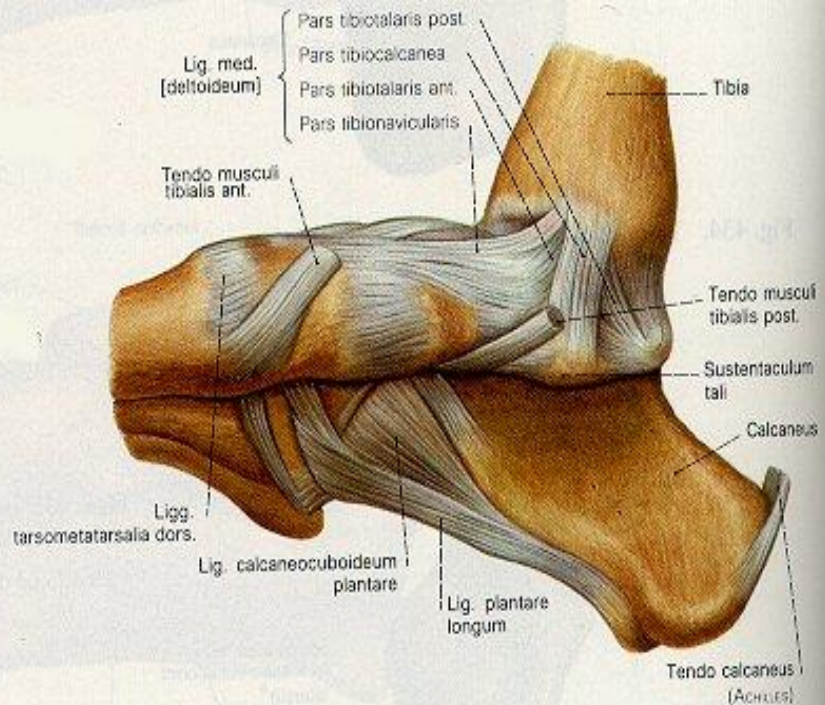




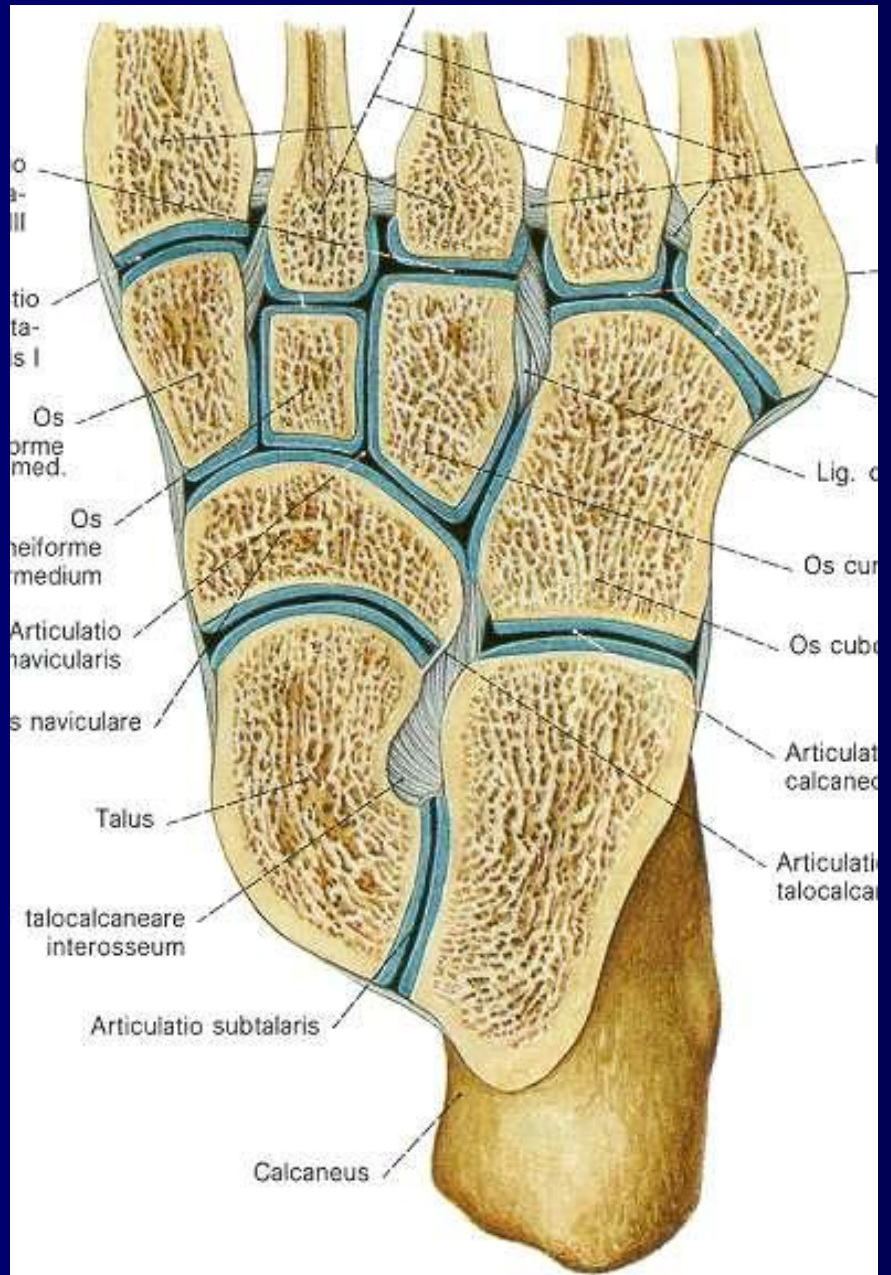




▲ Fig. 442. Ligamenta and tendines in the articulation talocruralis and the tarsus, medial view.



ion of the  
ght foot,





## Klenba nožní

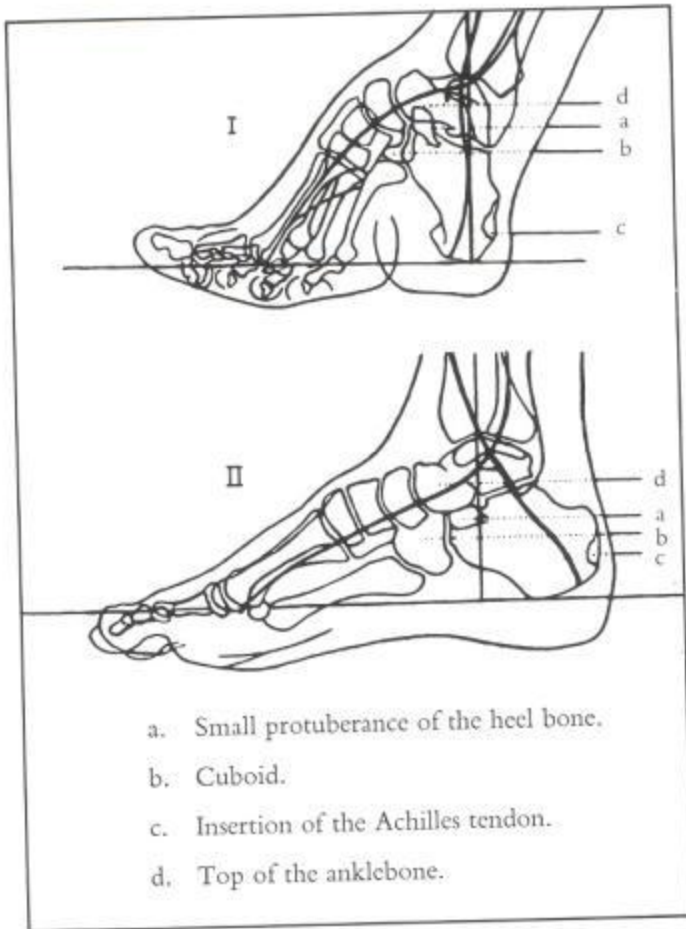
- brání utlačování měkkých tkání v plantě, umožňuje pružnost při došlapování

**příčná** – dána sklenutím ossa cuneiformia, drží ji mezikostní vazy,

m. peroneus longus, m. tibialis ant. m.adductor hall.

**podélná** – vrcholem talus, drží ji aponeurosa, lig. plantare longum,

m. tibialis post., m. flexor hall. longus, m. flexor digitorum long.

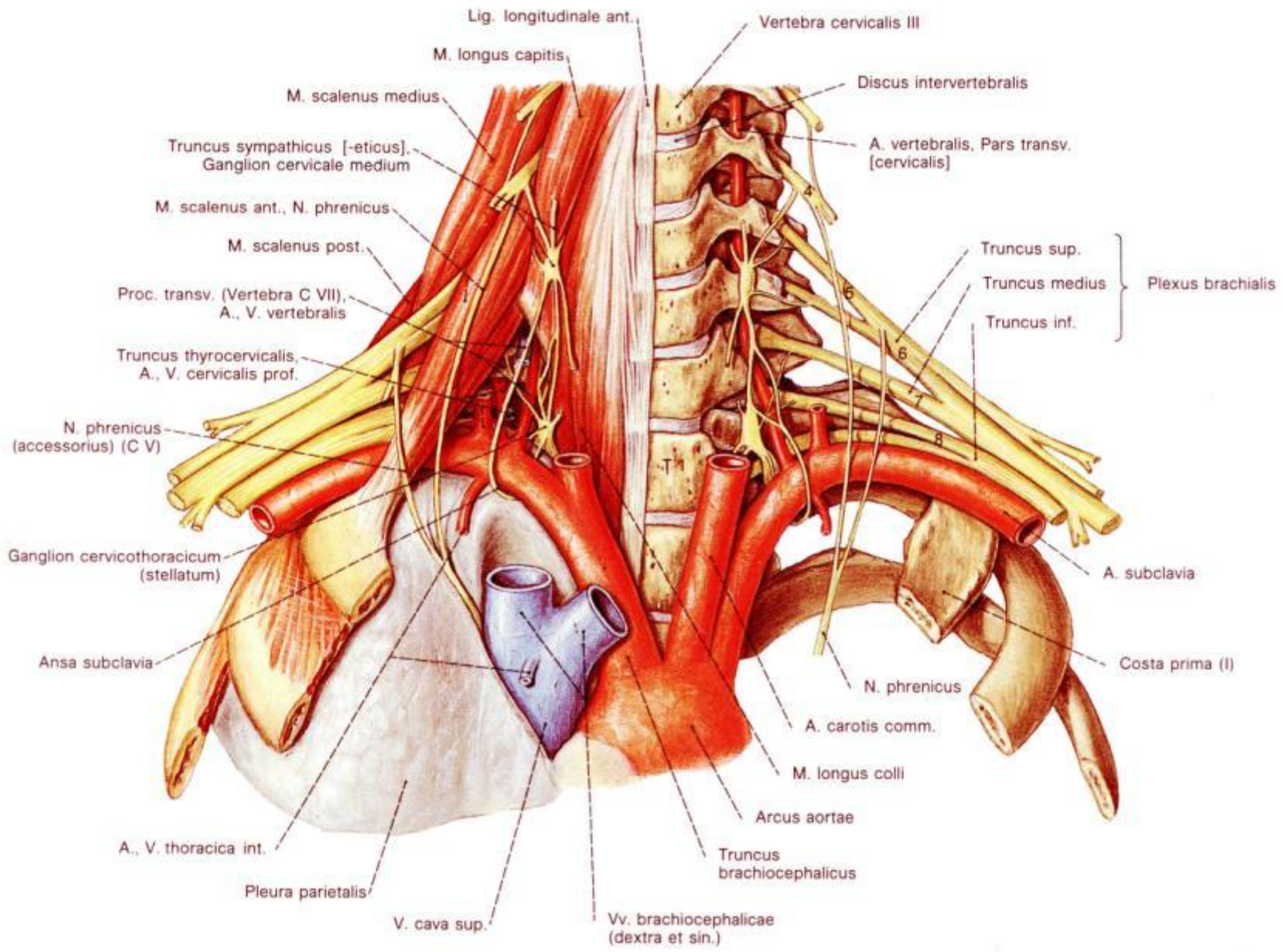


215 X-ray comparison of bound and normal foot, showing displacement of bones resulting from this unusual thousand-year-old custom.

clubbed foot



footbinding



Lig. longitudinale ant.

Vertebra cervicalis III

M. longus capitis

Discus intervertebralis

M. scalenus medius

Truncus sympathicus [-eticus]  
Ganglion cervicale medium

A. vertebralis, Pars transv.  
[cervicalis]

M. scalenus ant., N. phrenicus

M. scalenus post.

Truncus sup.

Proc. transv. (Vertebra C VII),  
A., V. vertebralis

Truncus medius

Plexus brachialis

Truncus thyrocervicalis  
A., V. cervicalis prof.

Truncus inf.

N. phrenicus  
(accessorius) (C V)

Ganglion cervicothoracicum  
(stellatum)

A. subclavia

Ansa subclavia

Costa prima (I)

N. phrenicus

A. carotis comm.

M. longus colli

A., V. thoracica int.

Arcus aortae

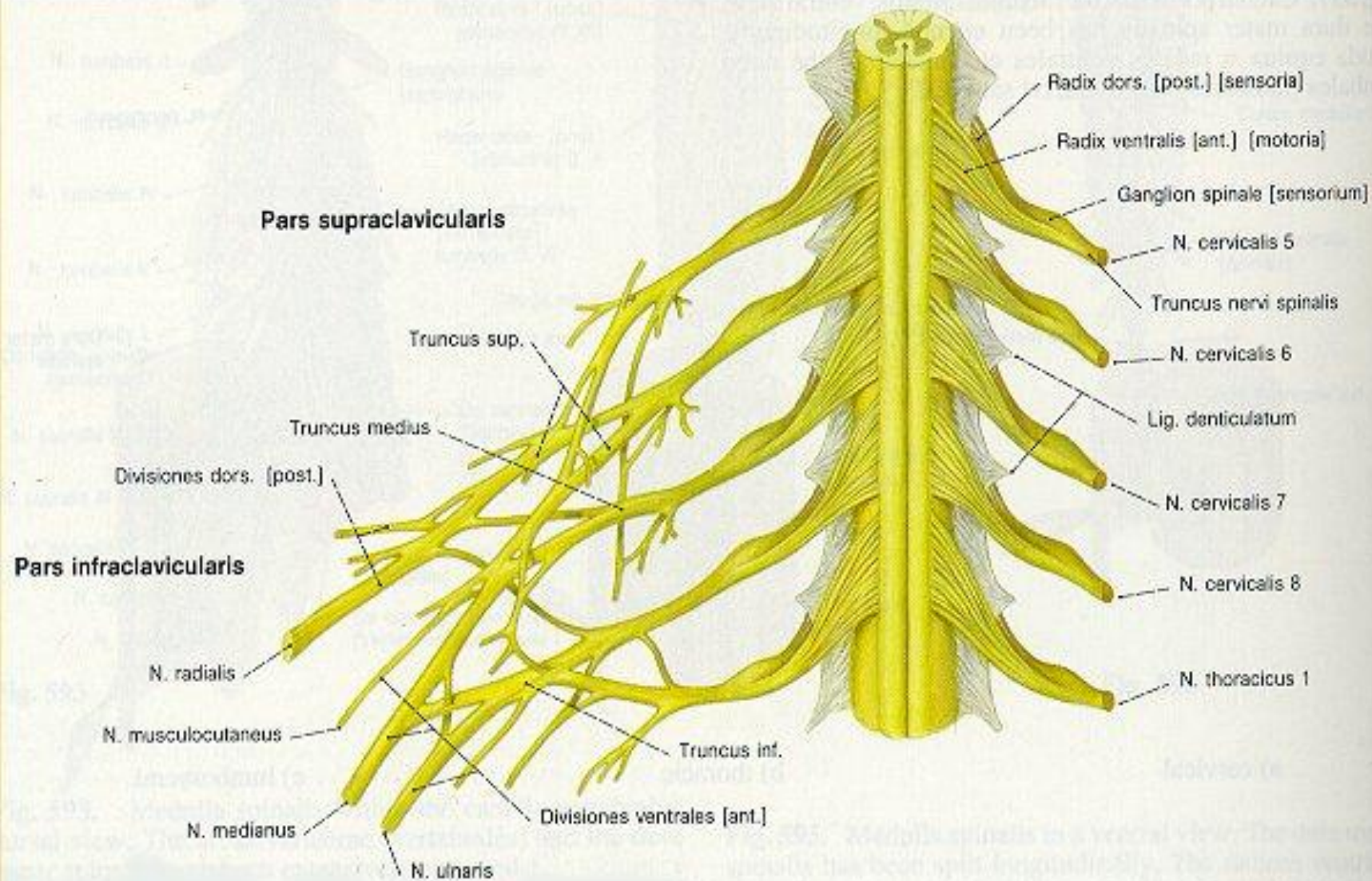
Truncus  
brachiocephalicus

Pleura parietalis

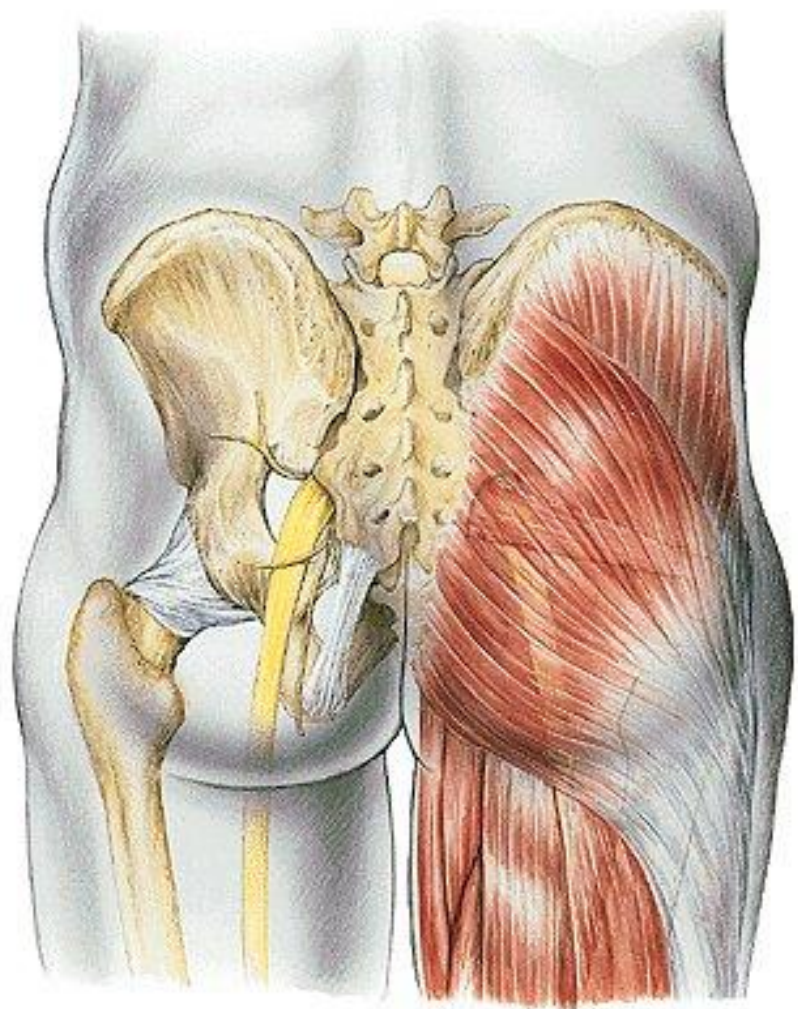
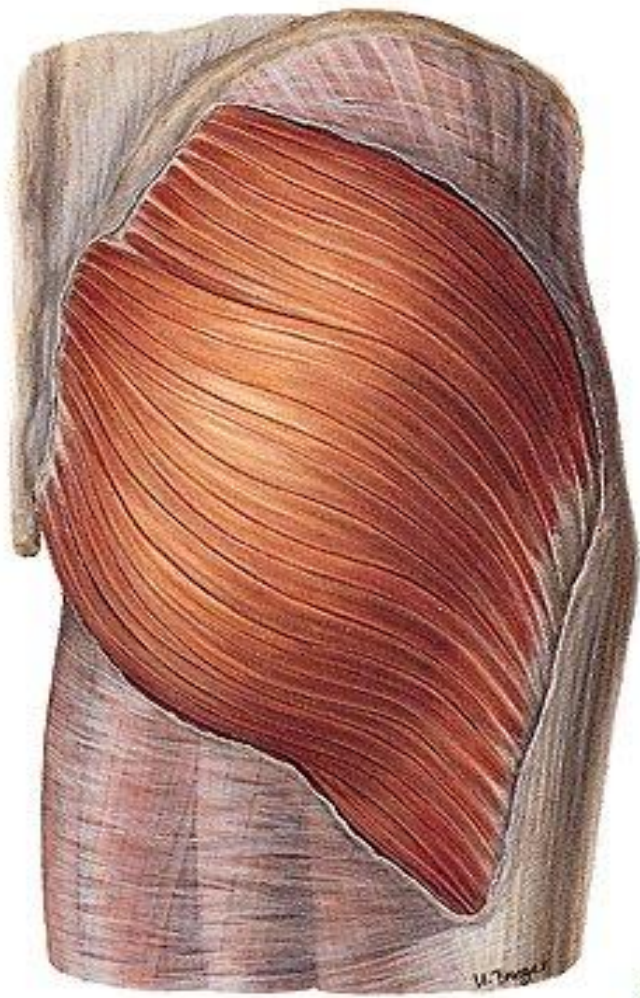
V. cava sup.

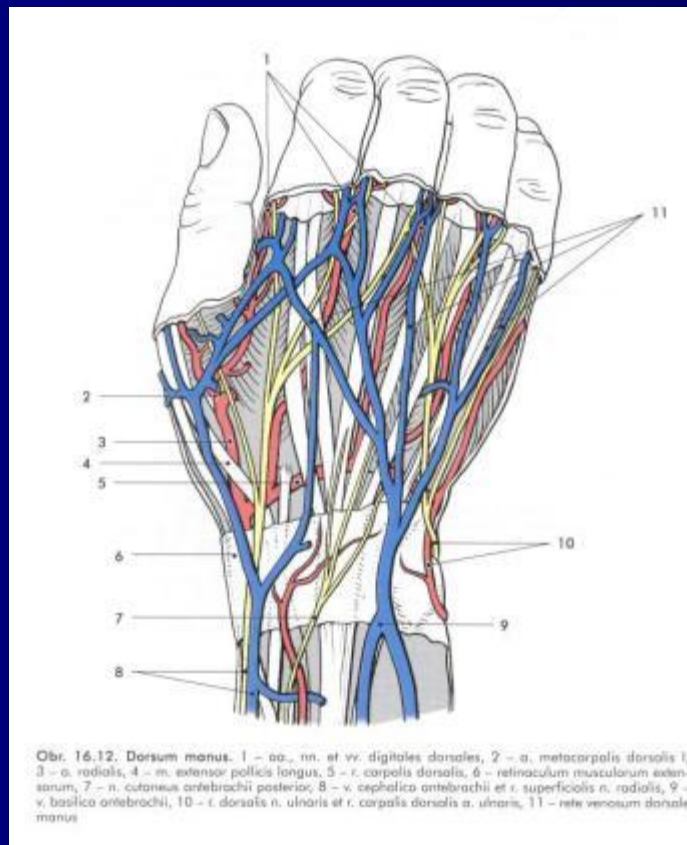
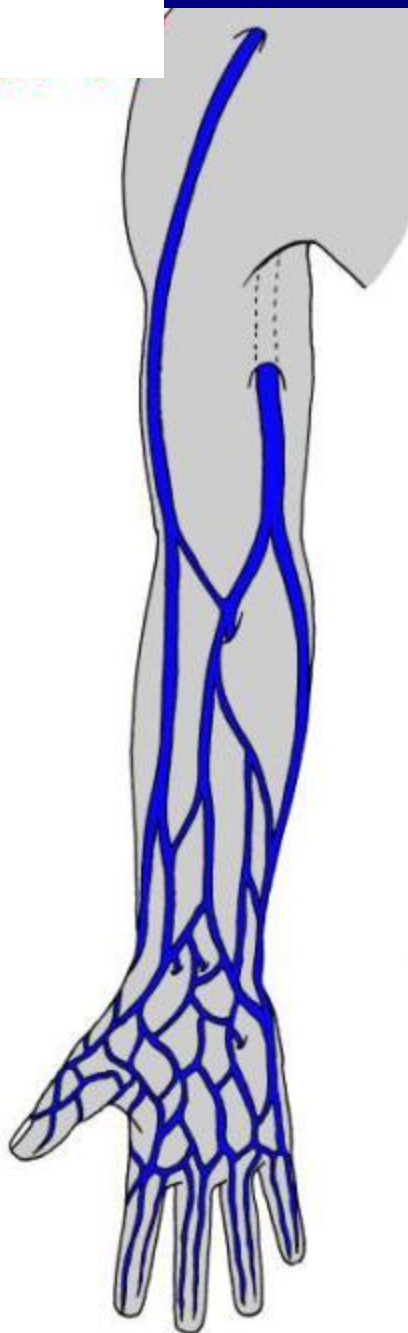
Vv. brachiocephalicae  
(dextra et sin.)



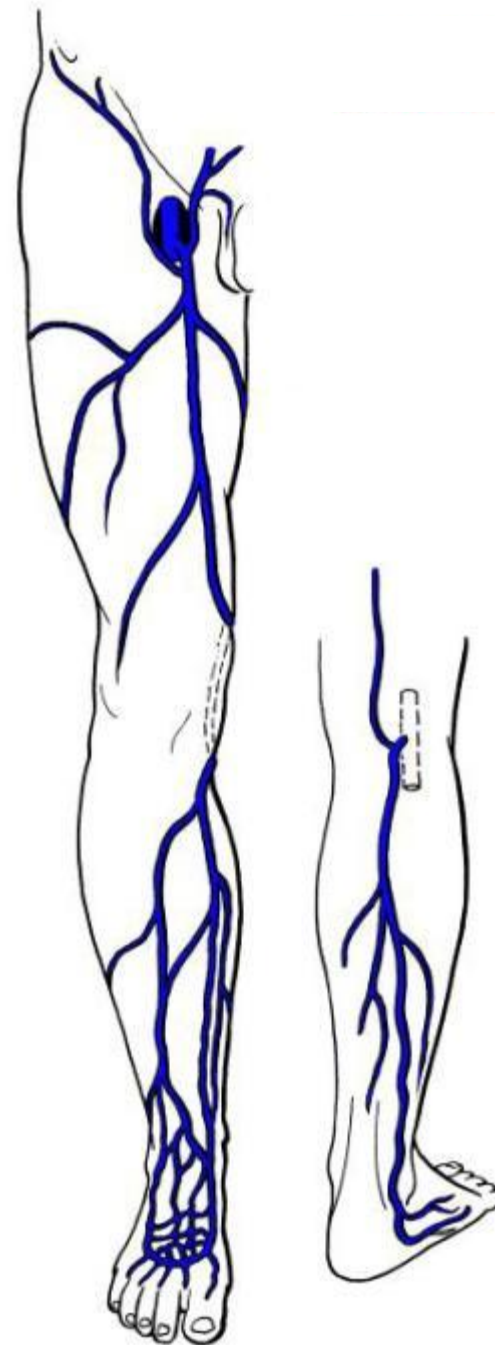


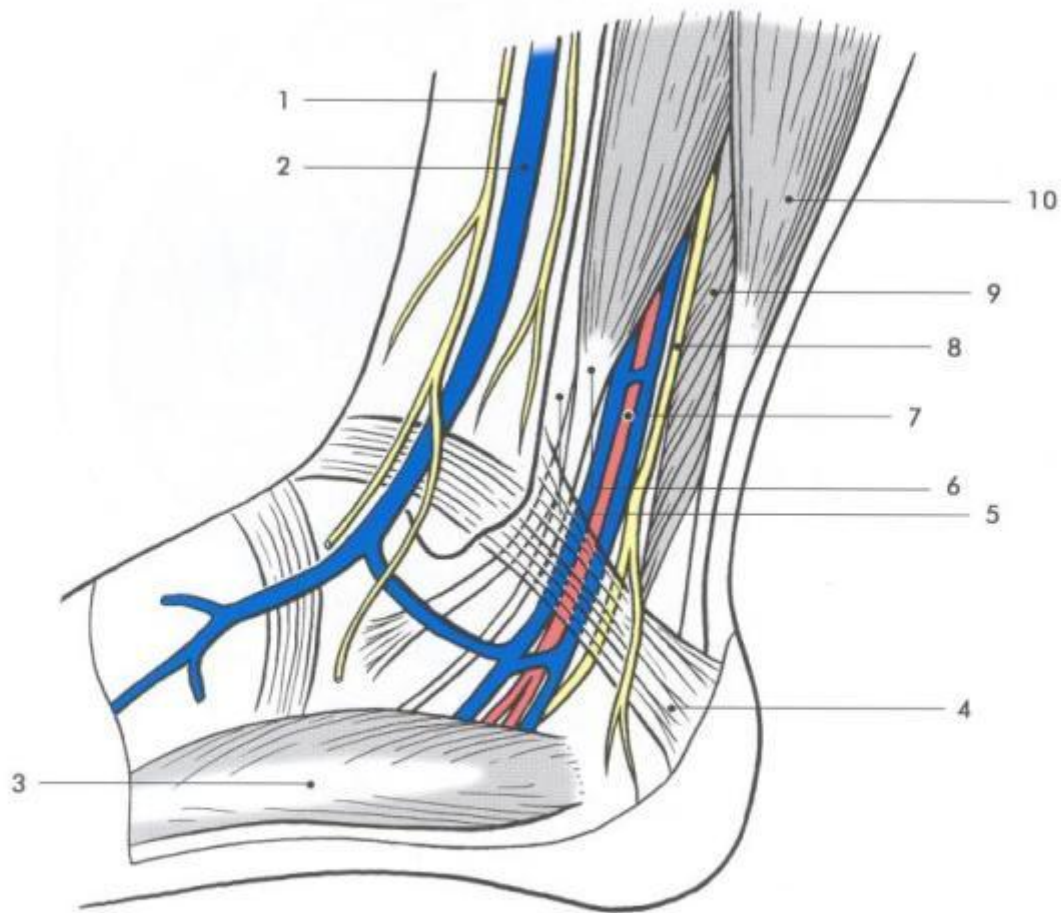






Obr. 16.12. Dorsum manus. 1 - aa., nn. et vv. digitales dorsales, 2 - a. metacarpalis dorsalis I, 3 - a. radialis, 4 - m. extensor pollicis longus, 5 - r. carpalis dorsalis, 6 - retinaculum musculorum extensorum, 7 - n. cutaneus antebrachii posterior, 8 - v. cephalica antebrachii et r. superficialis n. radialis, 9 - v. basilica antebrachii, 10 - r. dorsalis n. ulnaris et r. carpalis dorsalis a. ulnaris, 11 - rete venosum dorsale manus

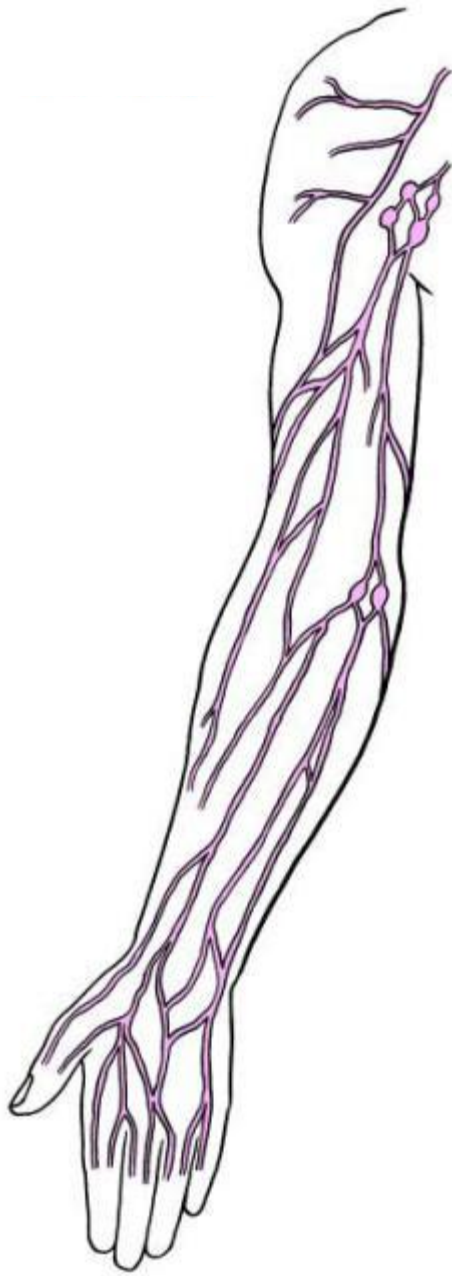




Obr. 17.9. Regio malleolaris et retromalleolaris medialis. 1 – n. saphenus, 2 – v. saphena magna, 3 – m. abductor hallucis, 4 – retinaculum mm. flexorum, 5 – šlacha m. tibialis posterior, 6 – šlacha m. flexor digitorum longus, 7 – vasa fibialia posteriora, 8 – n. tibialis, 9 – m. flexor hallucis longus, 10 – m. triceps surae

**6, 13, 18cm nad chodidlem**

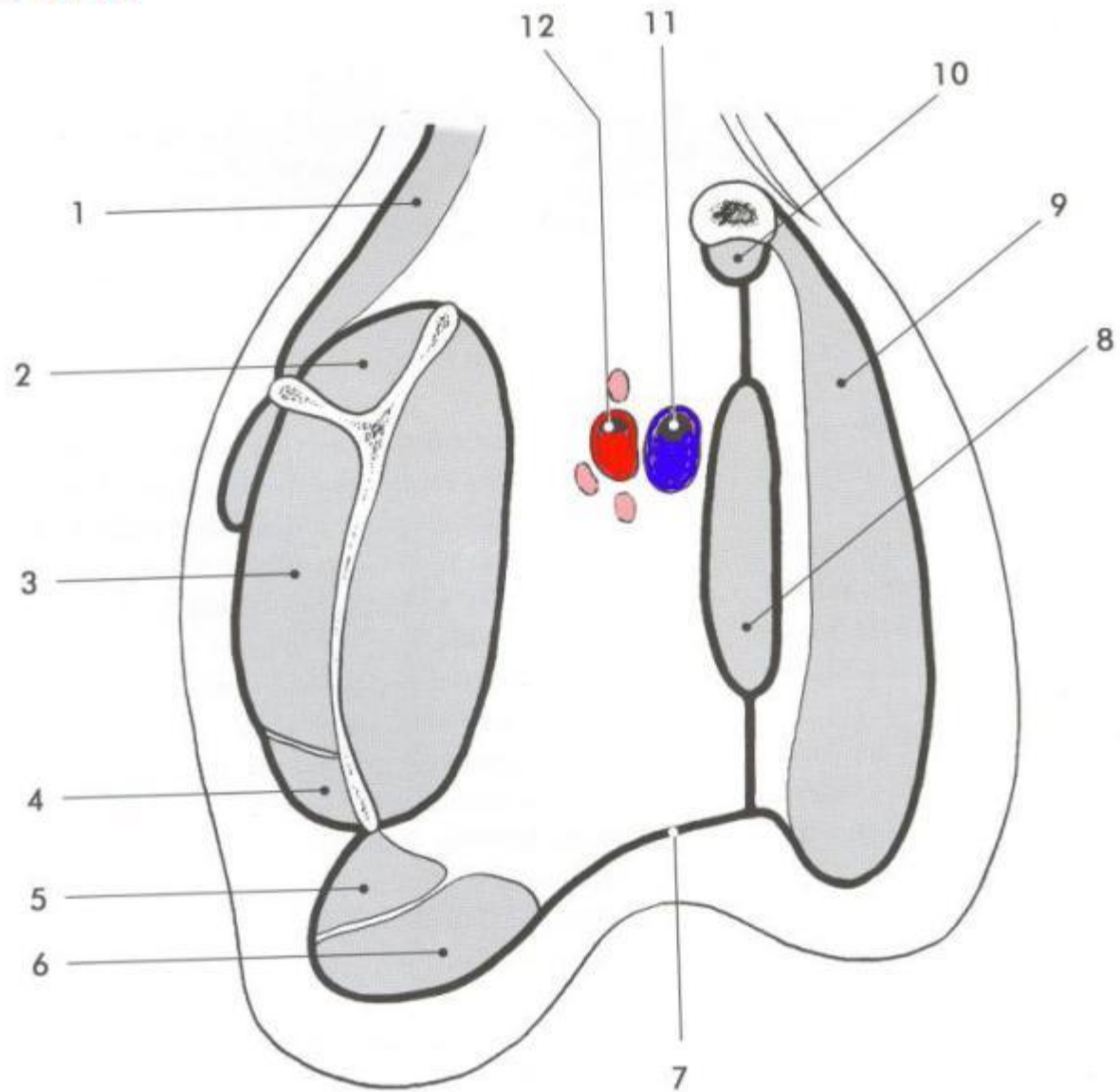
“perforátory“ – Cockettovy spojky

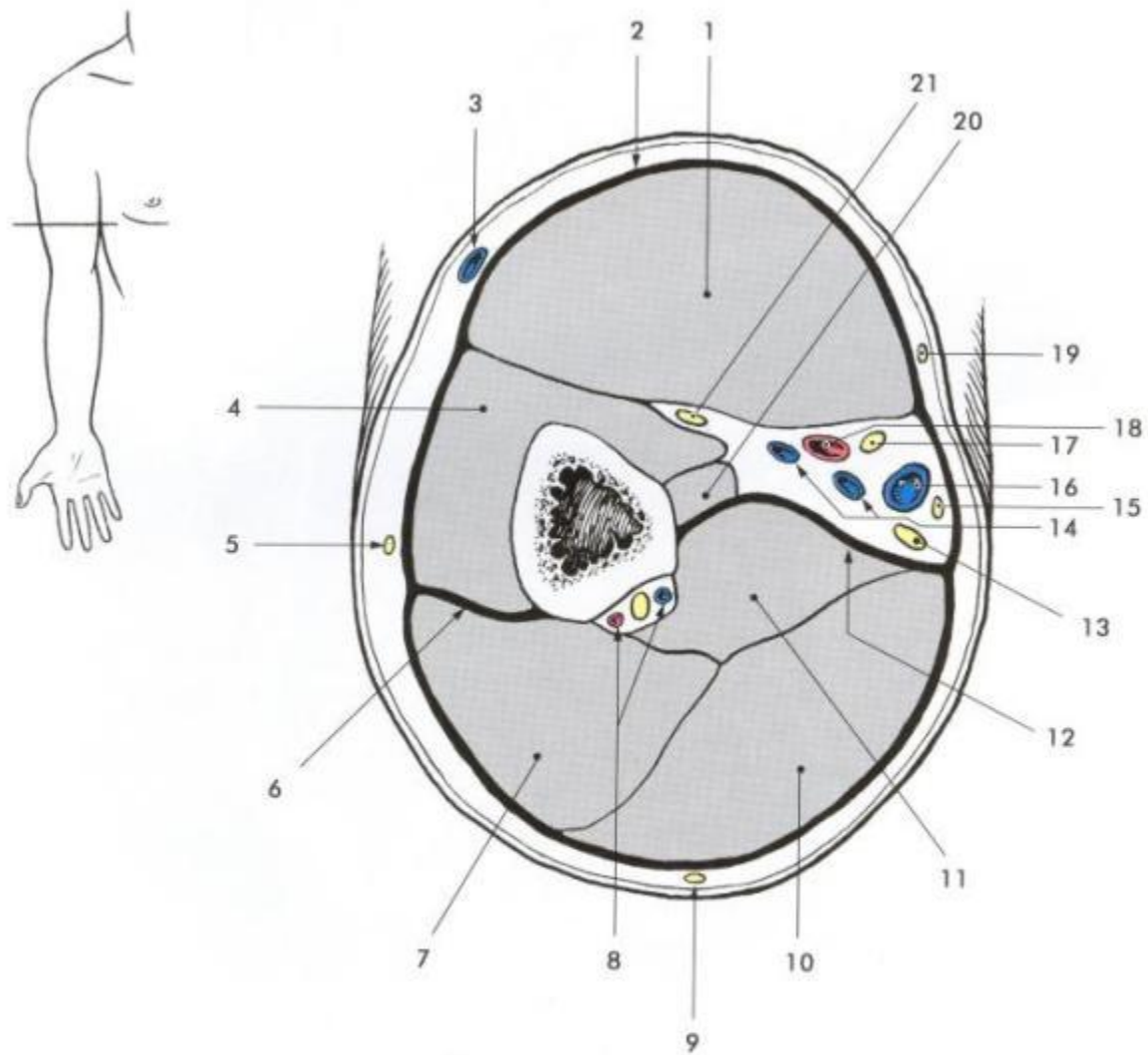


**Nodi axillares**



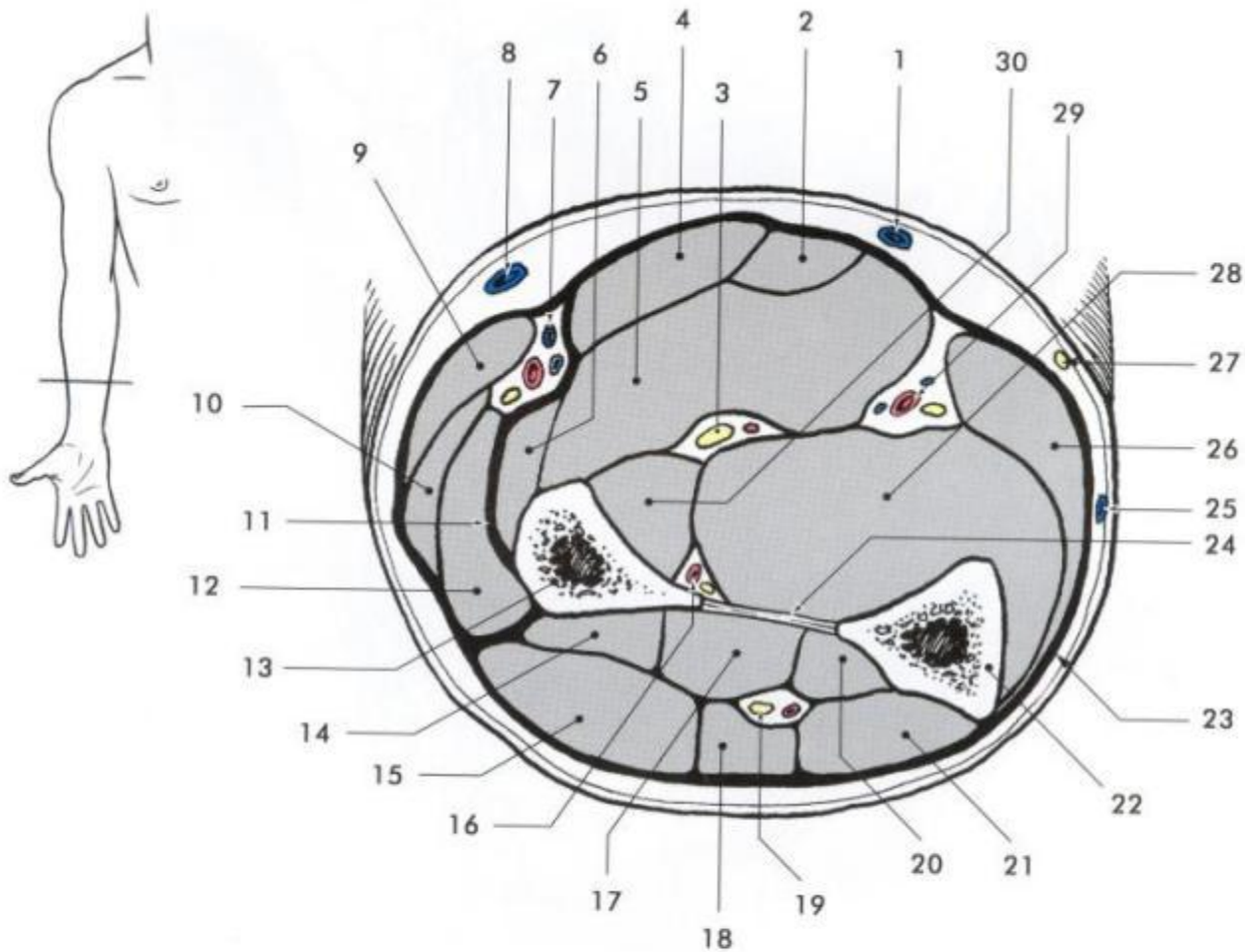
# S 39



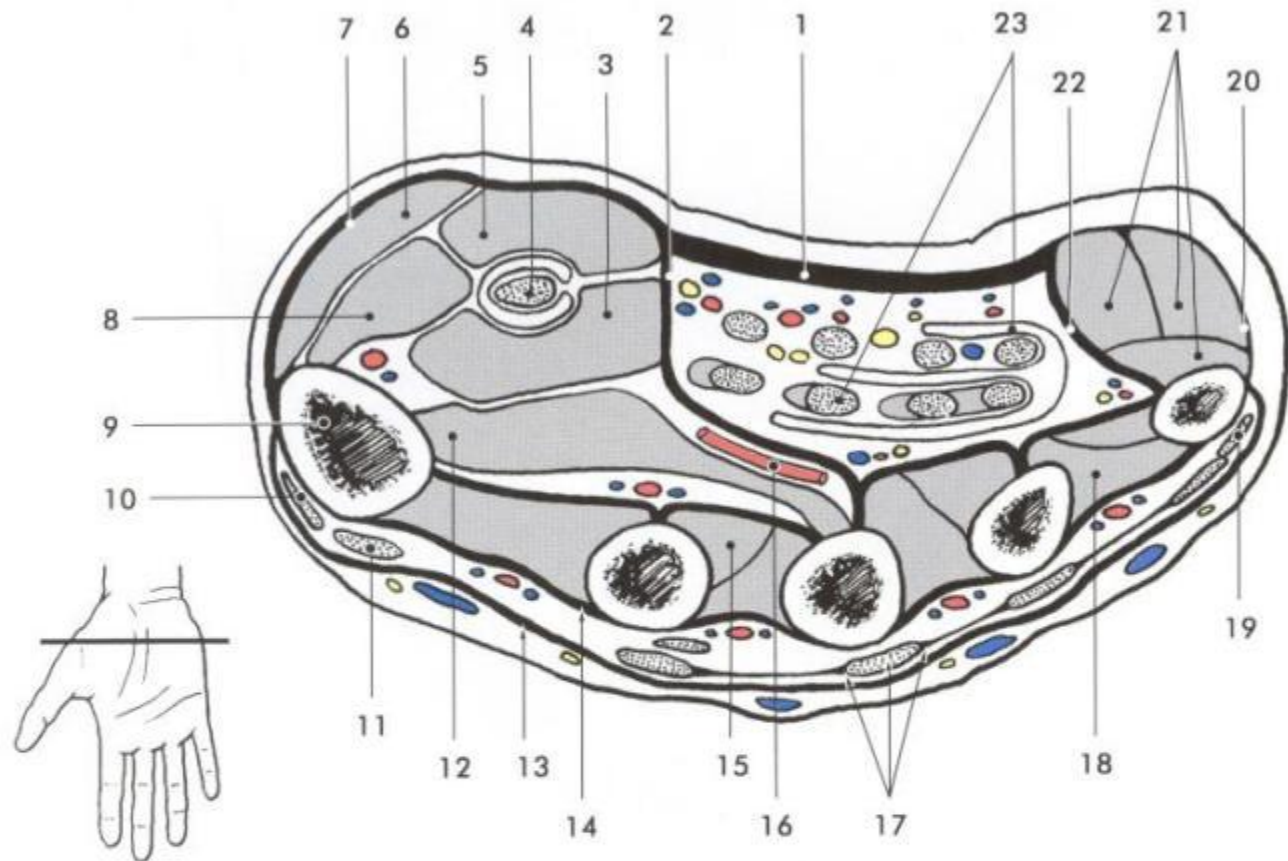


Obr. 16.6. Příčný řez středem paže. 1 – m. biceps brachii, 2 – fascia brachii, 3 – v. cephalica, 4 – m. brachialis, 5 – n. cutaneus brachii lateralis, 6 – septum intermusculare laterale, 7 – caput laterale m. tricipitis brachii, 8 – n. radialis et vasa profunda brachii, 9 – n. cutaneus brachii posterior, 10 – caput longum m. tricipitis brachii, 11 – caput mediale m. tricipitis brachii, 12 – septum intermusculare mediale, 13 – n. ulnaris, 14 – vv. brachiales, 15 – n. cutaneus antebrachii medialis, 16 – v. basilica, 17 – n. medianus, 18 – a. brachialis, 19 – n. cutaneus brachii medialis, 20 – m. coracobrachialis, 21 – n. musculocutaneus

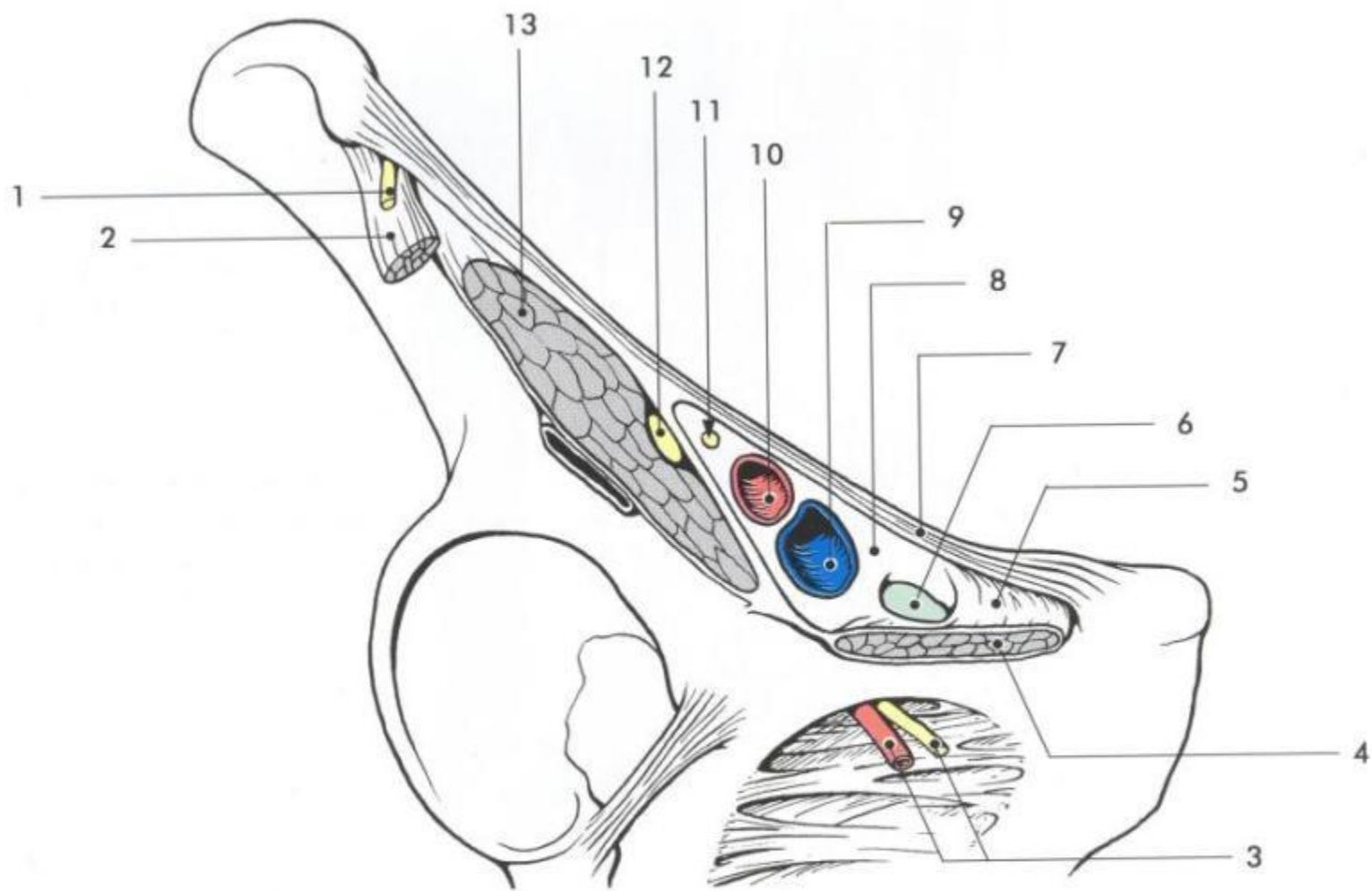




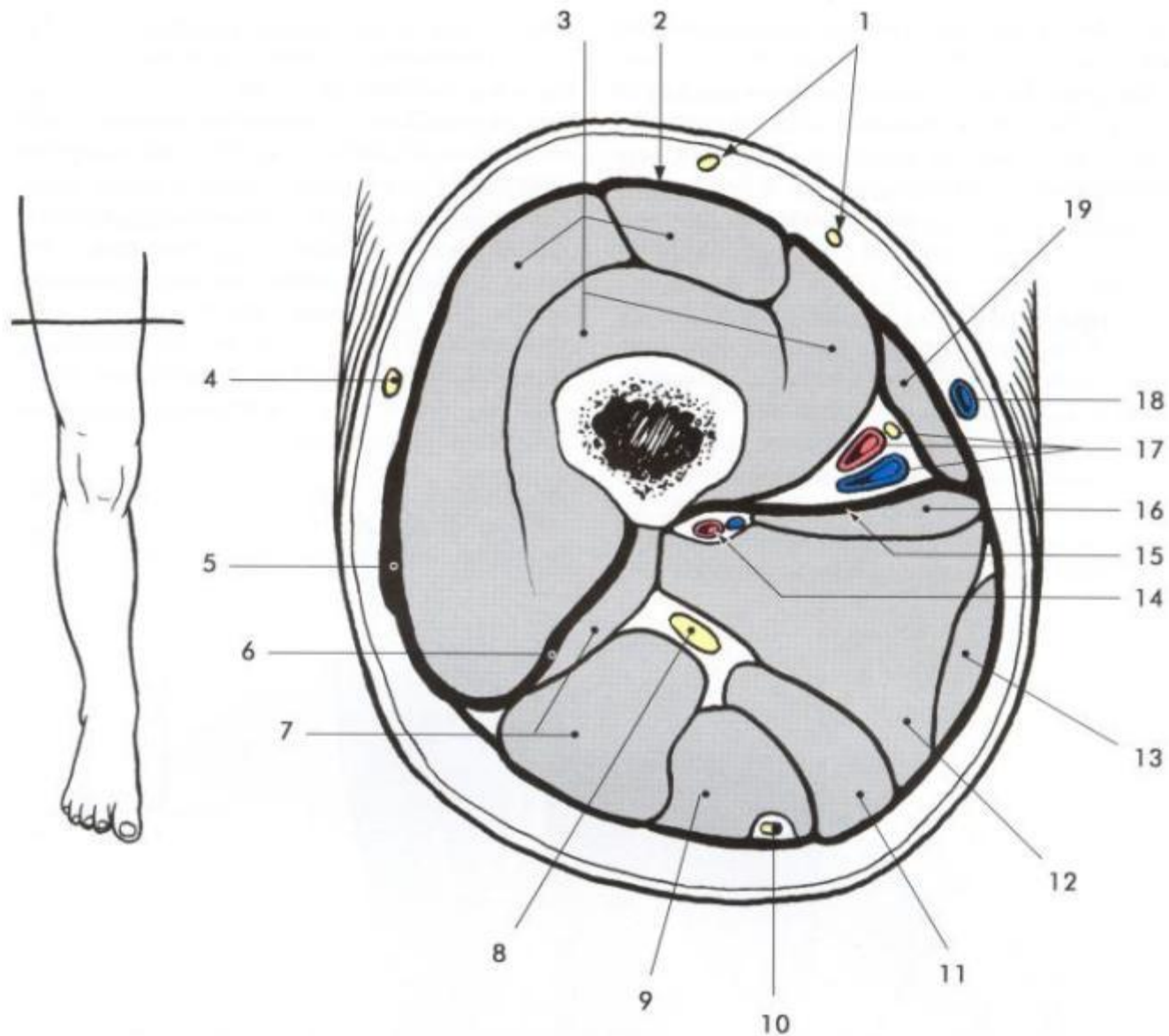
Obr. 16.8. Příčný řez předloktím. 1 – v. mediana antebrachii, 2 – m. palmaris longus, 3 – n. medianus, 4 – m. flexor carpi radialis, 5 – m. flexor digitorum superficialis, 6 – m. pronator teres, 7 – vasa radialis et r. superficialis n. radialis, 8 – v. cephalica, 9 – m. brachioradialis, 10 – m. extensor carpi radialis longus, 11 – radiální intermuskulární septum, 12 – m. extensor carpi radialis brevis, 13 – radius, 14 – m. abductor pollicis longus, 15 – m. extensor digitorum, 16 – n. et vasa interossea anteriora, 17 – m. extensor pollicis brevis, 18 – m. extensor digiti minimi, 19 – r. profundus n. radialis, 20 – m. extensor pollicis longus, 21 – m. extensor carpi ulnaris, 22 – ulna, 23 – fascia antebrachii, 24 – membrana interossea, 25 – v. basilica, 26 – m. flexor carpi ulnaris, 27 – n. cutaneus antebrachii medialis, 28 – m. flexor digitorum profundus, 29 – n. et vasa ulnaria, 30 – m. flexor pollicis longus



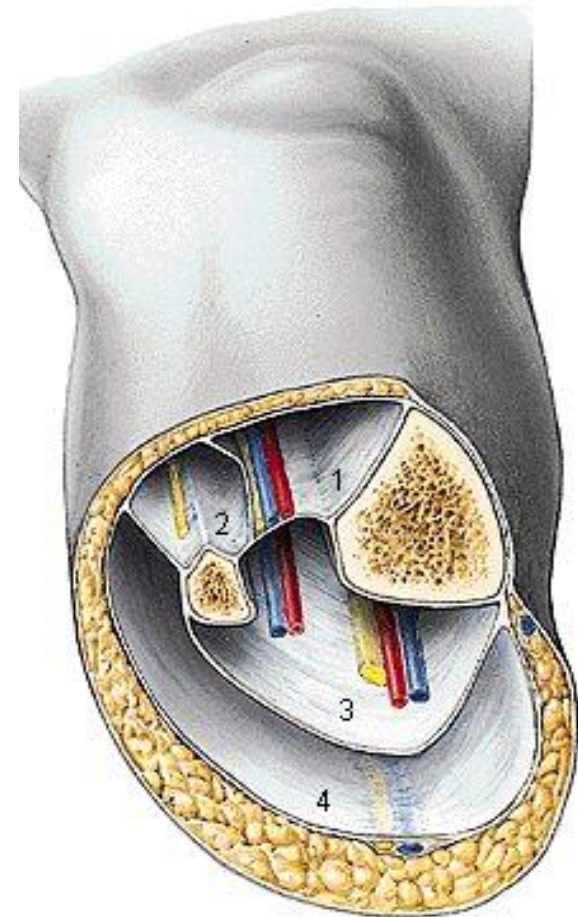
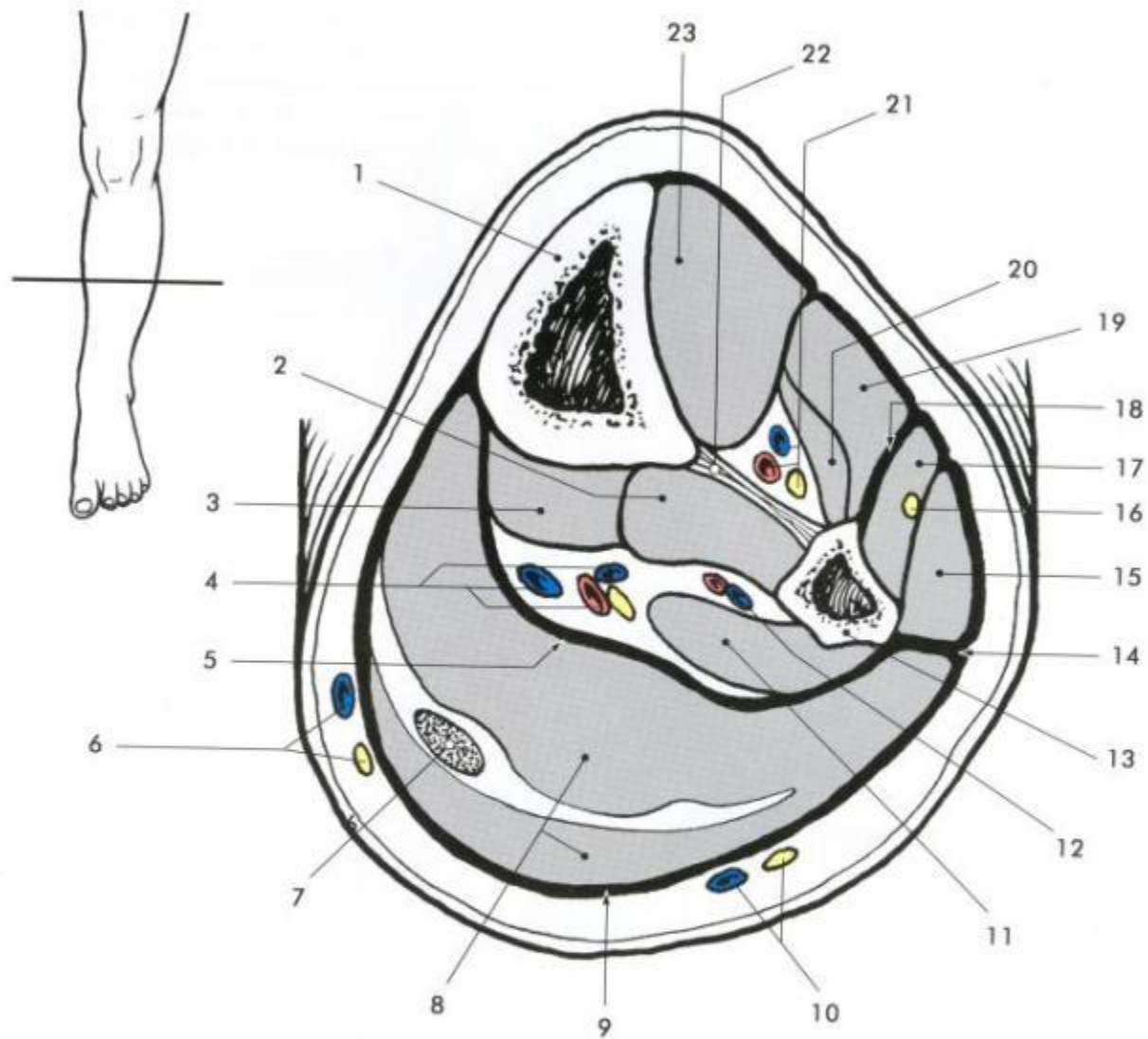
**Obr. 16.11. Příčný řez rukou.** 1 – aponeurosis palmaris, 2 – palmární thenarové septum, 3 – caput prof. m. flexoris pollicis brevis, 4 – šlacha m. flexor pollicis longus a její synoviální pochva, 5 – caput superficiale m. flexoris pollicis brevis, 6 – m. abductor pollicis brevis, 7 – thenarová fascie, 8 – m. opponens pollicis, 9 – os metacarpale I, 10 – šlacha m. extensor pollicis brevis, 11 – šlacha m. extensor pollicis longus, 12 – m. adductor pollicis (caput transversum), 13 – fascia dorsalis manus superficialis, 14 – fascia interossea dorsalis, 15 – m. interosseus palmaris I, 16 – arcus palmaris profundus, 17 – šlacha m. extensor digitorum pro 3. prst a connexus intertendinei, 18 – m. interosseus dorsalis IV, 19 – šlacha m. extensor digiti minimi, 20 – hypothenarová fascie, 21 – svaly hypothenaru, 22 – hypothenarové septum, 23 – vrstvy šlach m. flexor digitorum superficialis et profundus zavzaté do společné synoviální pochvy; od šlach m. flexor digitorum profundus odstupují mm. lumbricales



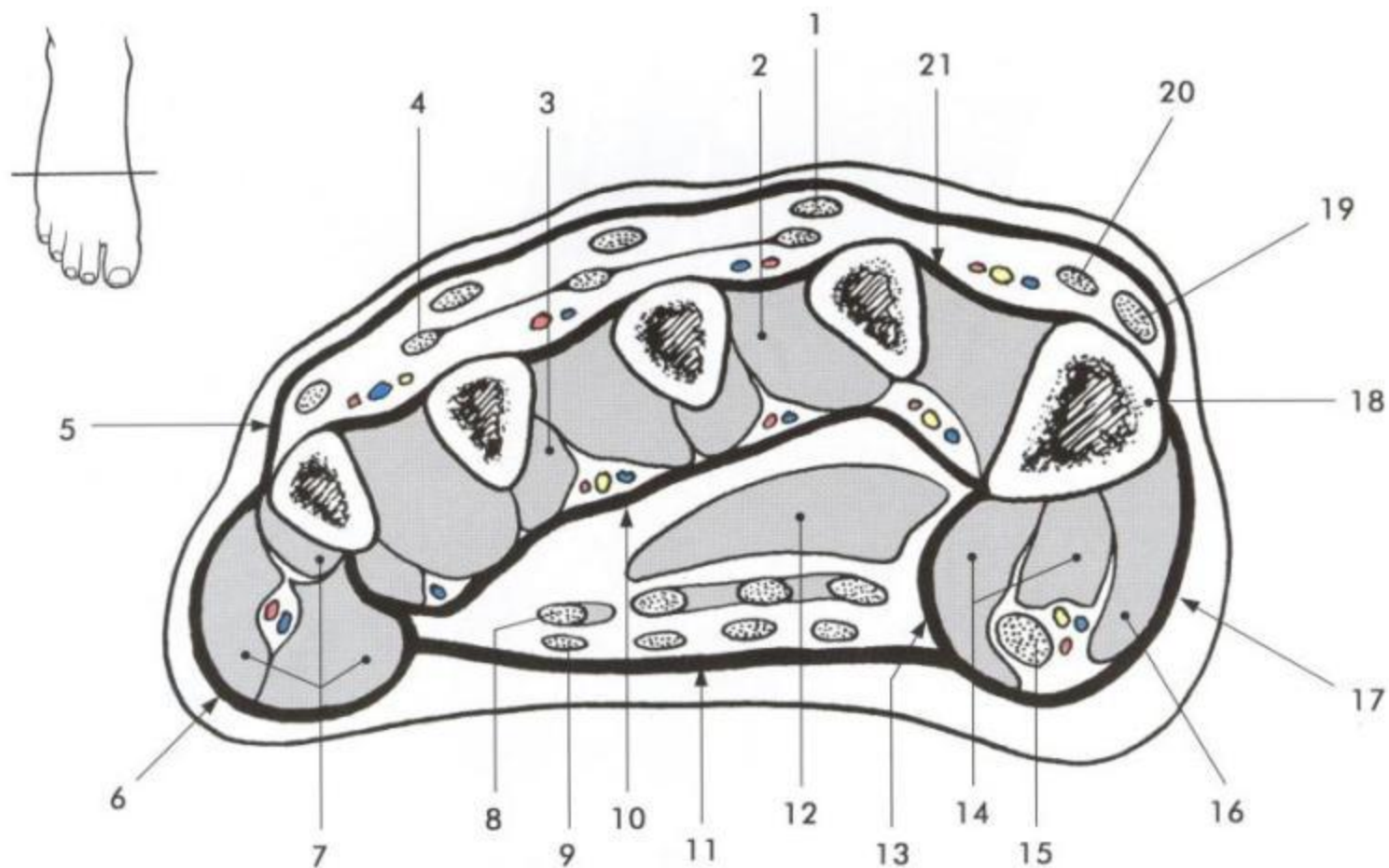
Obr. 17.5. Lacuna vasorum et musculorum. 1 – n. cutaneus femoris lateralis, 2 – m. sartorius, 3 – a. et n. obturatorius, 4 – m. pectineus, 5 – lig. lacunare, 6 – nodi inguinales profundi, 7 – lig. inguinale, 8 – lacuna vasorum vyplněná vazivovým septum femorale, 9 – v. femoralis, 10 – a. femoralis, 11 – r. femoralis n. genitofemoralis, 12 – n. femoralis, 13 – m. iliopsoas v lacuna musculorum



Obr. 17.6. Příčný řez středem stehna. 1 – rr. cutanei anteriores n. femoralis, 2 – fascia lata femoris, 3 – m. quadriceps femoris, 4 – n. cutaneus femoris lateralis, 5 – tractus iliotibialis, 6 – laterální intermuskulární septum, 7 – m. biceps femoris, 8 – n. ischiadicus, 9 – m. semitendinosus, 10 – n. cutaneus femoris posterior, 11 – m. semimembranosus, 12 – m. adductor magnus, 13 – m. gracilis, 14 – a. et v. profunda femoris, 15 – mediální intermuskulární septum, 16 – m. adductor longus, 17 – a. et v. femoralis, n. saphenus, 18 – v. saphena magna, 19 – m. sartorius



Obr. 17.8. Příčný řez bérce. 1 – tibia, 2 – m. tibialis posterior, 3 – m. flexor digitorum longus, 4 – n. tibialis et vasa tibialia posteriora, 5 – hluboký list bércevé fascie, 6 – n. saphenus et v. saphena magna, 7 – šlacha m. plantaris, 8 – m. triceps surae, 9 – fascia cruris, 10 – n. suralis et v. saphena parva, 11 – m. flexor hallucis longus, 12 – vasa fibularia, 13 – fibula, 14 – zadní laterální intermuskulární septum, 15 – m. fibularis longus, 16 – n. fibularis superficialis, 17 – m. fibularis brevis, 18 – přední laterální intermuskulární septum, 19 – m. extensor digitorum longus, 20 – m. extensor hallucis longus, 21 – n. fibularis profundus et vasa tibialia ant., 22 – membrana interossea, 23 – m. tibialis anterior



**Obr. 17.11. Příčný řez nohou.** 1 – šlacha m. extensor digitorum longus, 2 – m. interosseus dorsalis II, 3 – m. interosseus plantaris II, 4 – vrstva šlach m. extensor digitorum brevis, 5 – fascia dorsalis pedis subcutanea, 6 – fascie malíkové skupiny svalů, 7 – svaly malíku, 8 – vrstva šlach m. flexor digitorum longus a mm. lumbricales, 9 – vrstva šlach m. flexor digitorum brevis, 10 – fascia interossea plantaris, 11 – aponeurosis plantaris, 12 – m. adductor hallucis, caput obliquum, 13 – mediální septum, 14 – m. flexor hallucis brevis, 15 – m. flexor hallucis longus, 16 – m. adductor hallucis, 17 – fascie svalů palce, 18 – os metatarsi I, 19 – m. extensor hallucis longus, 20 – m. extensor hallucis brevis, 21 – fascia dorsalis pedis interossea



