

RADIO-ANATOMIE DU GENOU

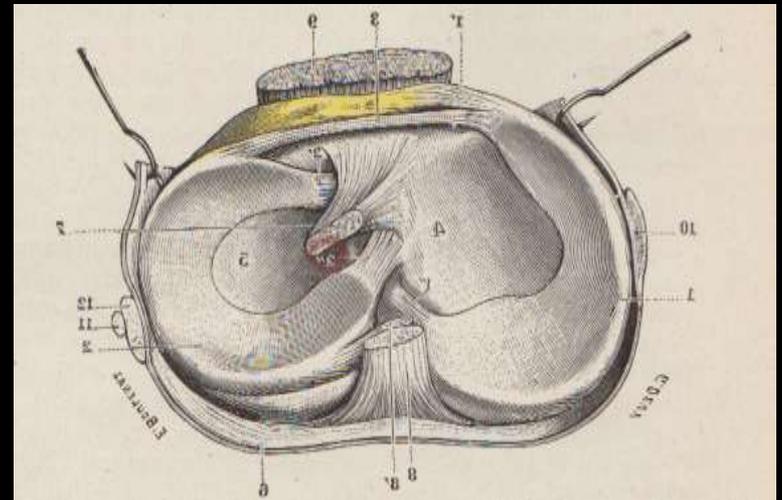
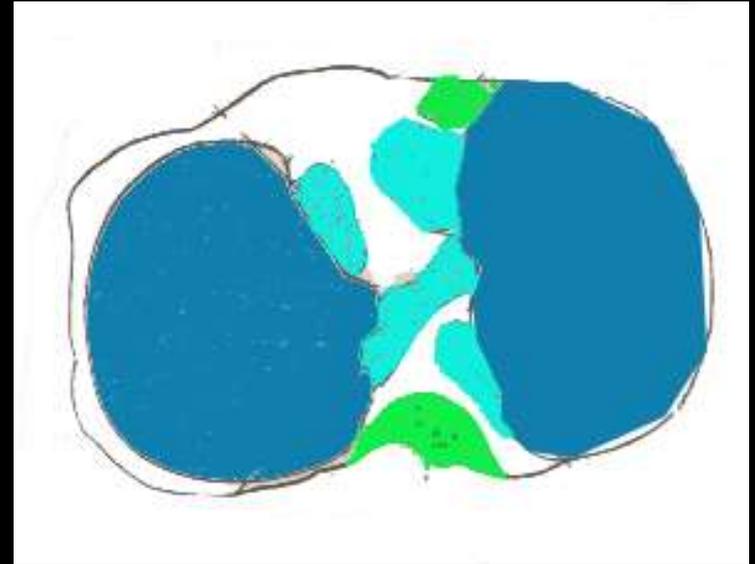
X DEMONDION

Service de Radiologie et Imagerie Musculosquelettique, CHRU de Lille
Laboratoire d'Anatomie, Faculté de Médecine de Lille
FRANCE

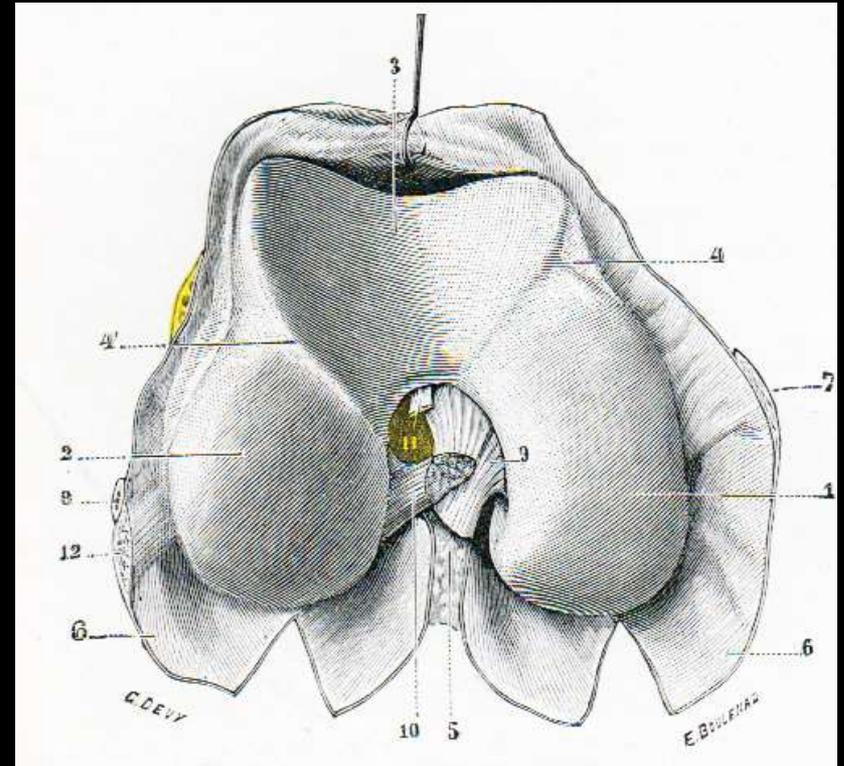
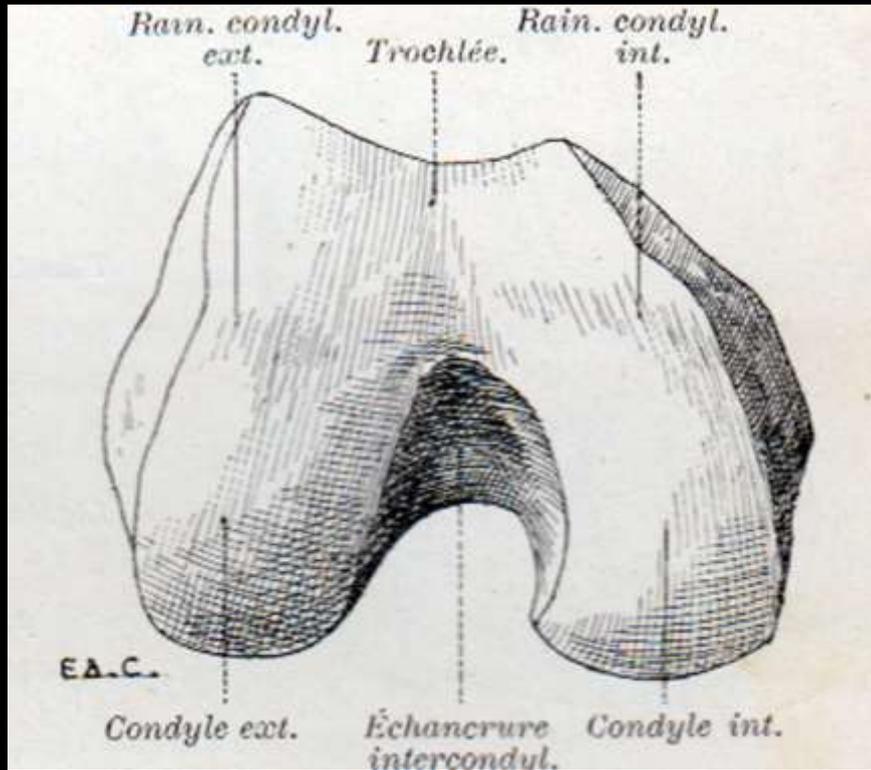
Éléments osseux



Extrémité proximale tibia

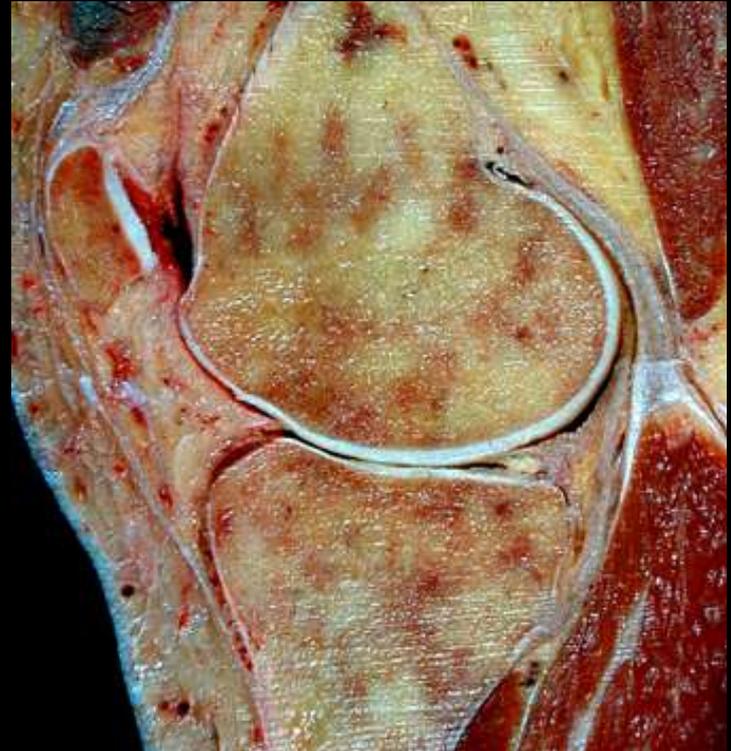


Les condyles fémoraux



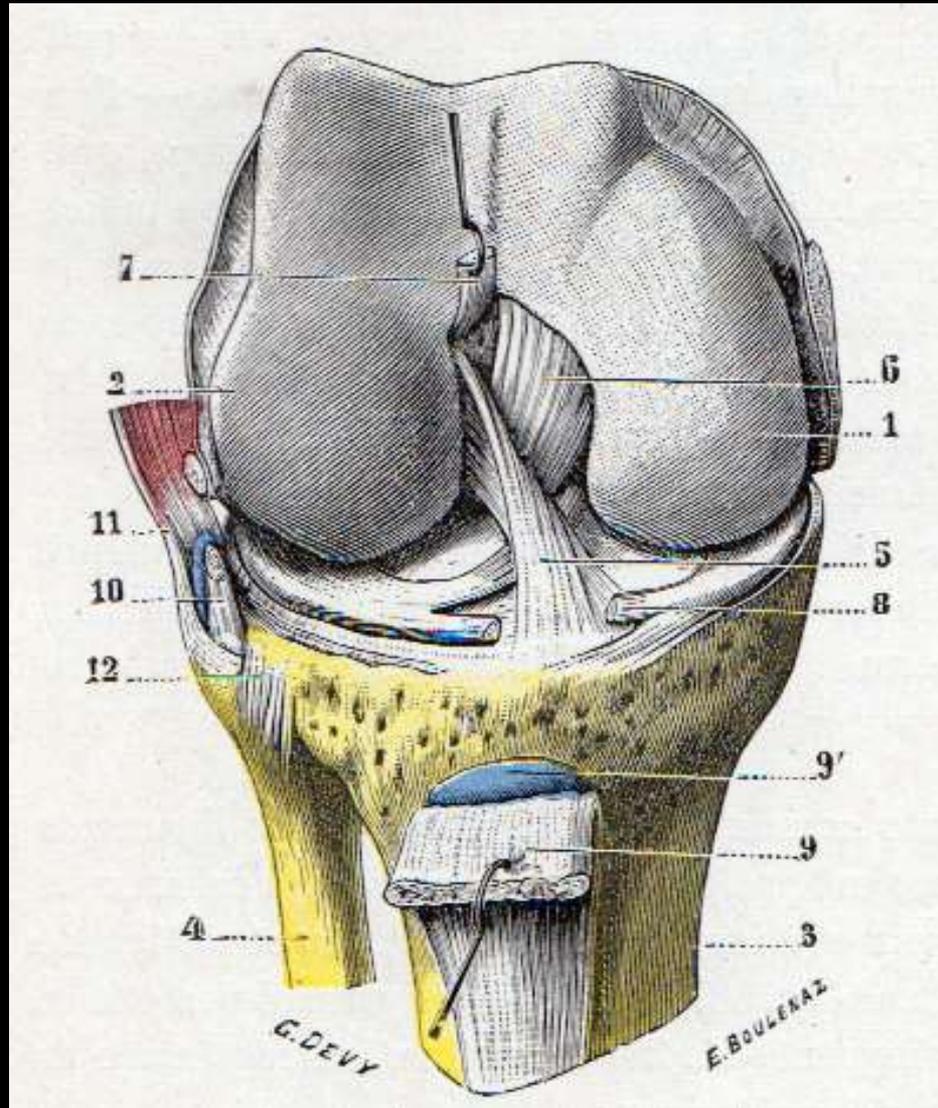
L Testut





Les structures ligamentaires

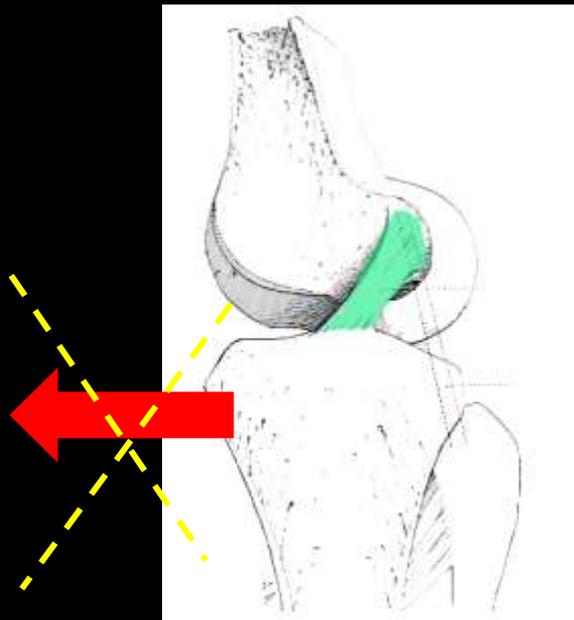
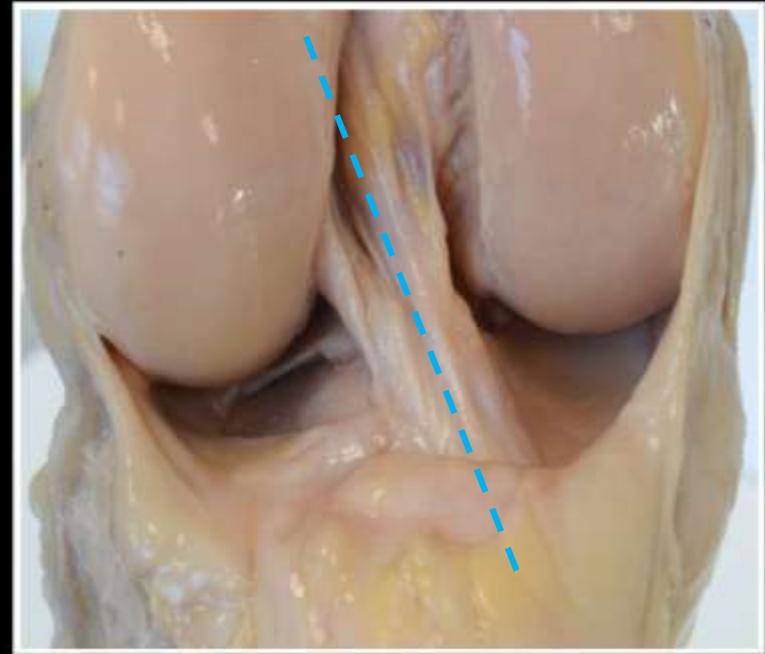
Les ligaments croisés



L Testut

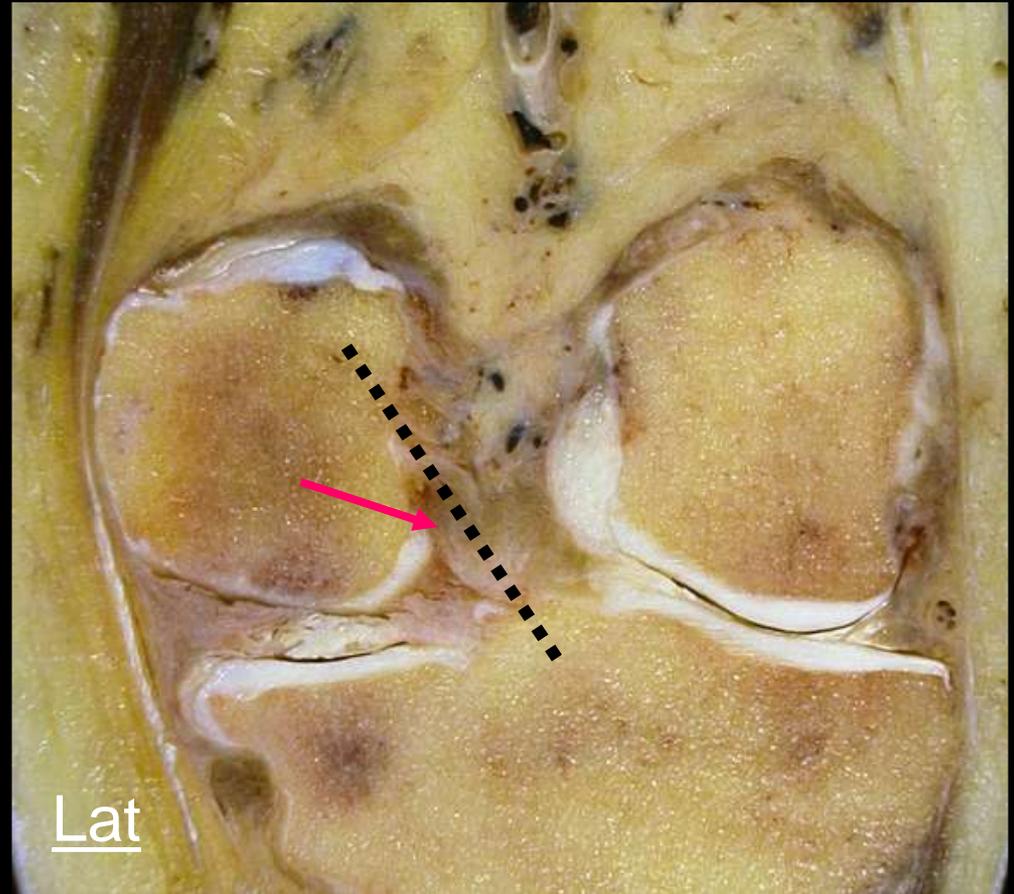
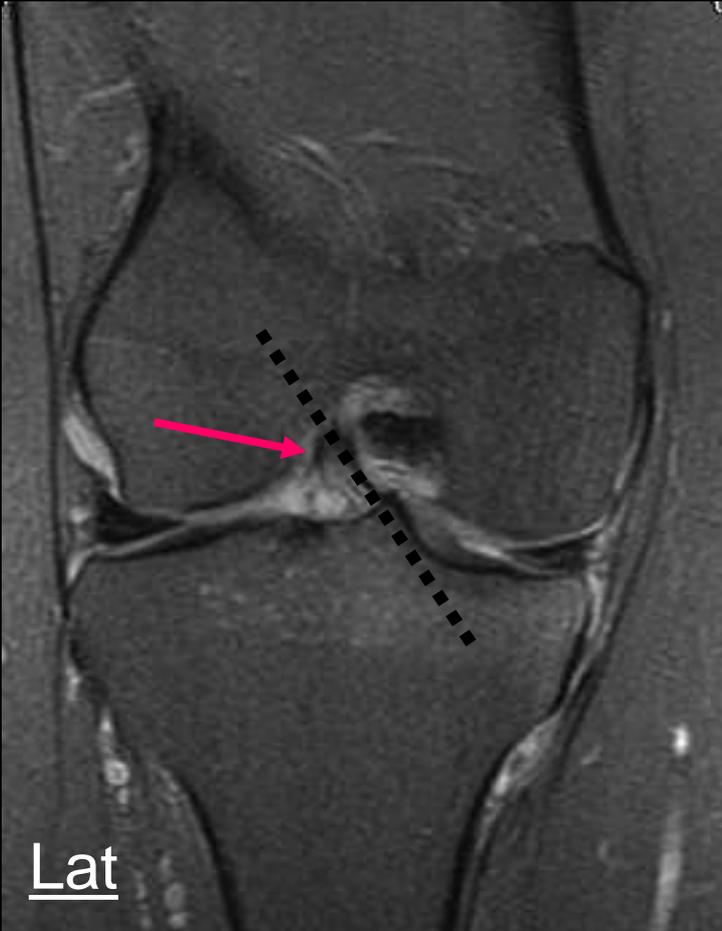
Ligament croisé antérieur (LCA)

- ❖ LCA structure intra-articulaire extrasynoviale
- ❖ Partie postéromédiale du condyle fémoral latéral → partie antéromédiale du plateau tibial.



- ❖ LCA: structure principale contre le tiroir antérieur du tibia.

Ligament croisé antérieur



Ligament croisé antérieur



Ligament croisé antérieur (LCA)

Deux faisceaux principaux :

- antéromédial (AM)
- postérolatéral (PL)

Les faisceaux nommés / insertion tibiale.

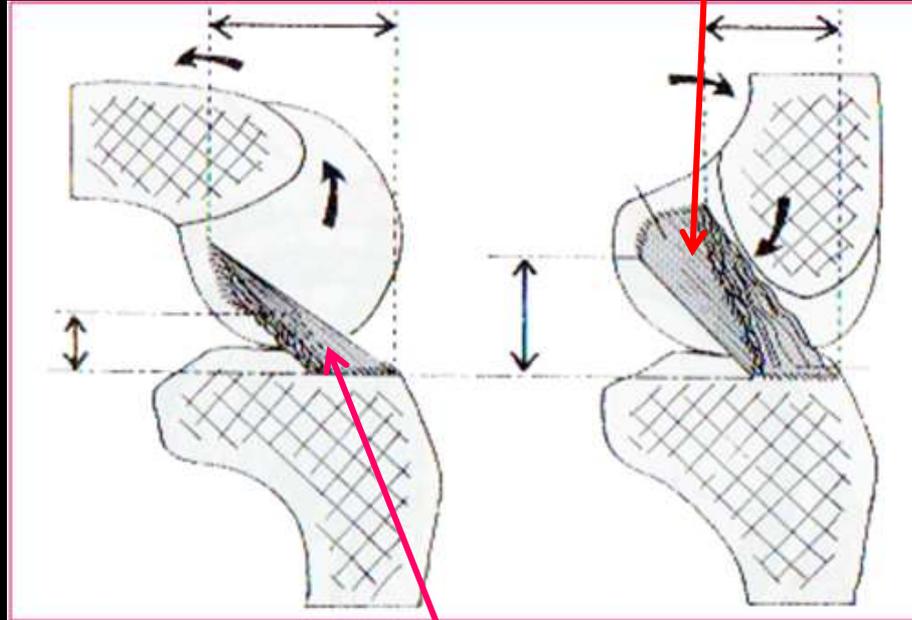


Pendant la flexion du genou, le faisceau AM s'enroule autour du faisceau PL.



LCA

Le faisceau postérolatéral est tendu en extension

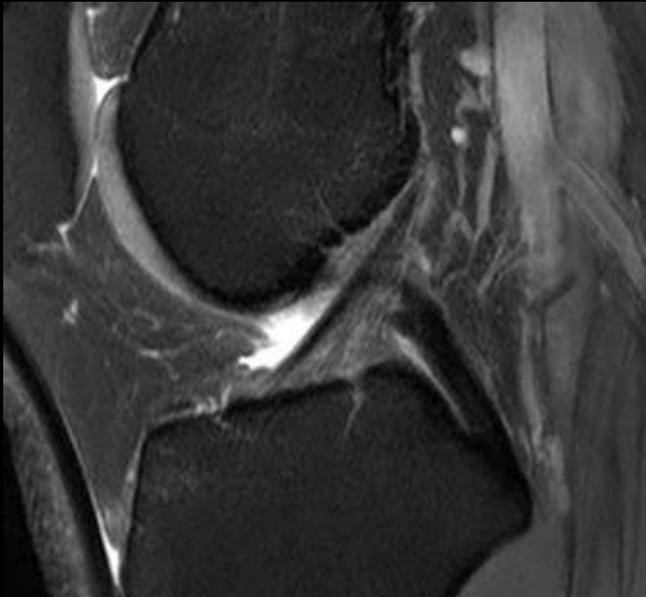


Le faisceau antéromédial est tendu en flexion

Aspect IRM normal

❖ Sagittal :

- ❖ Faisceau AM signal hypointense sur toutes les séquences
- ❖ Le faisceau PL peut présenter un signal modérément hyperintense en raison de la présence de graisse entre les fascicules.





Les deux faisceaux du LCA peuvent être objectivés dans le plan coronal oblique.

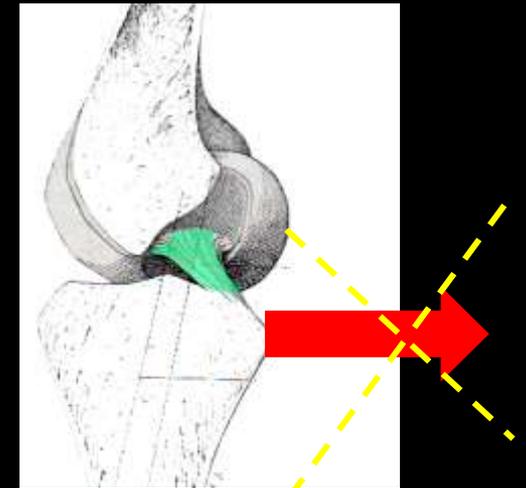
Le ligament croisé postérieur (LCP)



❖ LCP :

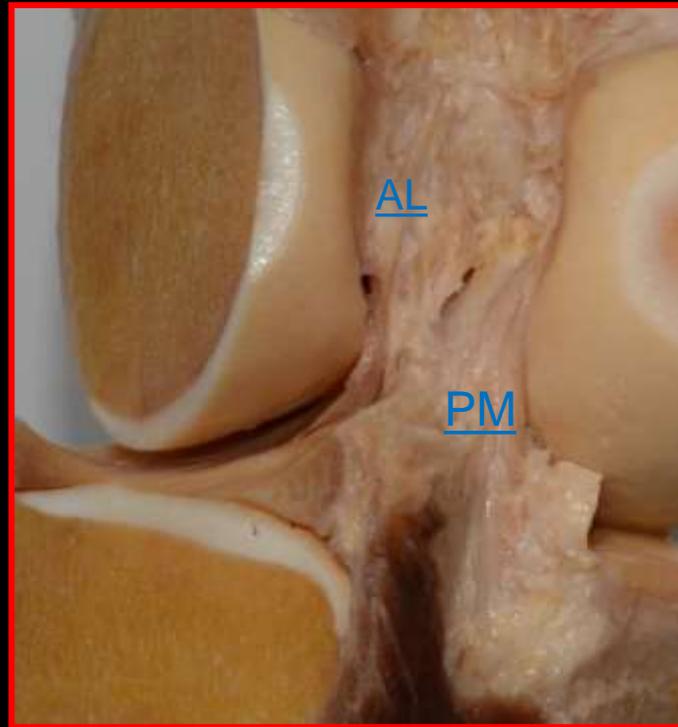
- plus épais et plus résistant que le LCA
 - face latérale du condyle fémoral medial
- ➔ partie latérale de l'aire intercondyloire du plateau tibial.

LCP : frein au tiroir postérieur du tibia.

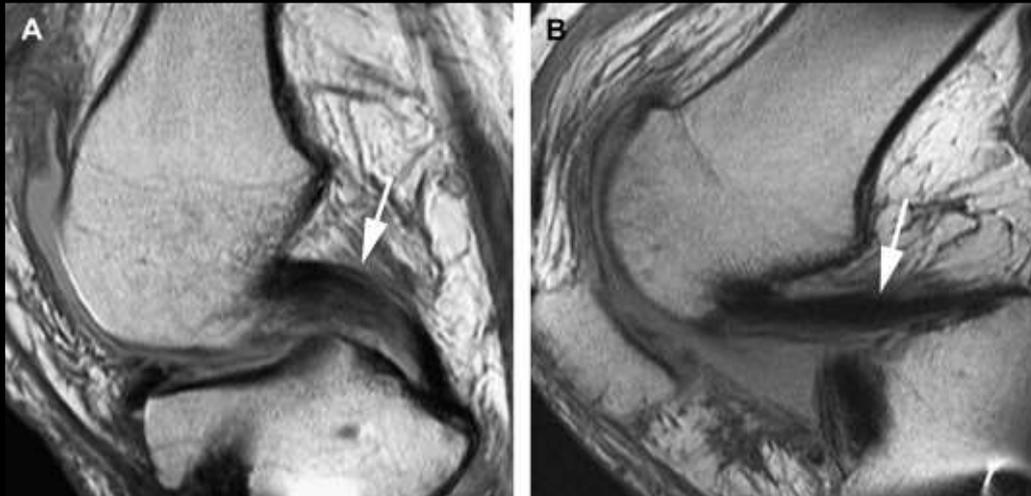
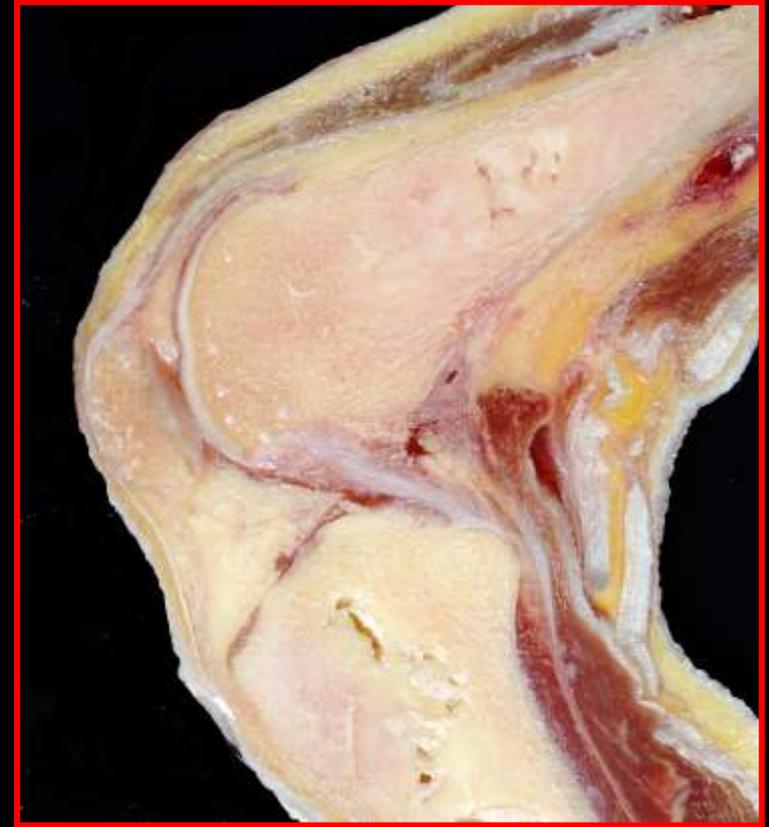
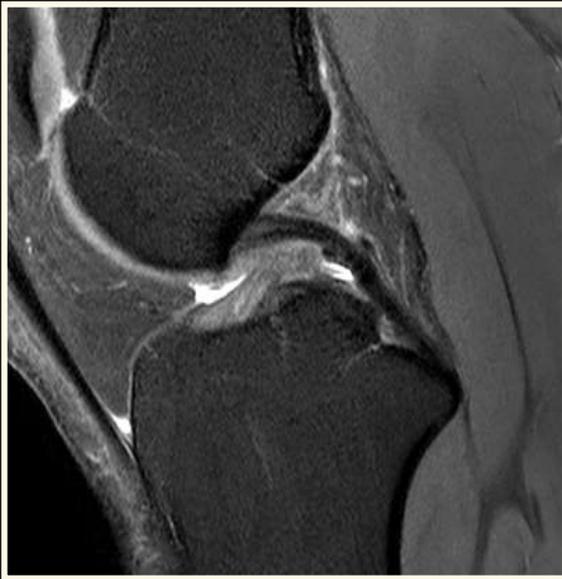


Le ligament croisé postérieur (LCP)

- ❖ LCP peut être divisé en deux principaux faisceaux : le faisceau antérolatéral et le faisceau postéromédial .



- ❖ Le faisceau antérolatéral (AL) est + épais et + résistant.



C Roberts .et al

Radiologic Clinics of North America 2007

- ❖ En flexion le LCP est tendu et devient fonctionnel alors que les structures anatomiques du point d'angle postérolatéral se relâchent.

Genou G !

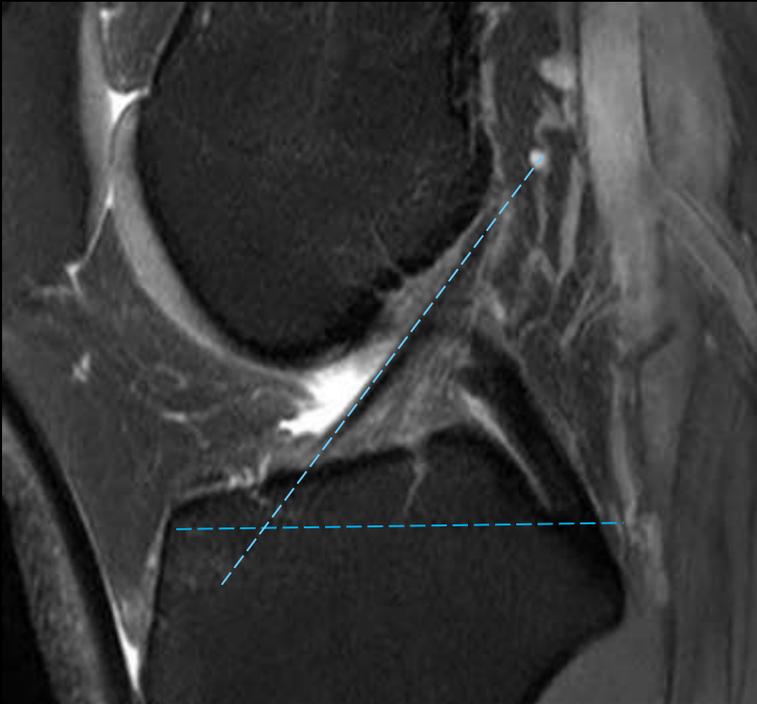


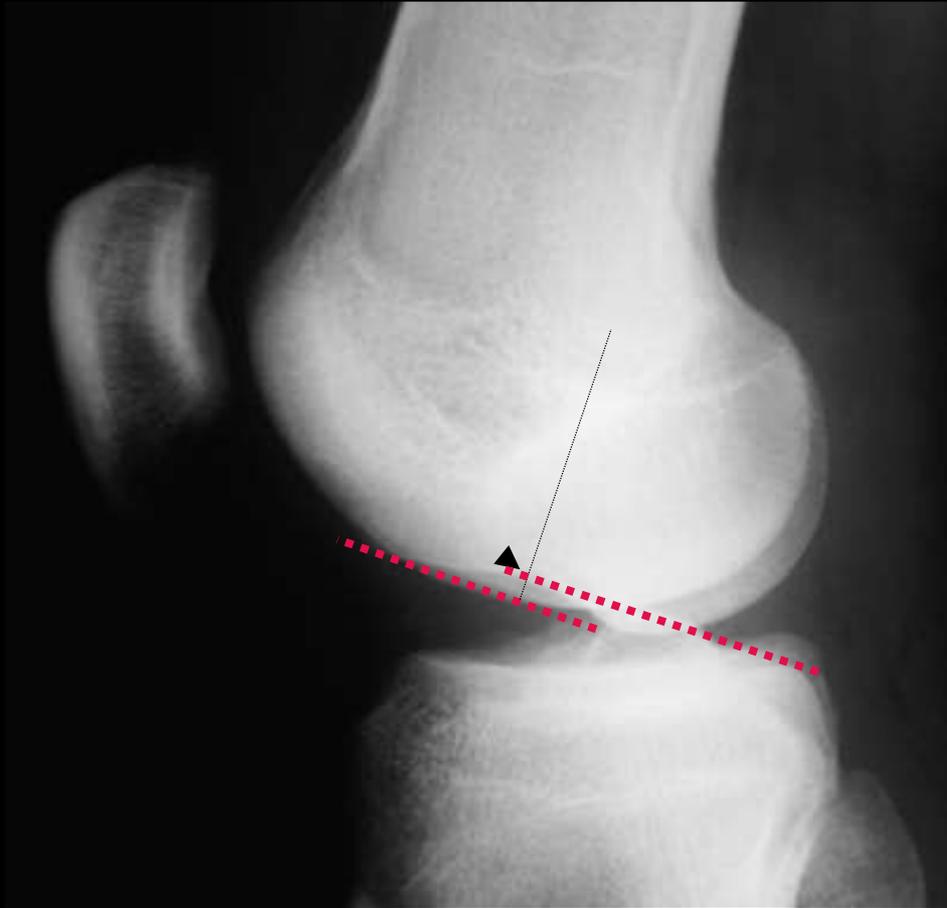
- ❖ en rotation médiale les lig croisés s'enroulent l'un autour de l'autre.

Lésions du LCA

Signes directs

- Trajet anormal du ligament (angle inf 45° / plateau tib lat)
sensibilité de 90 % ; spécificité de 97 % (*Gentily radiology 1994*)
- Hyperintensité anormale du ligament
- discontinuité ligamentaire





Encoche physiologique < 1,5 mm (*Cobby et al*)

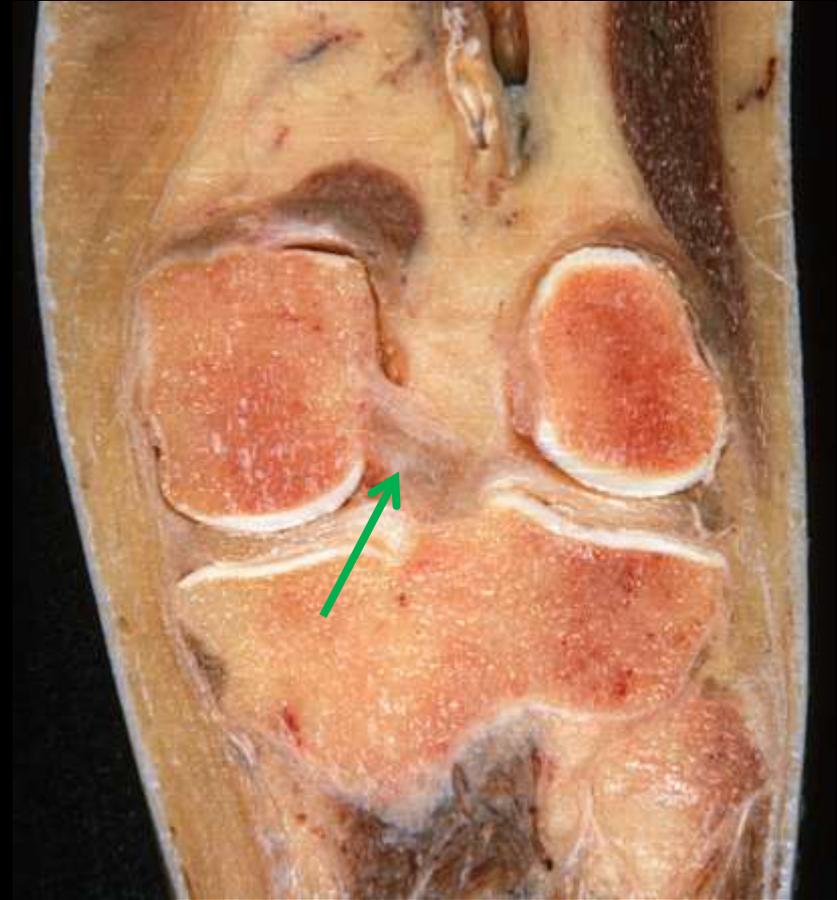
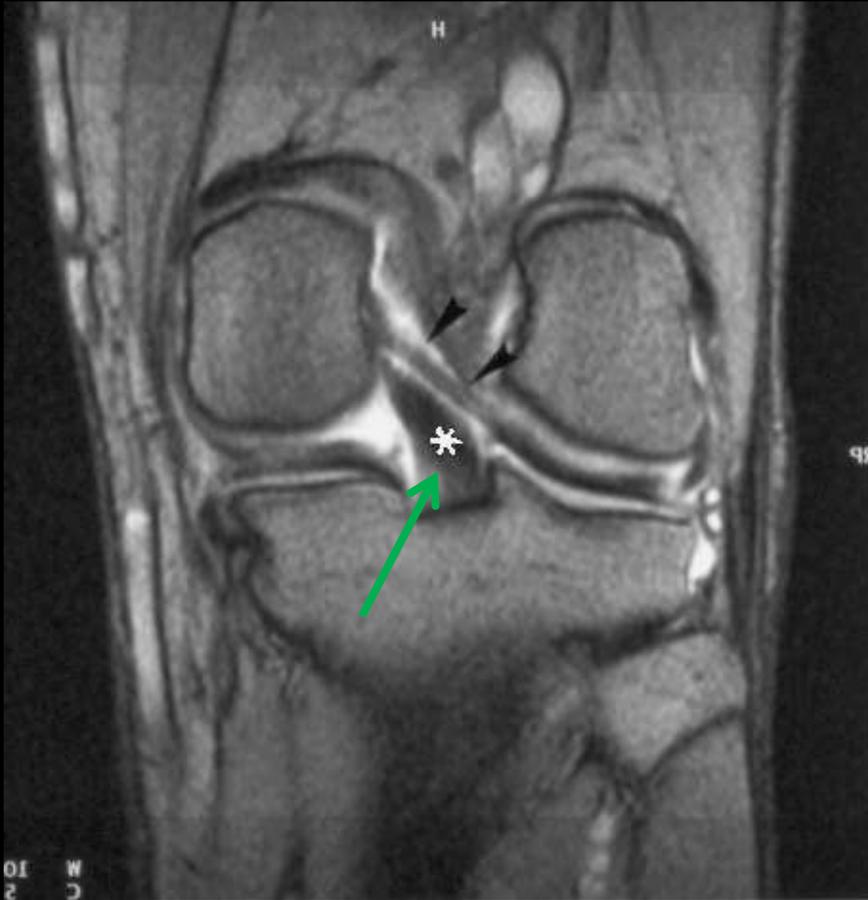
Le Ligament Croisé Postérieur

coupes sagittales



Le LCP

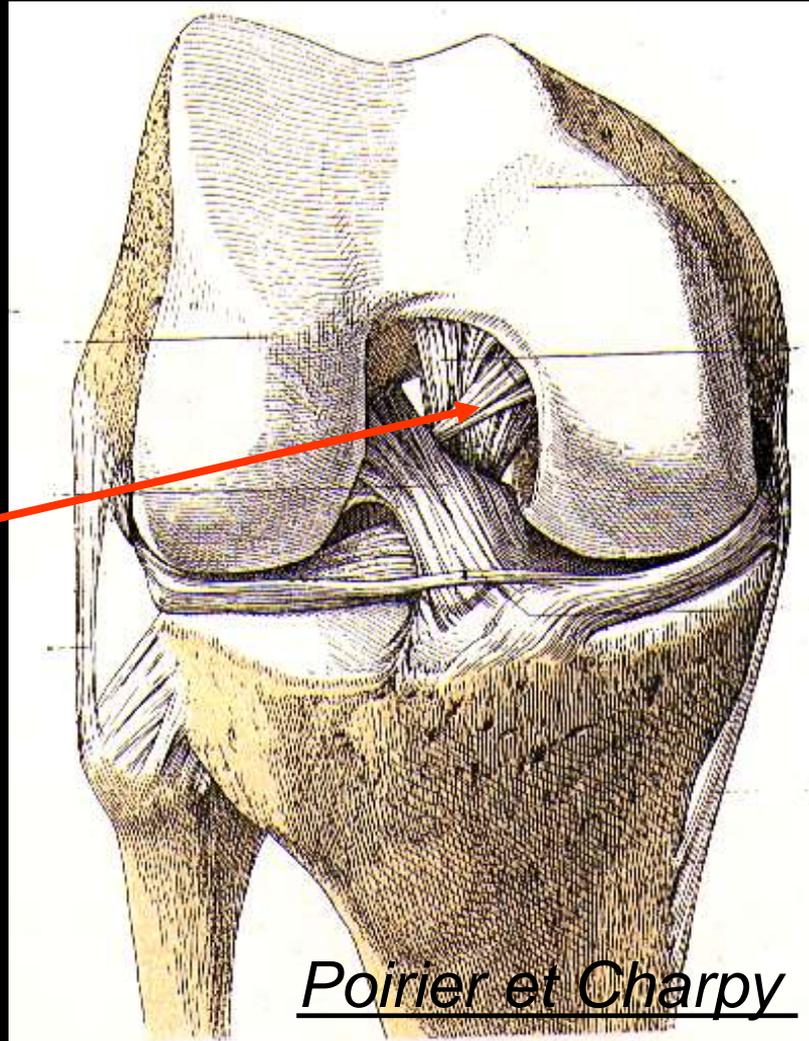
coupe coronale



Aspect IRM des lésions ligamentaires: la rupture du LCP



Ligament ménisco-fémoral antérieur de Humphrey



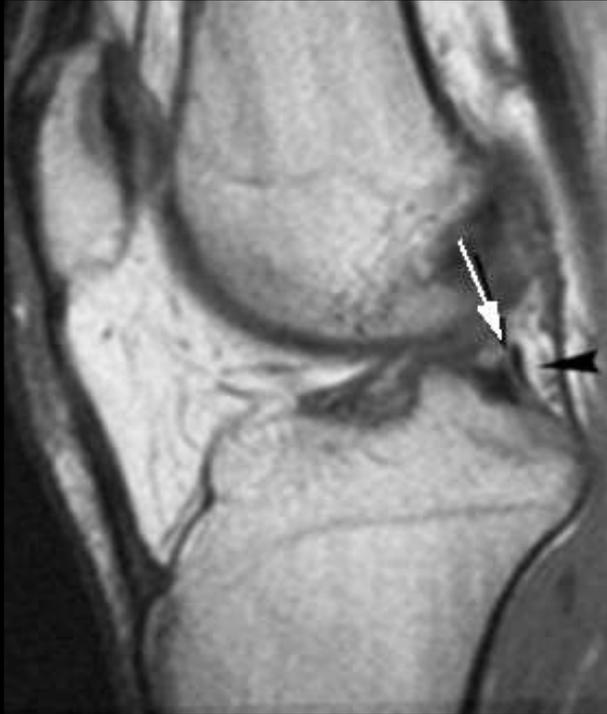
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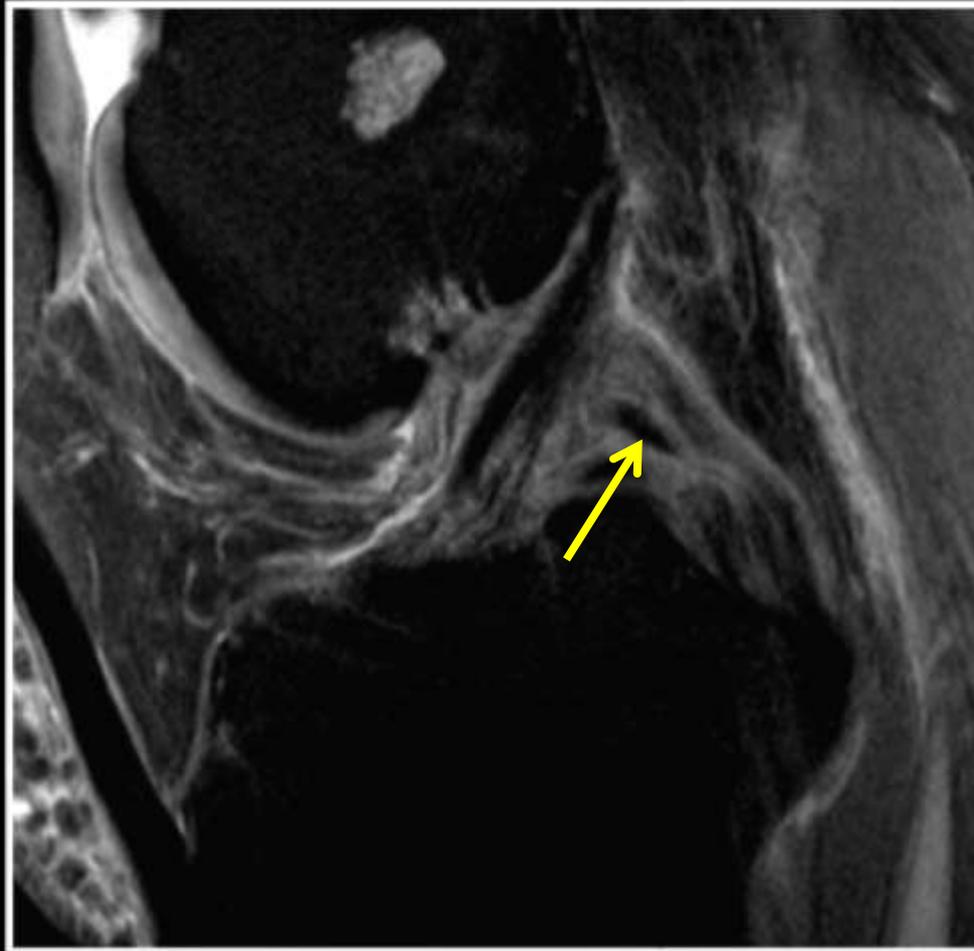
A

B



Le ligament ménisco-fémoral postérieur (Wrisberg)





❖ Quand les ligaments méniscafémoraux demeurent intacts, ils peuvent simuler une lésion partielle.

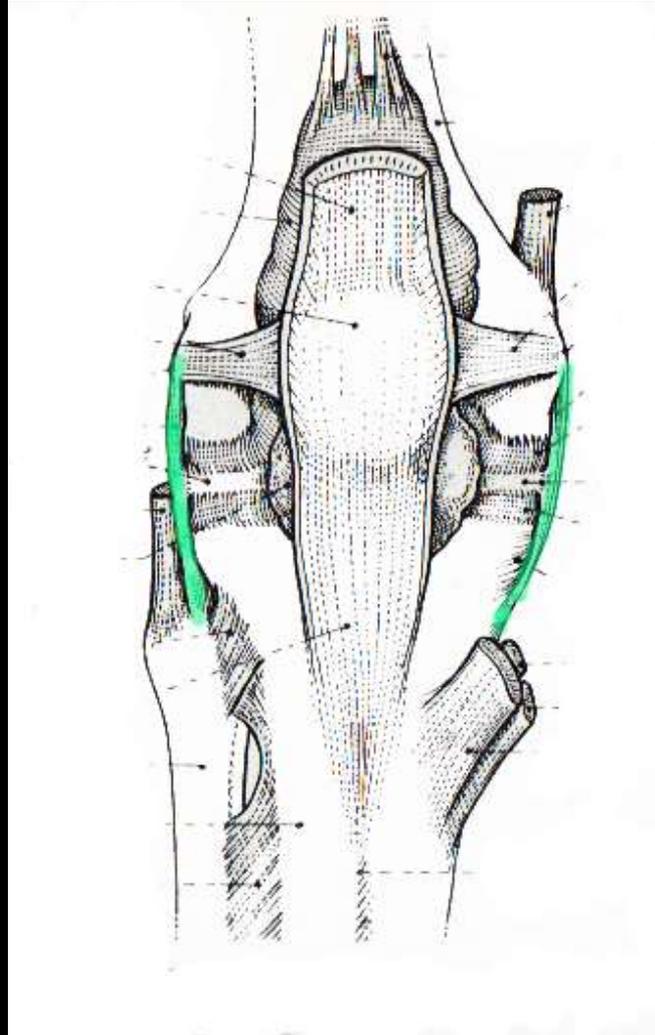
Le ligament ménisco-fémoral postérieur



Toldt

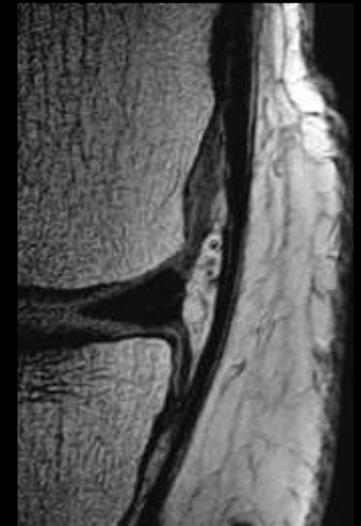
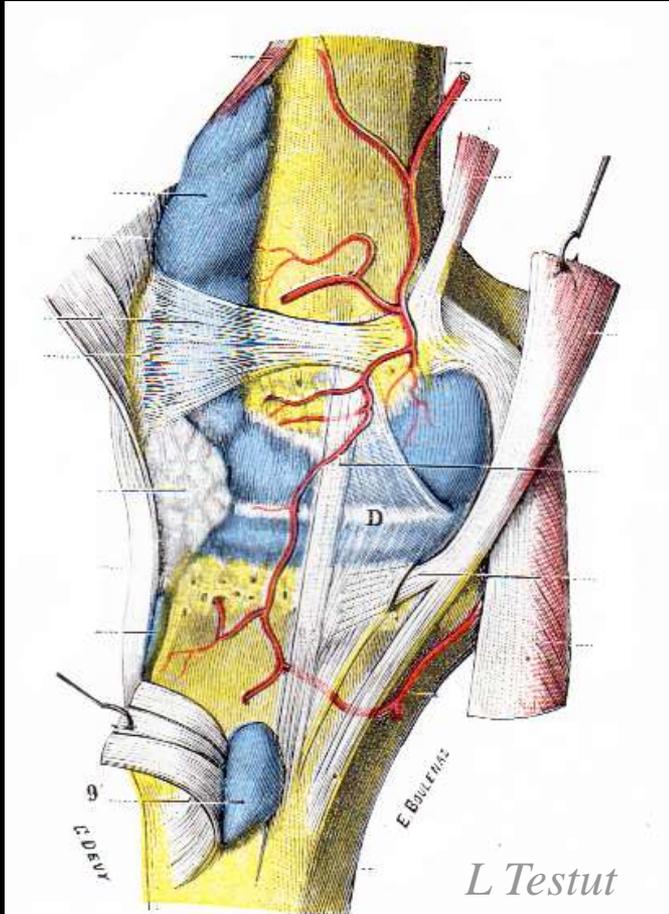


Les ligaments collatéraux

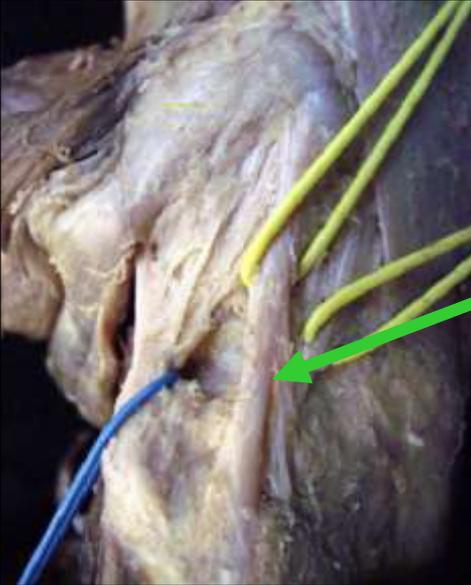
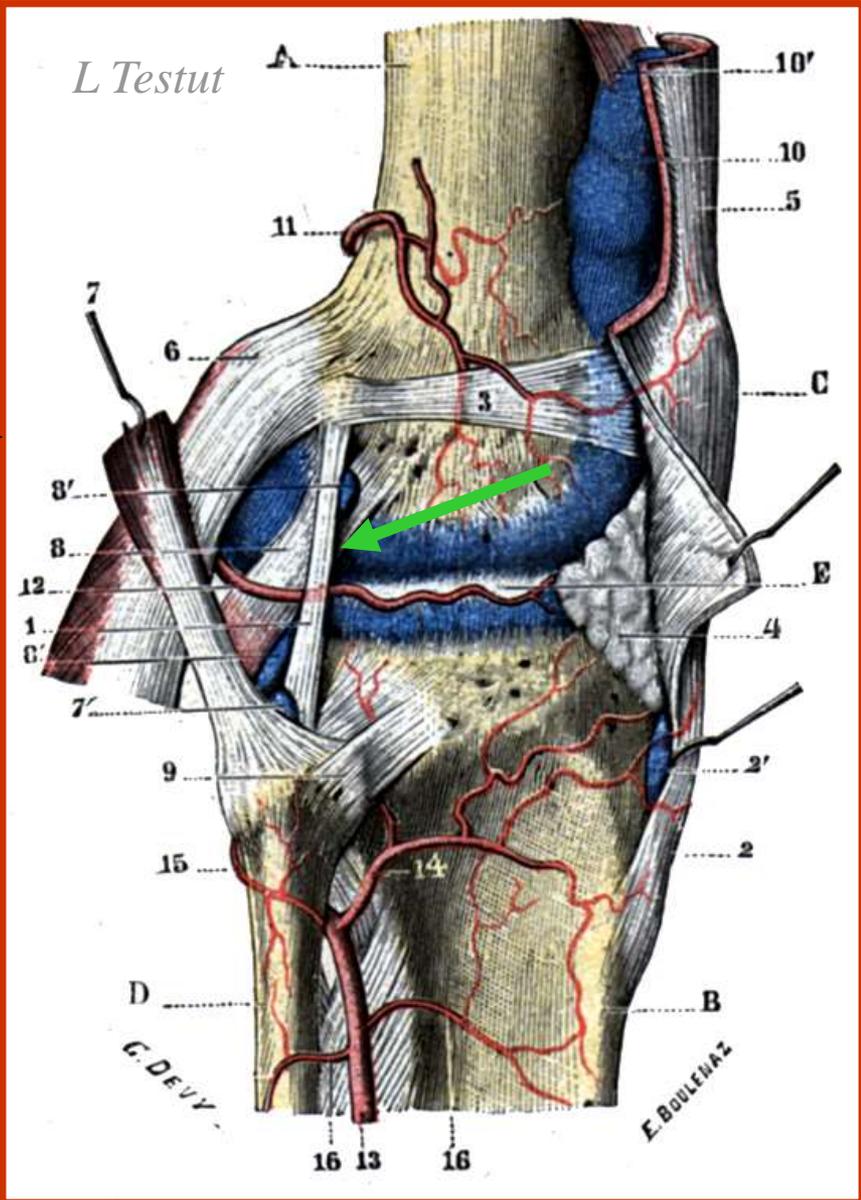


Pauchet et dupret

Ligament collatéral médial



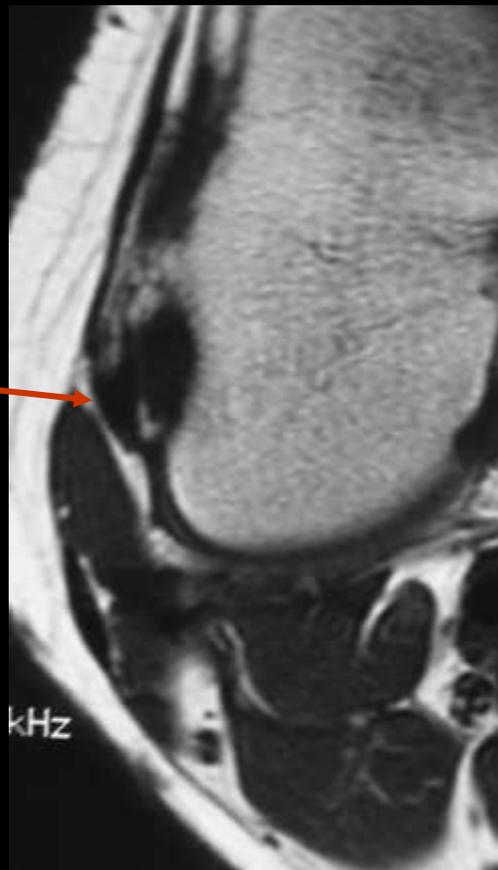
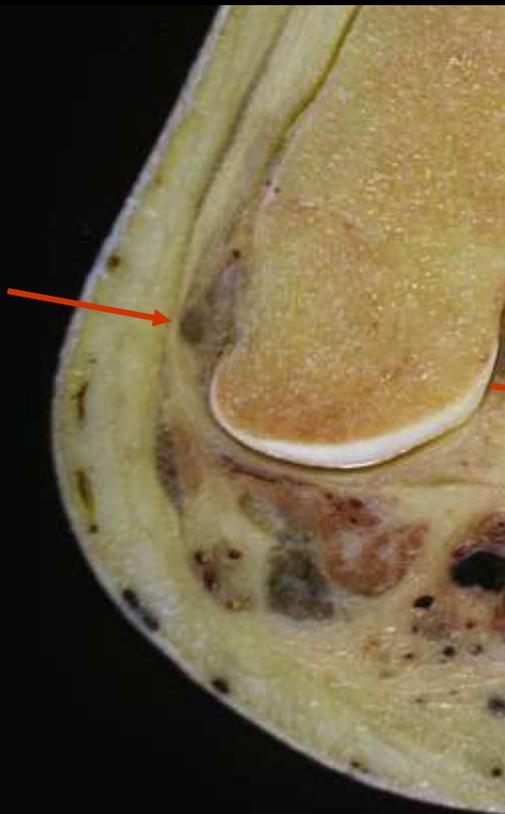
Ligament collatéral latéral



Ligament collatéral latéral

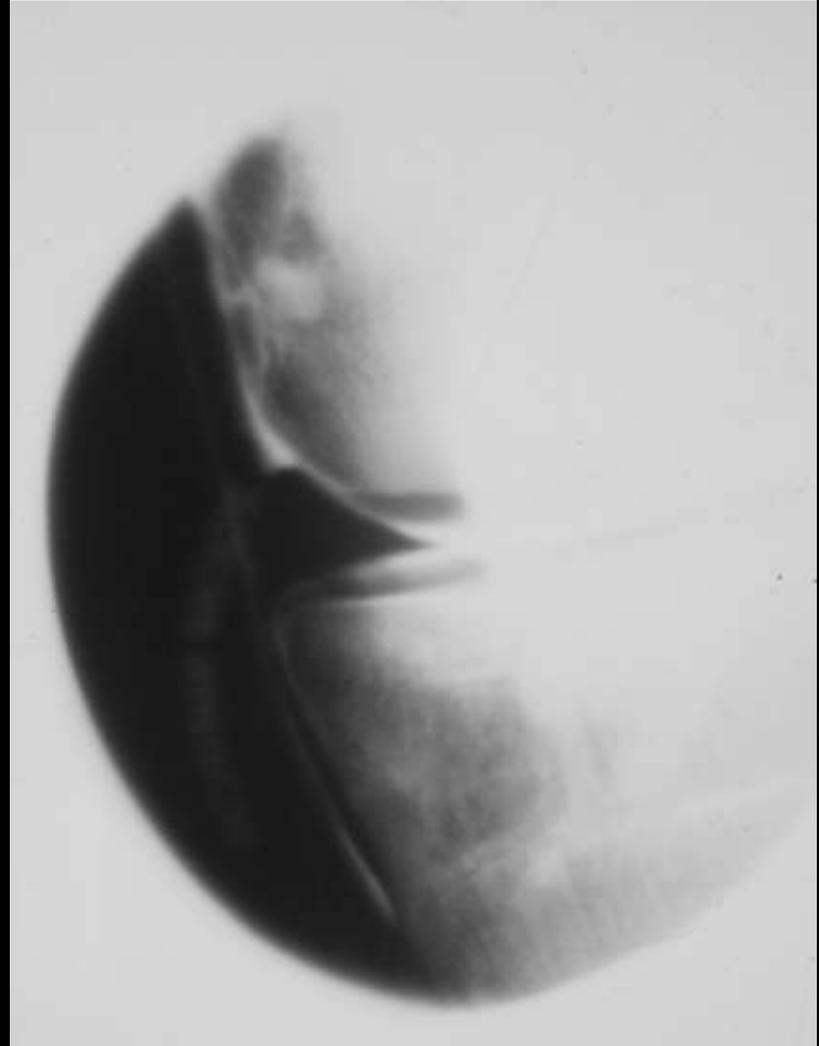


Ligament collatéral latéral



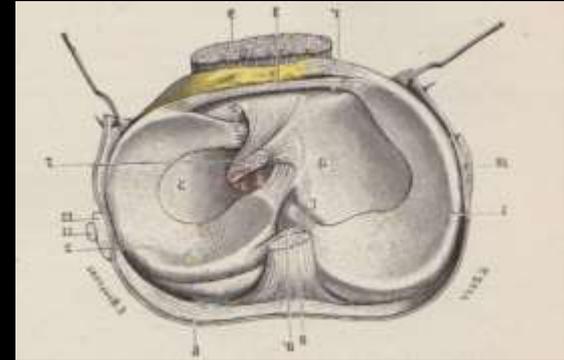
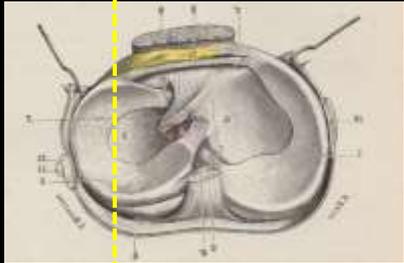
LES MENISQUES

Les ménisques



Ménisque latéral

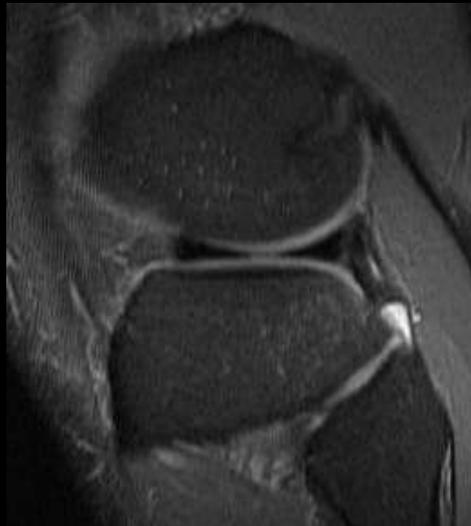
Coupes sagittales : Corne antérieure et postérieure de taille identique



Forme de « O »

Insertion de la **corne antérieure**
en arrière de la terminaison du LCA.

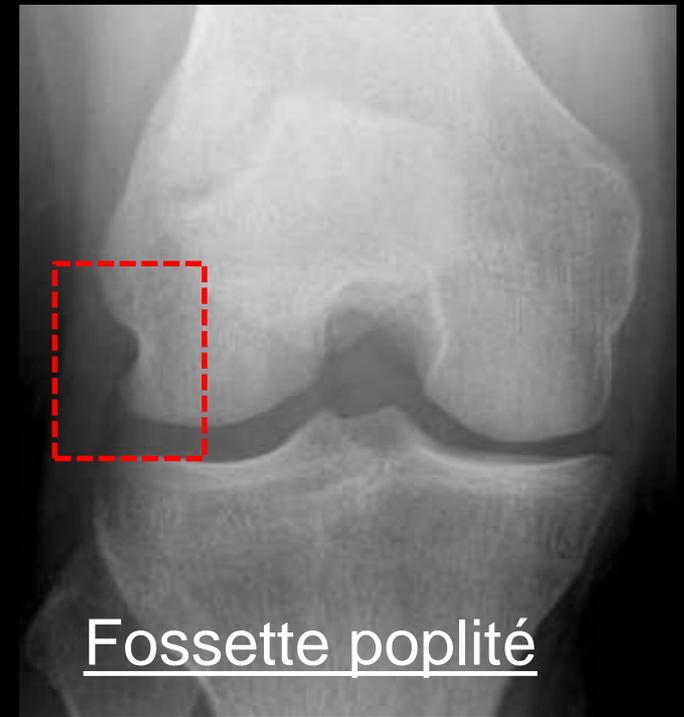
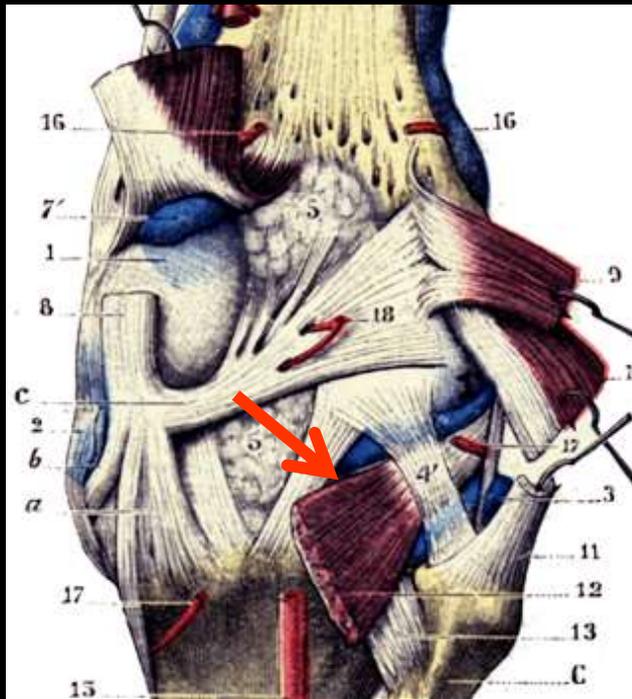
Non adhérent au ligament collatéral fibulaire



Ménisque latéral

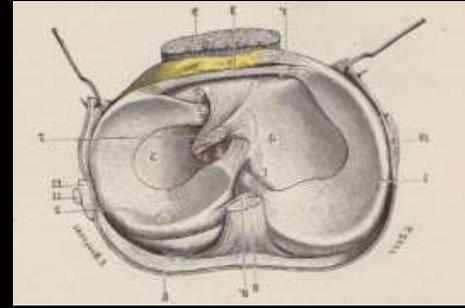
Corne postérieure : Attaches, hiatus poplité





Ménisque médial

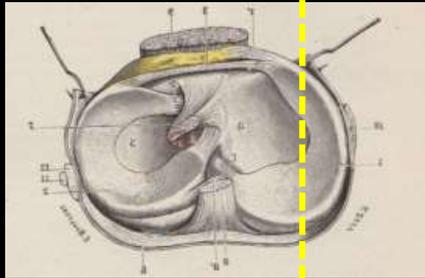
Coupes sagittales : Corne antérieure plus fine que corne postérieure



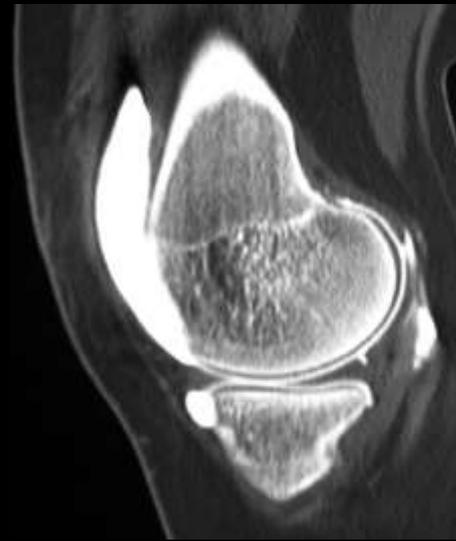
Forme de « C »

Insertion très antérieure de la corne antérieure en avant de la terminaison du LCA.

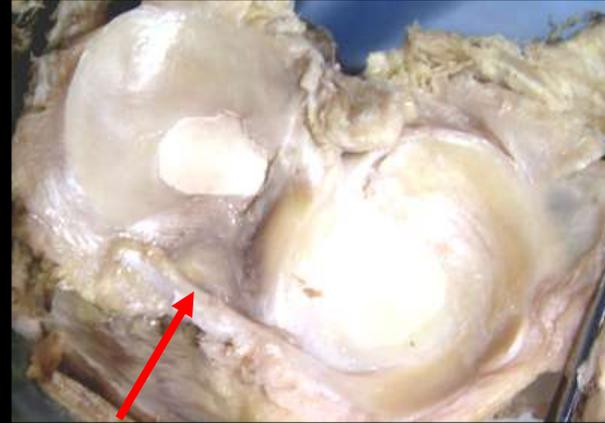
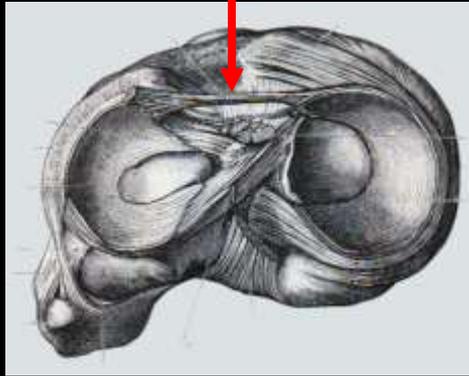
Fermement adhérent au ligament collatéral médial



Attaches ménisque médial

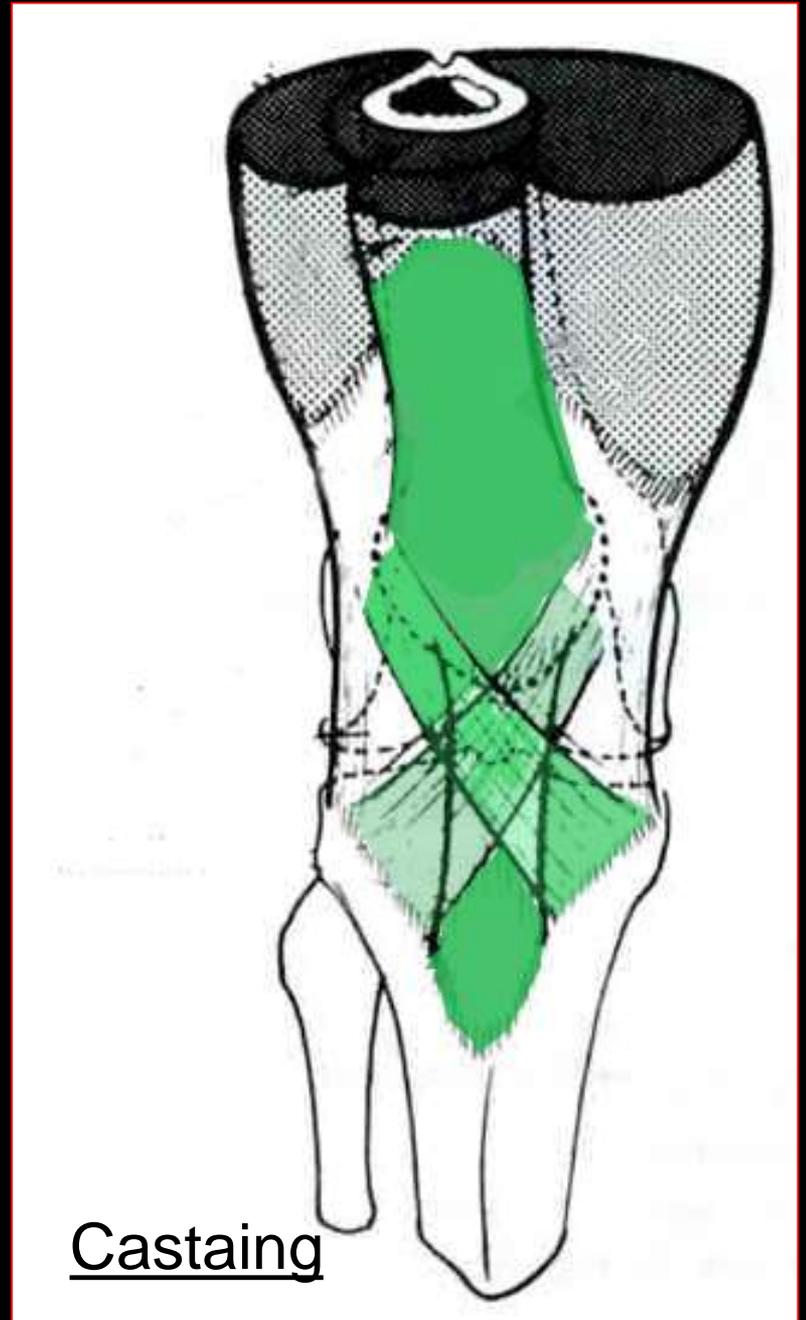
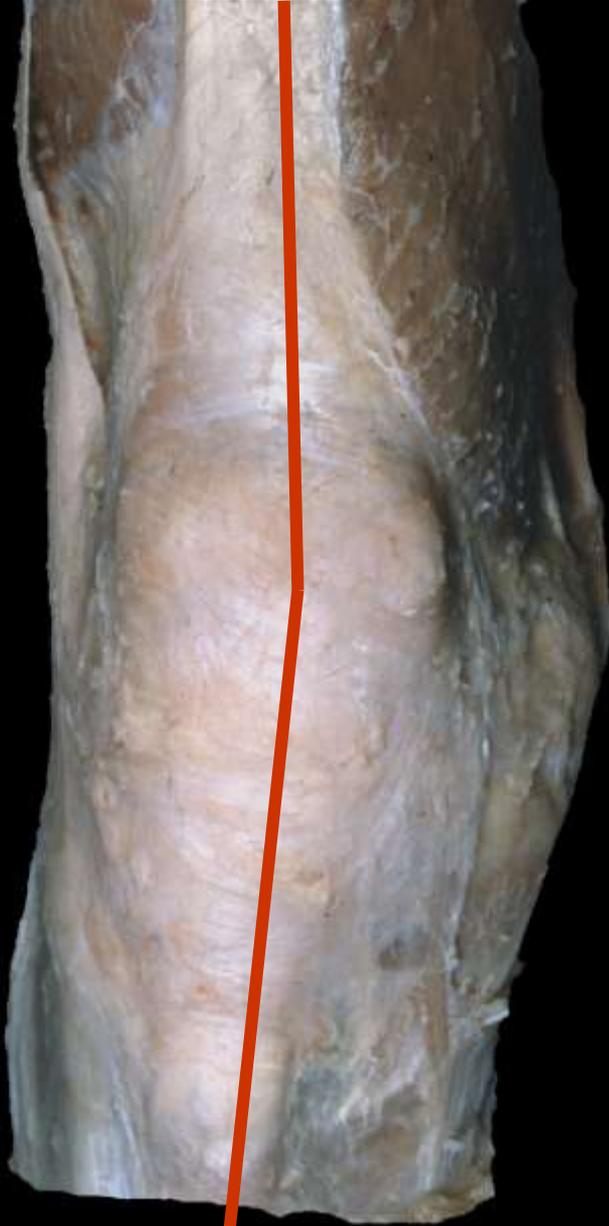


Le ligament interméniscal (Jugal)

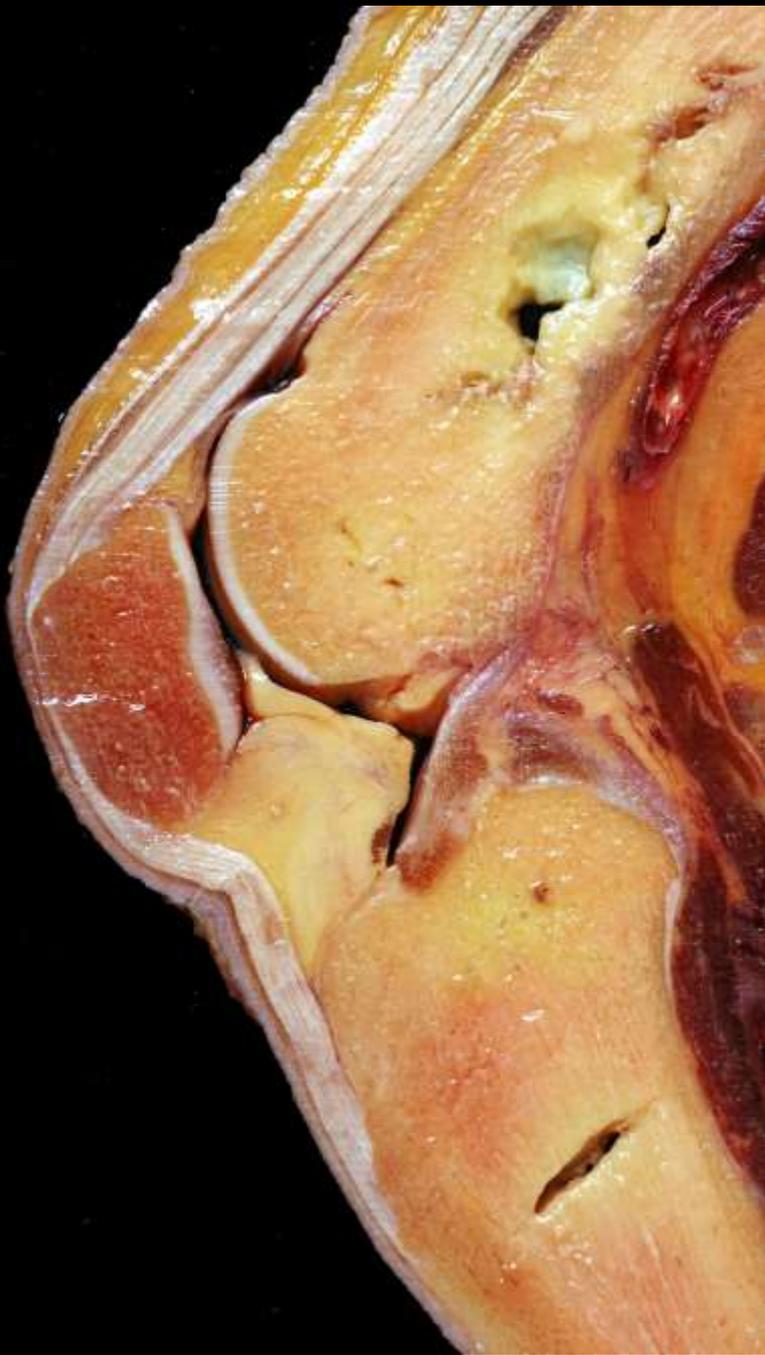


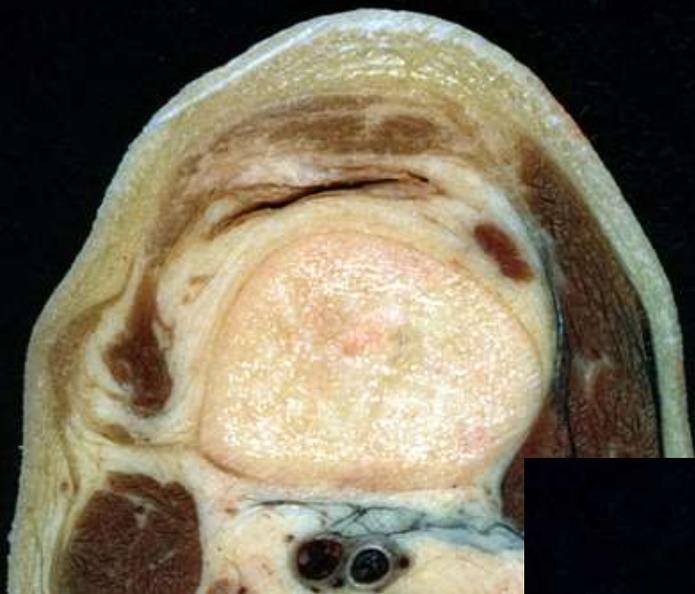
MUSCLES ET TENDONS
PERIARTICULAIRES DU GENOU

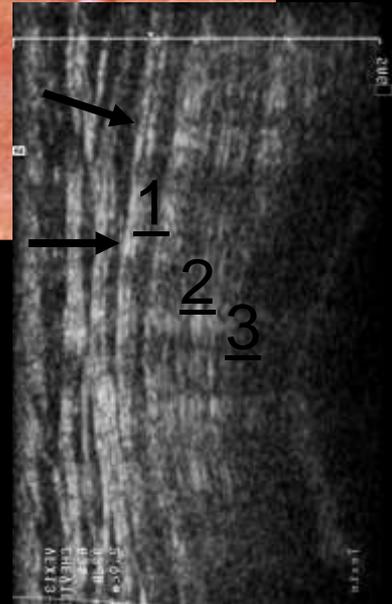
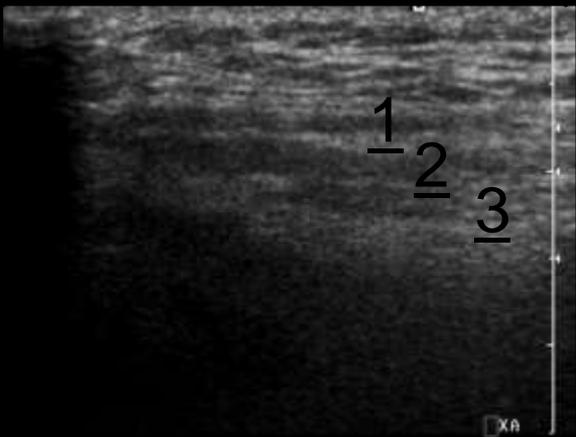
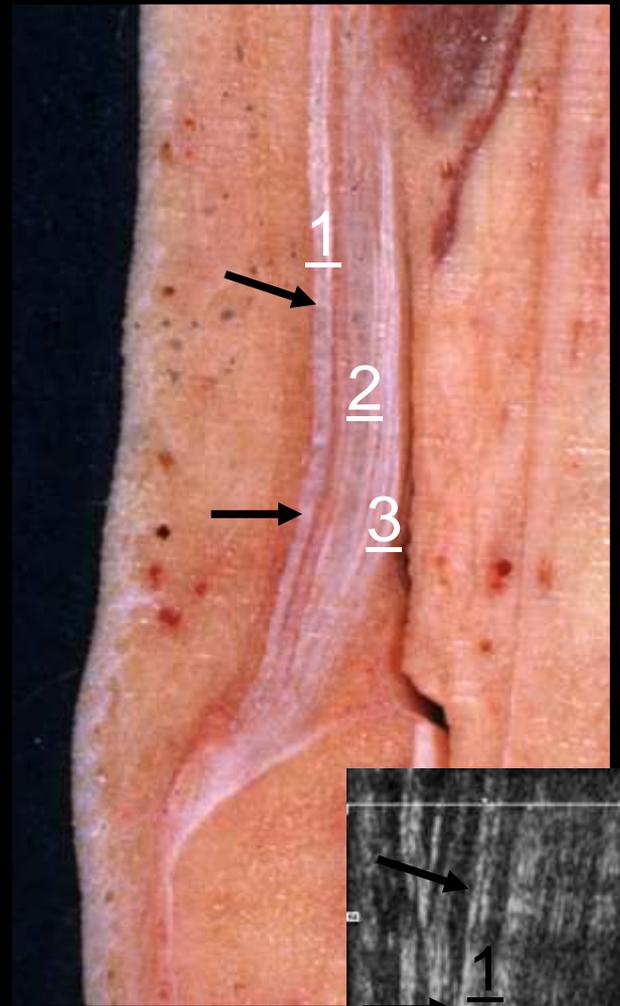
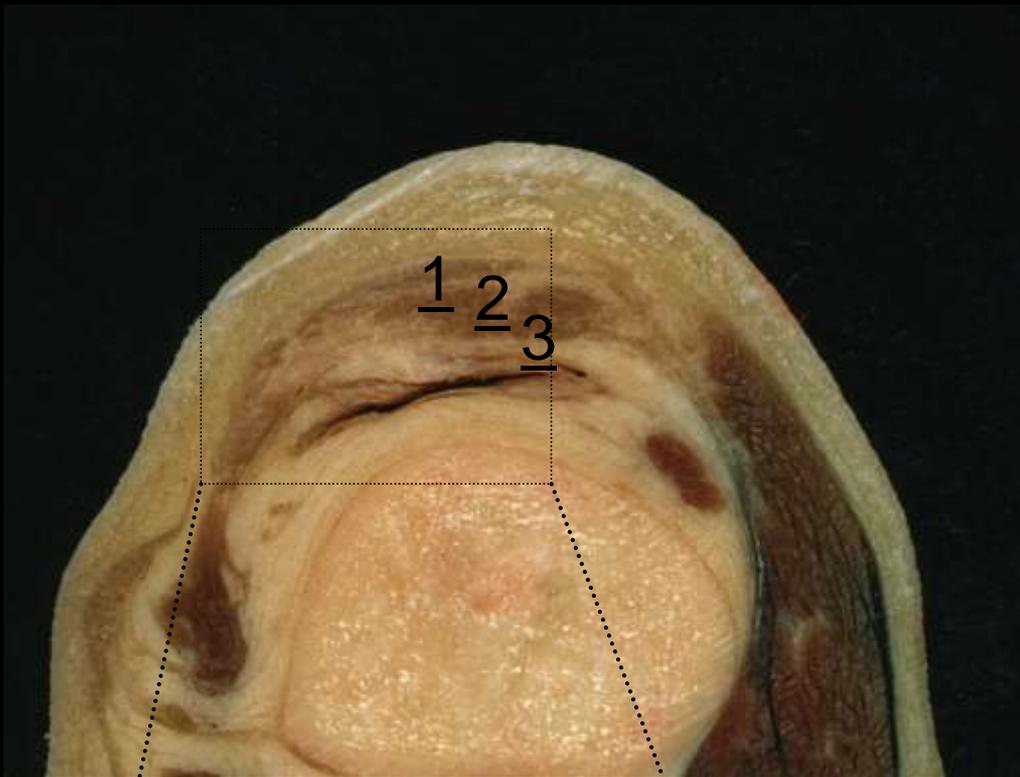
Tendon quadricipital



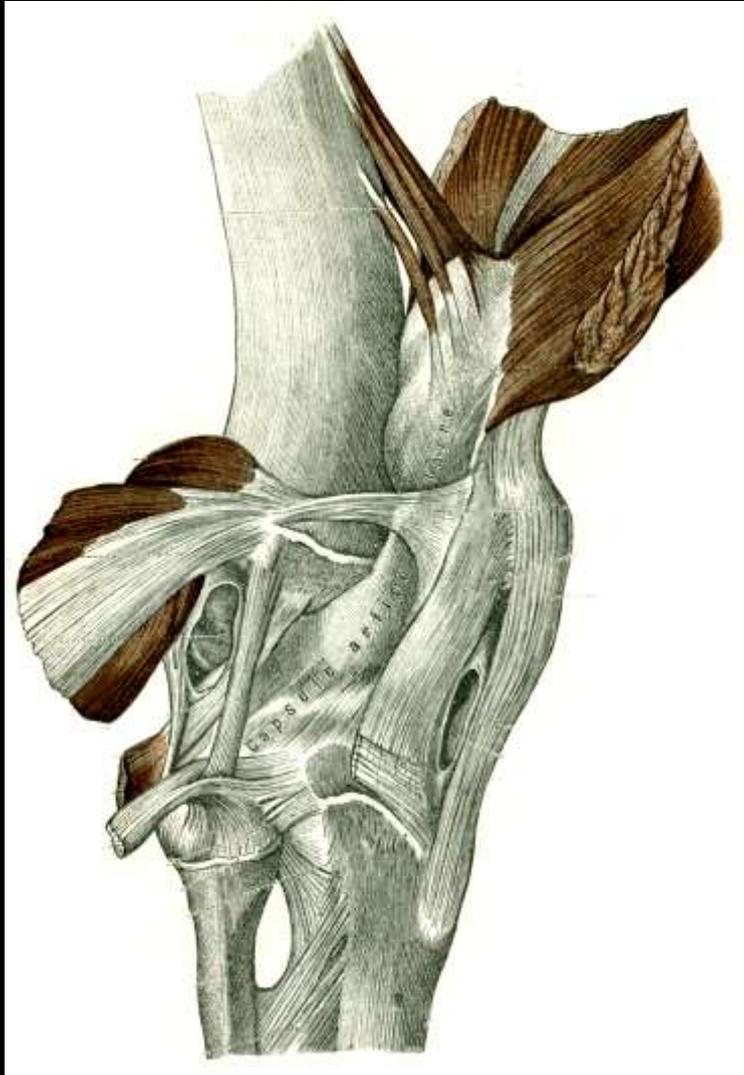
Castaing





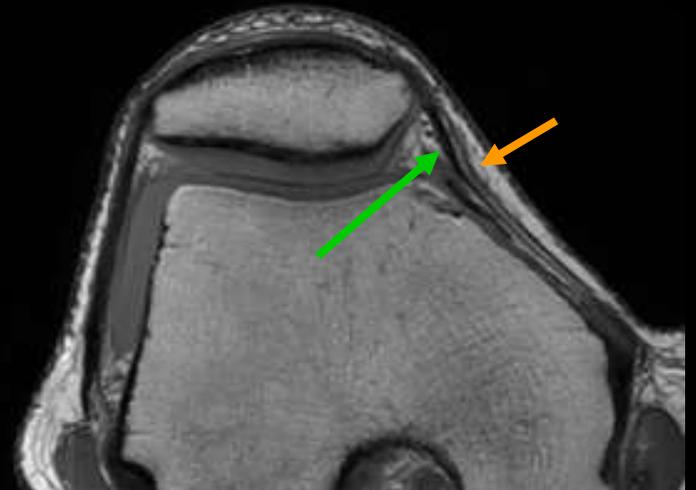
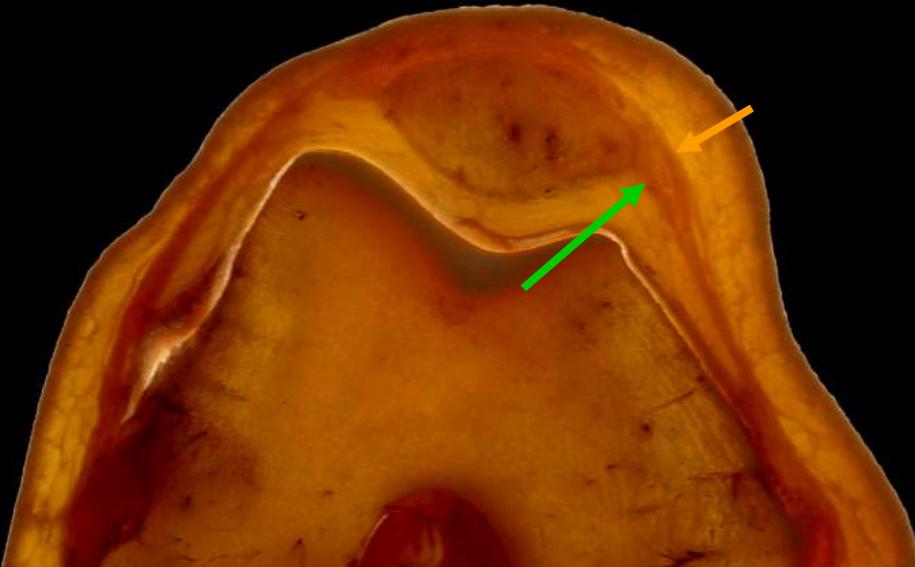
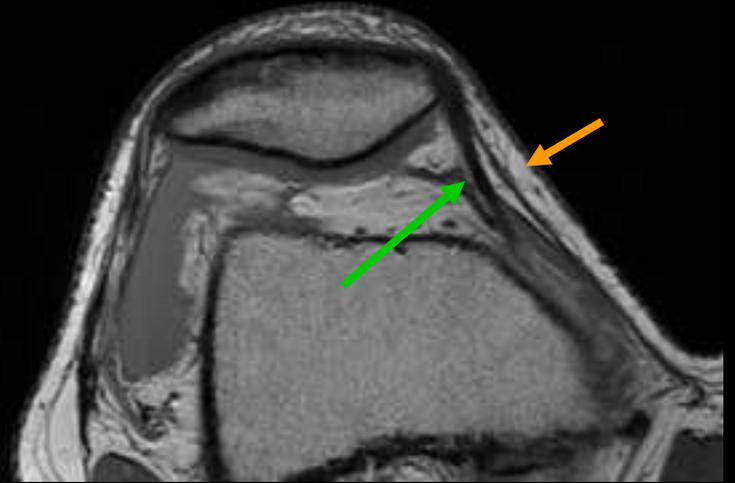
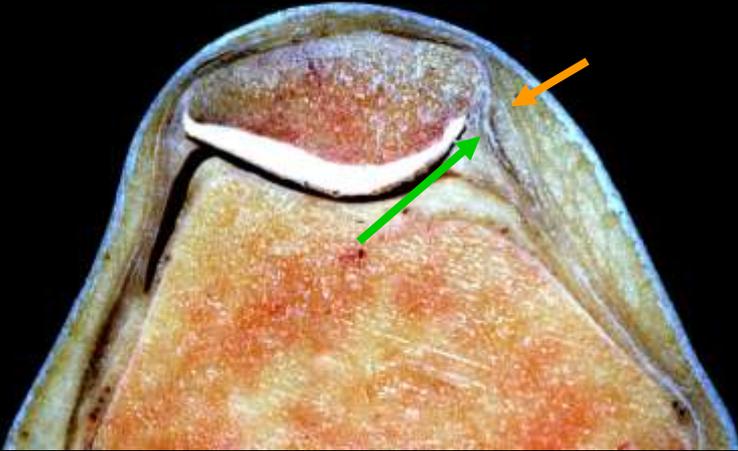


RETINACULUMS PATELLAIRES

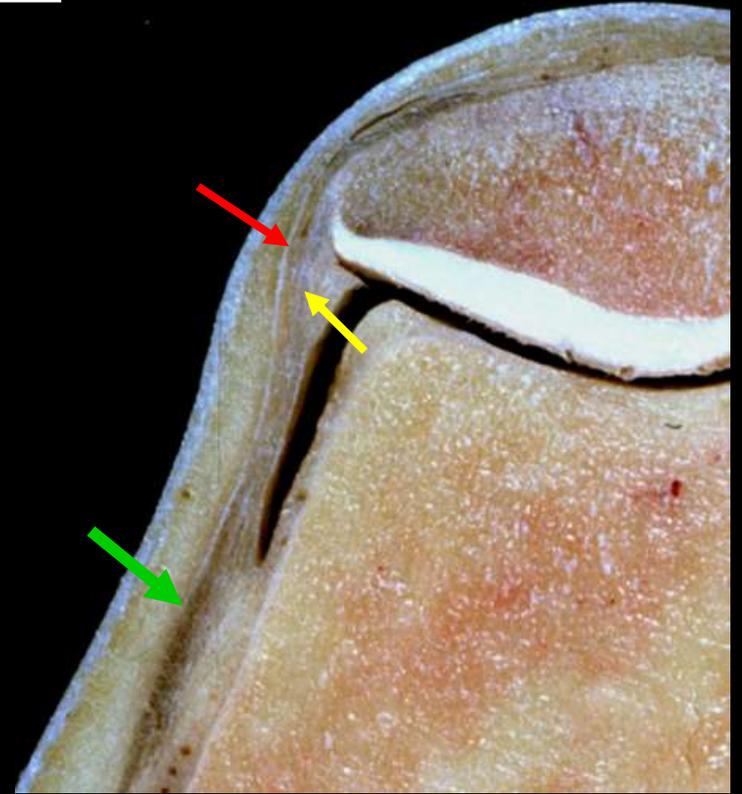
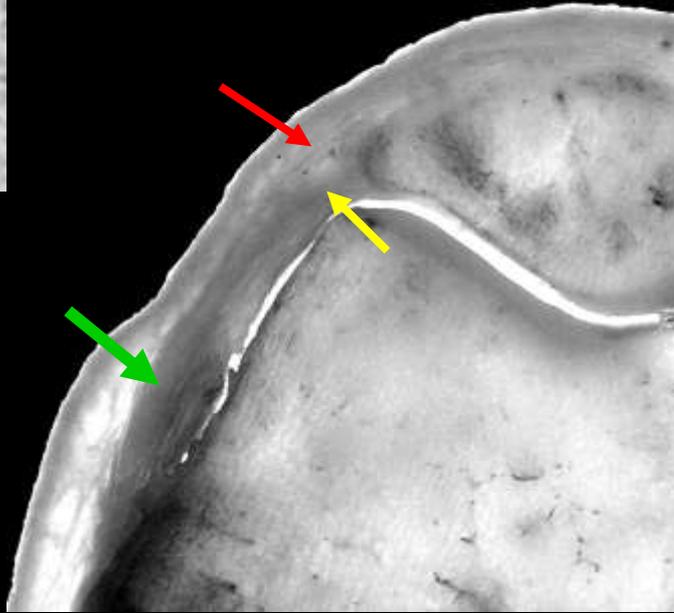
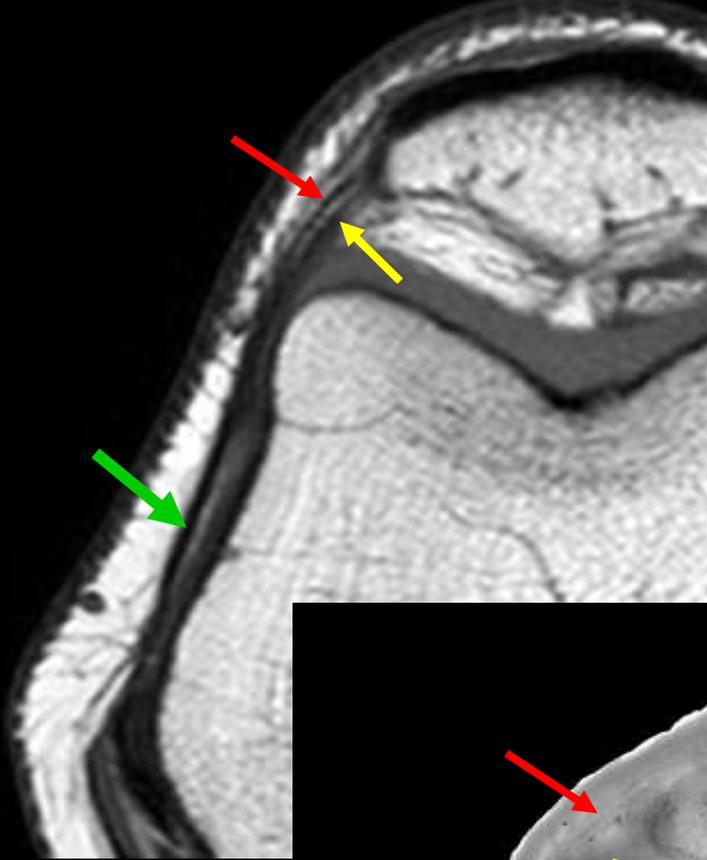


C Toldt

Retinaculum patellaire médial



Retinaculum patellaire latéral



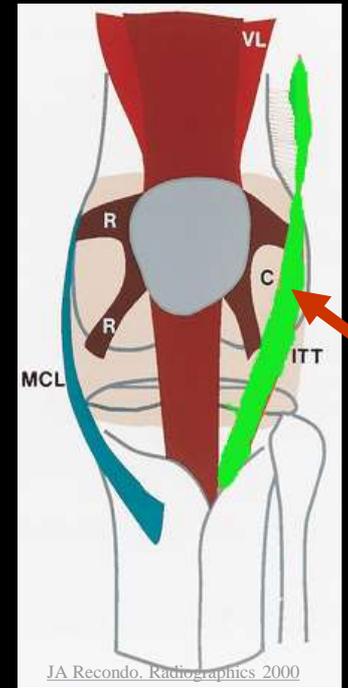
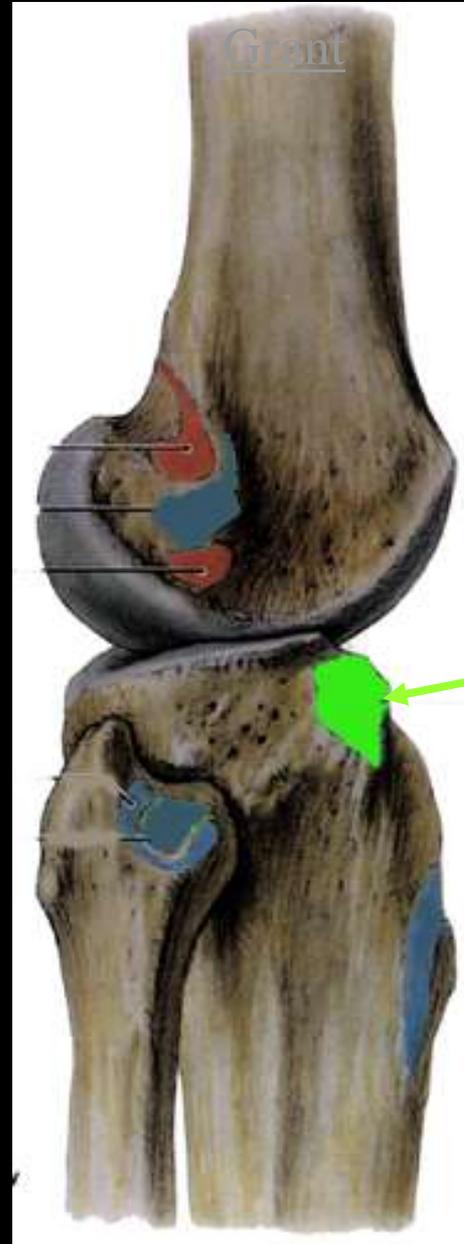
Tractus ilio-tibial

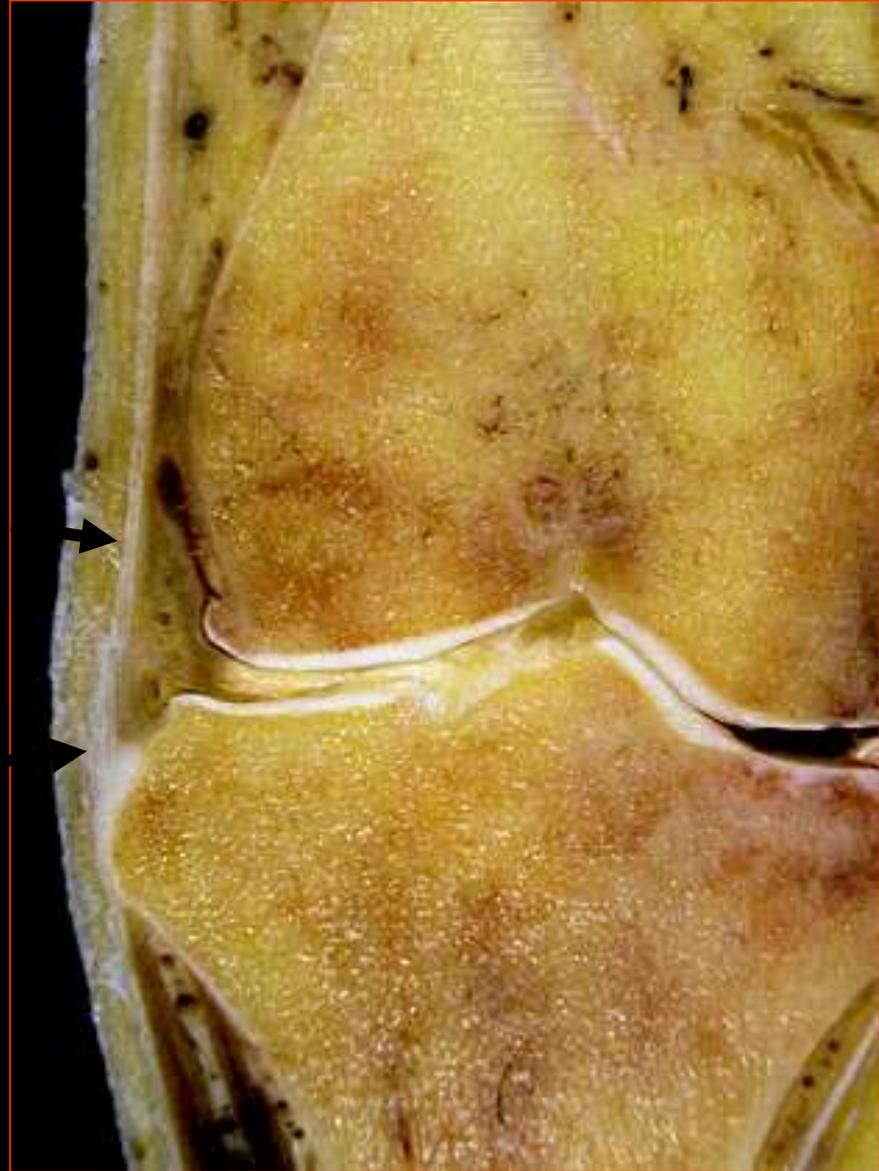
Le tractus ilio-tibial est un élément fibreux, plat, résistant, faisant suite au fascia lata



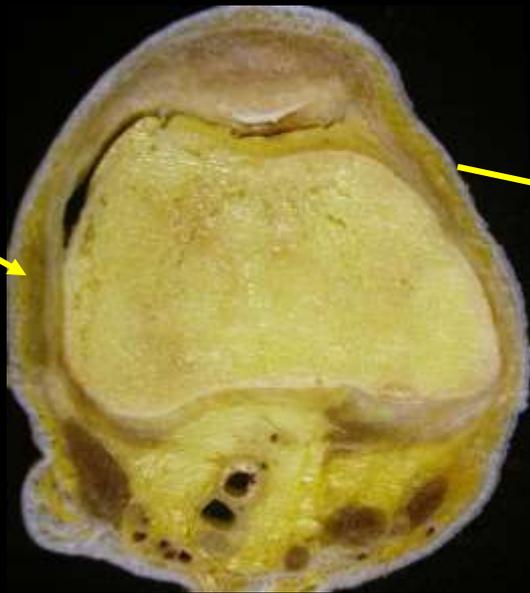
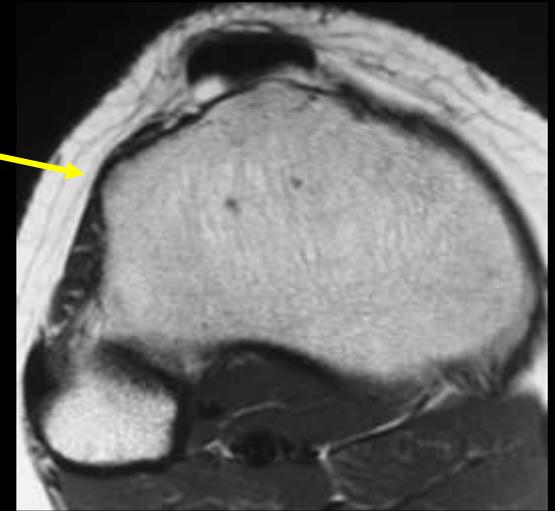
C Toldt

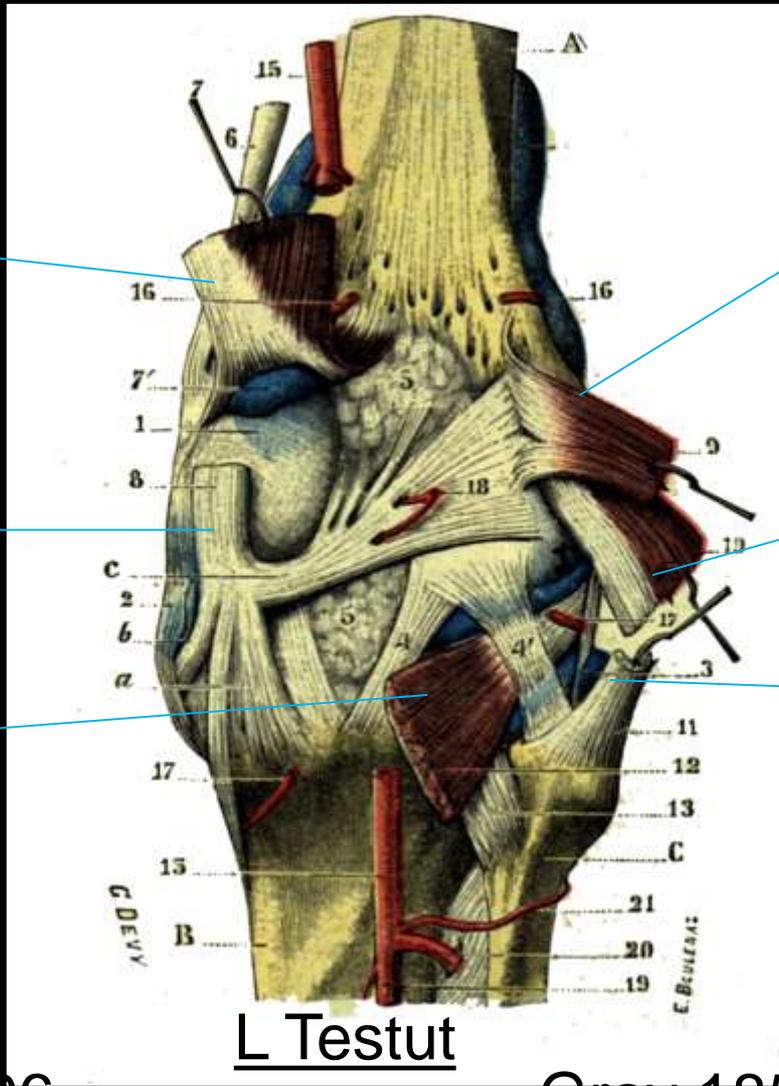
Tractus ilio-tibial





Tractus ilio-tibial





Chef médial
m gastrocnémien

Tendon
m semi-membraneux

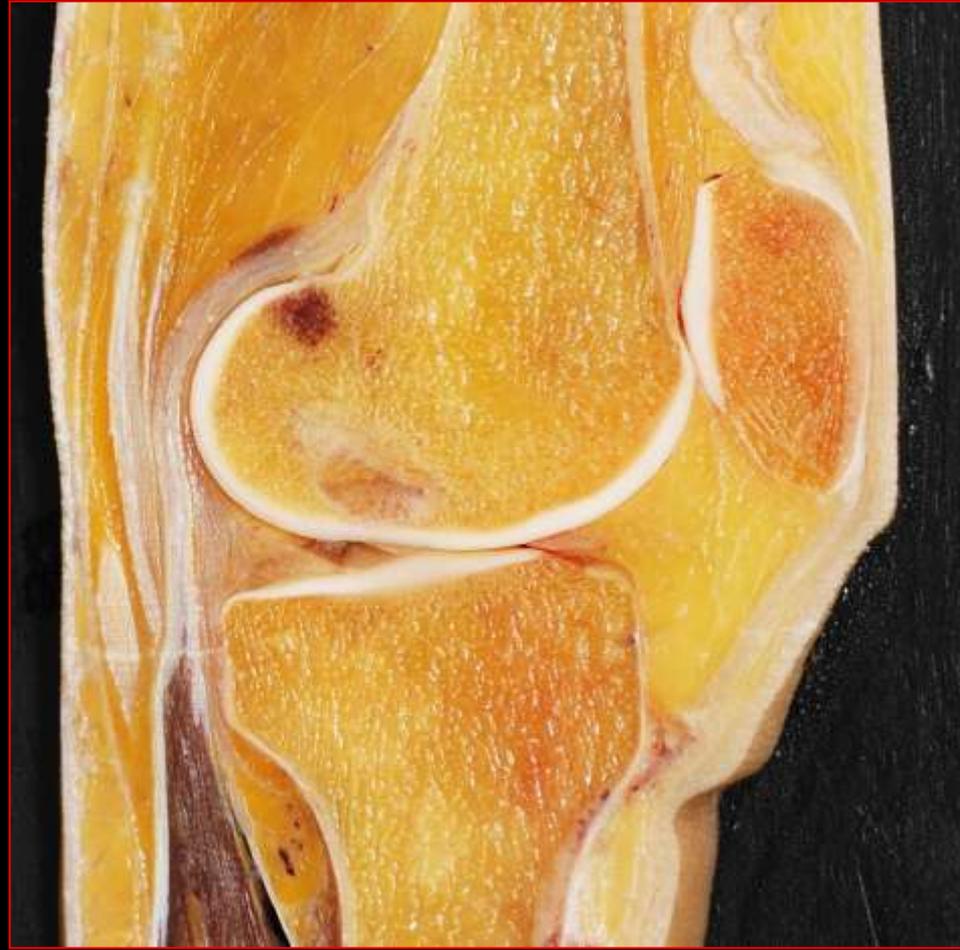
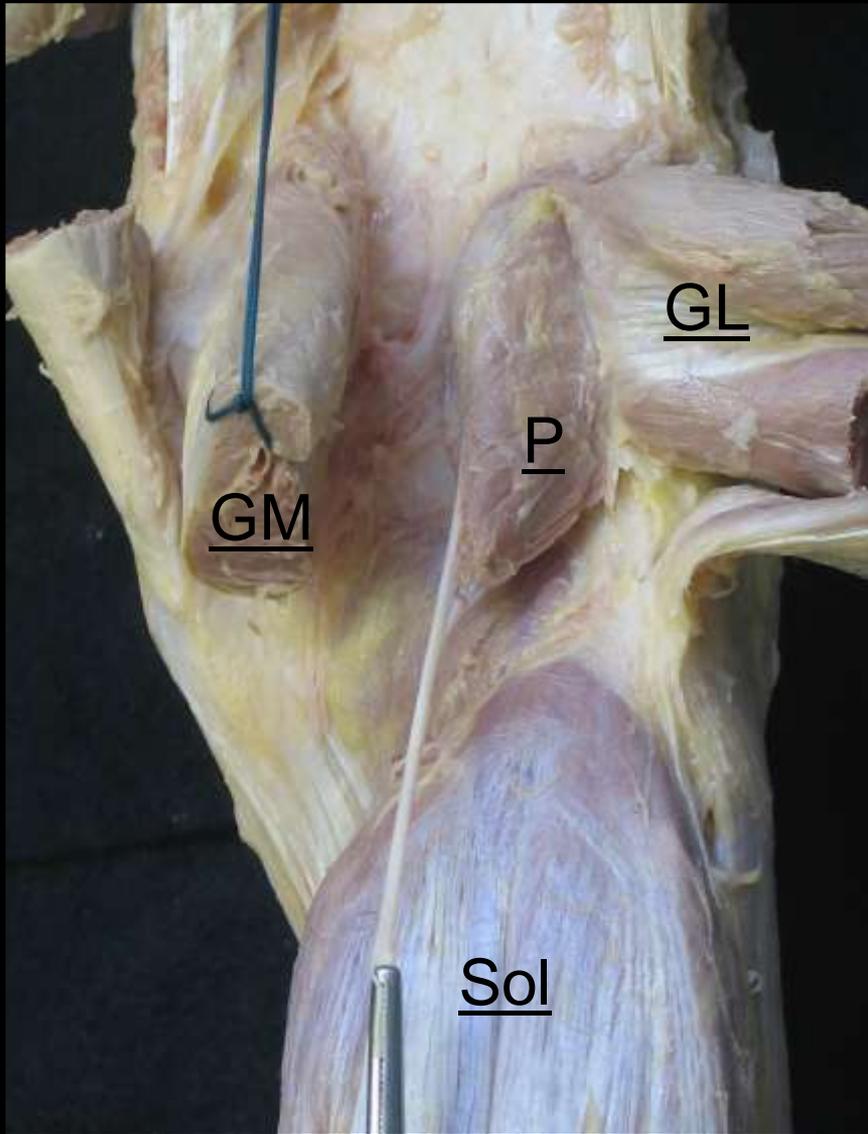
M poplité

m plantaire

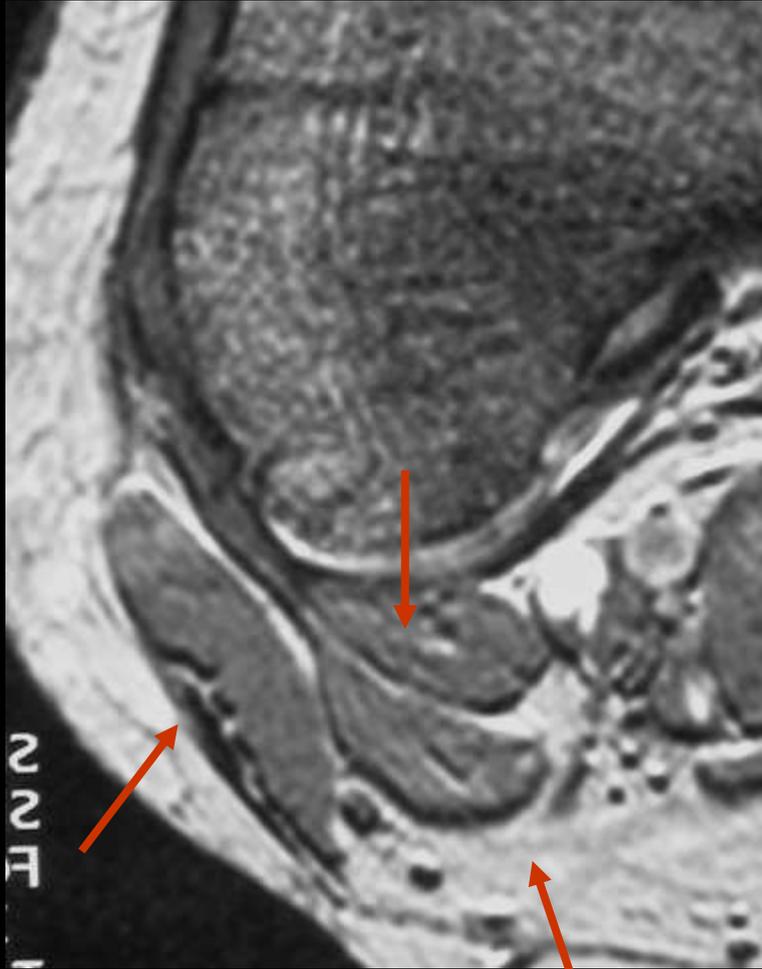
Chef lat
m gastrocnémien

Biceps fémoral

L Testut

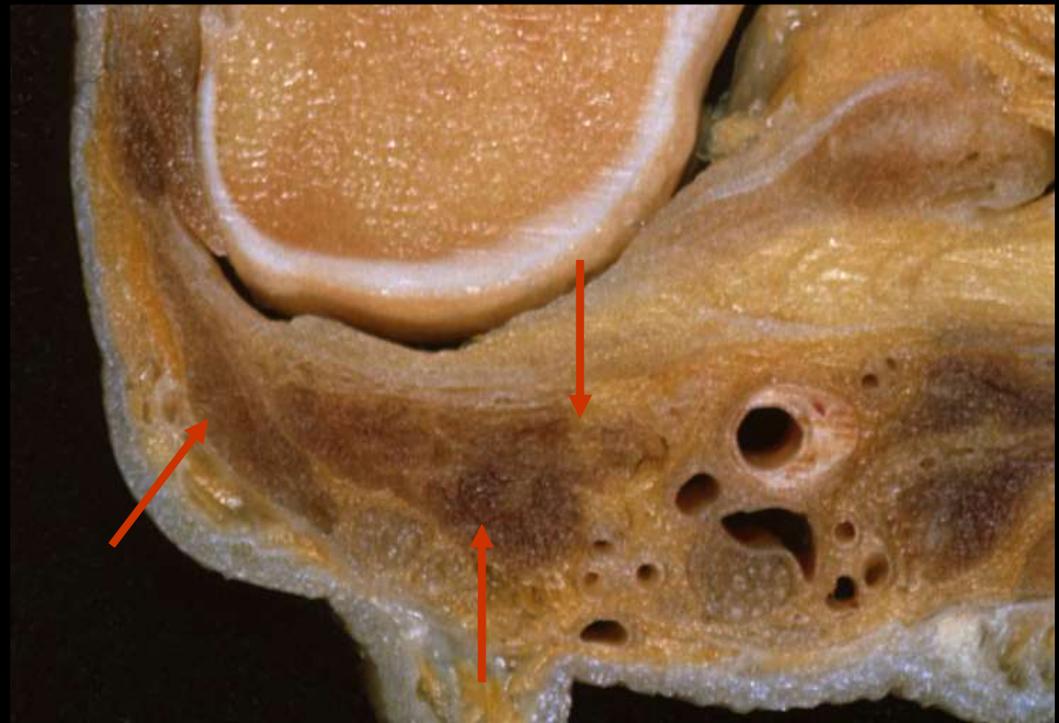
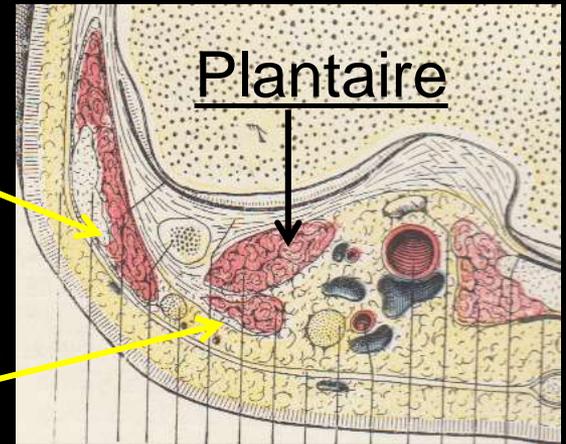


PAPE

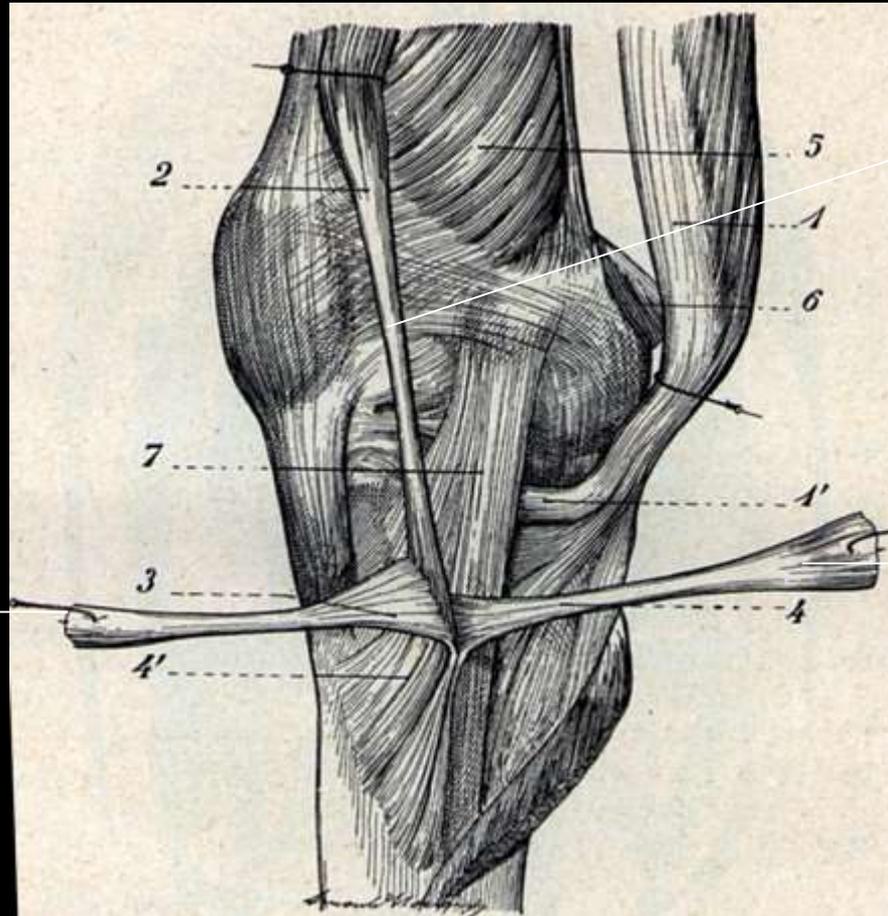


Biceps femoral

Chef lat gastrocnémien



Les tendons de la « patte d'oie »

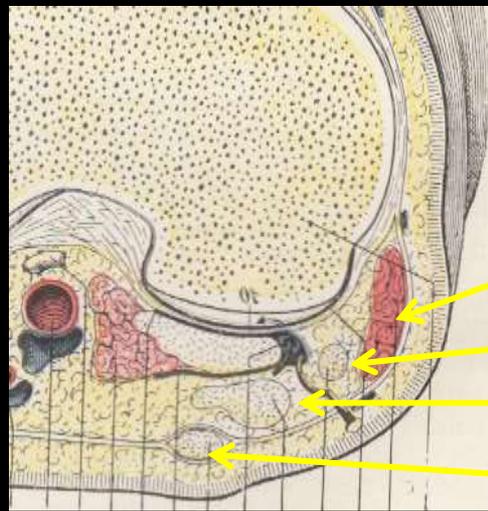


Gracile

1/2 tendineux

Sartorius

PAPI

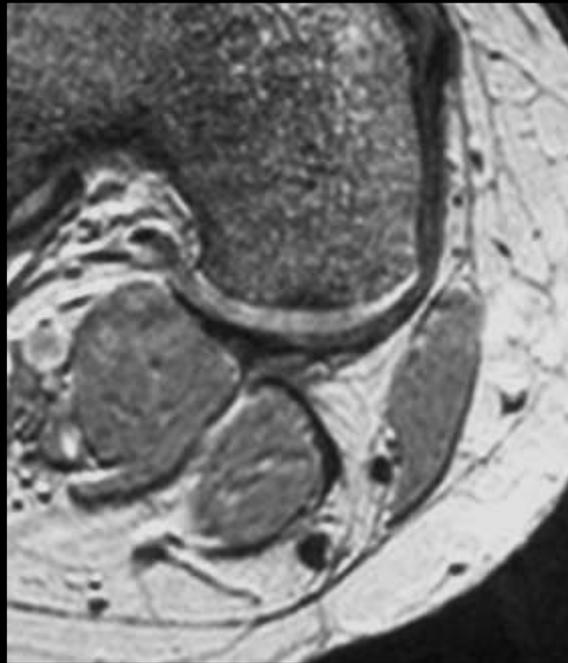


Sartorius

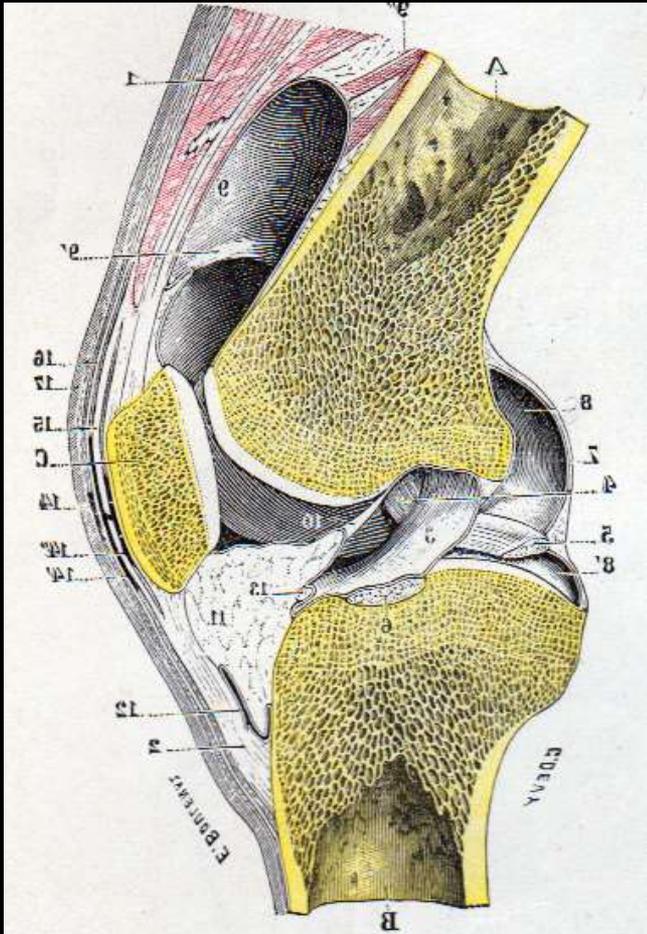
Gracile

1/2 membraneux

1/2 tendineux



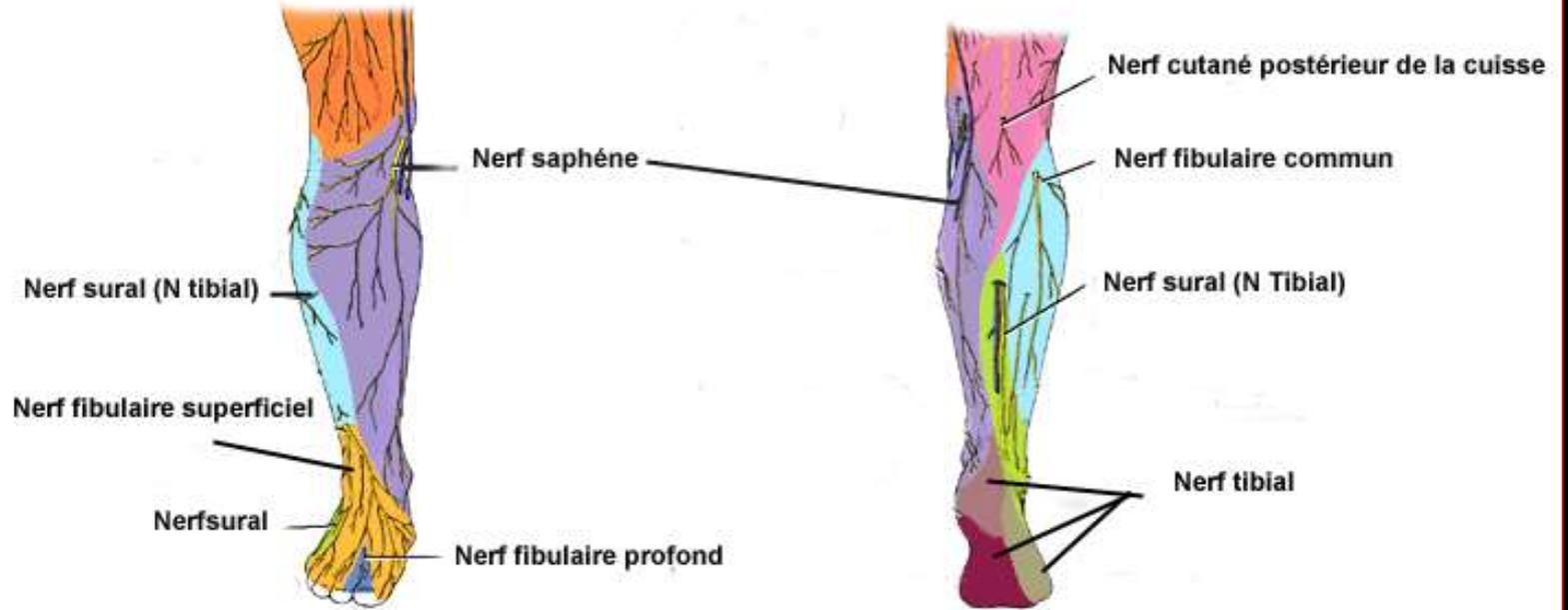
Corps adipeux infra-patellaire de Hoffa



Plica infrapatellaire = Ligament adipeux
= Ligamentum mucosum



LES NERFS AUTOUR DU GENOU



- Nerf tibial

- Nerf fibulaire commun

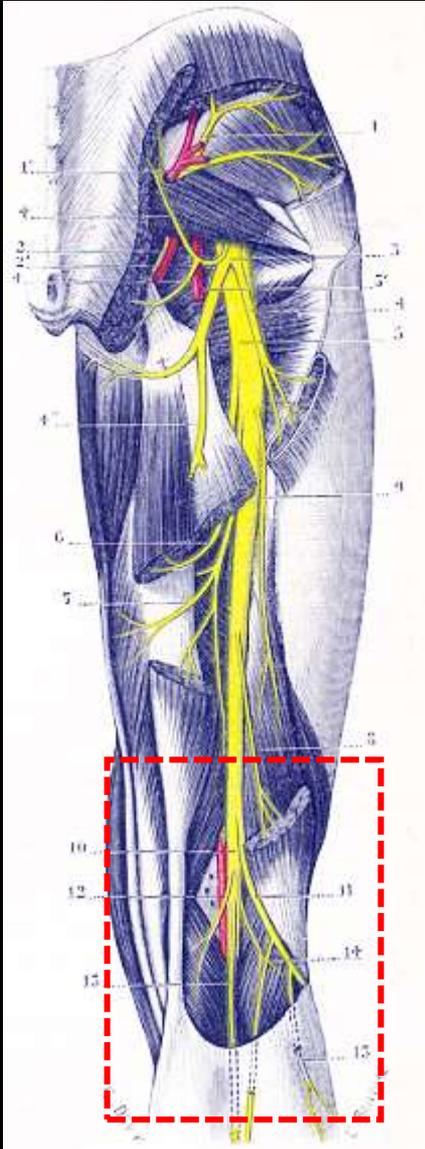
- Nerf fibulaire superficiel

- Nerf fibulaire profond

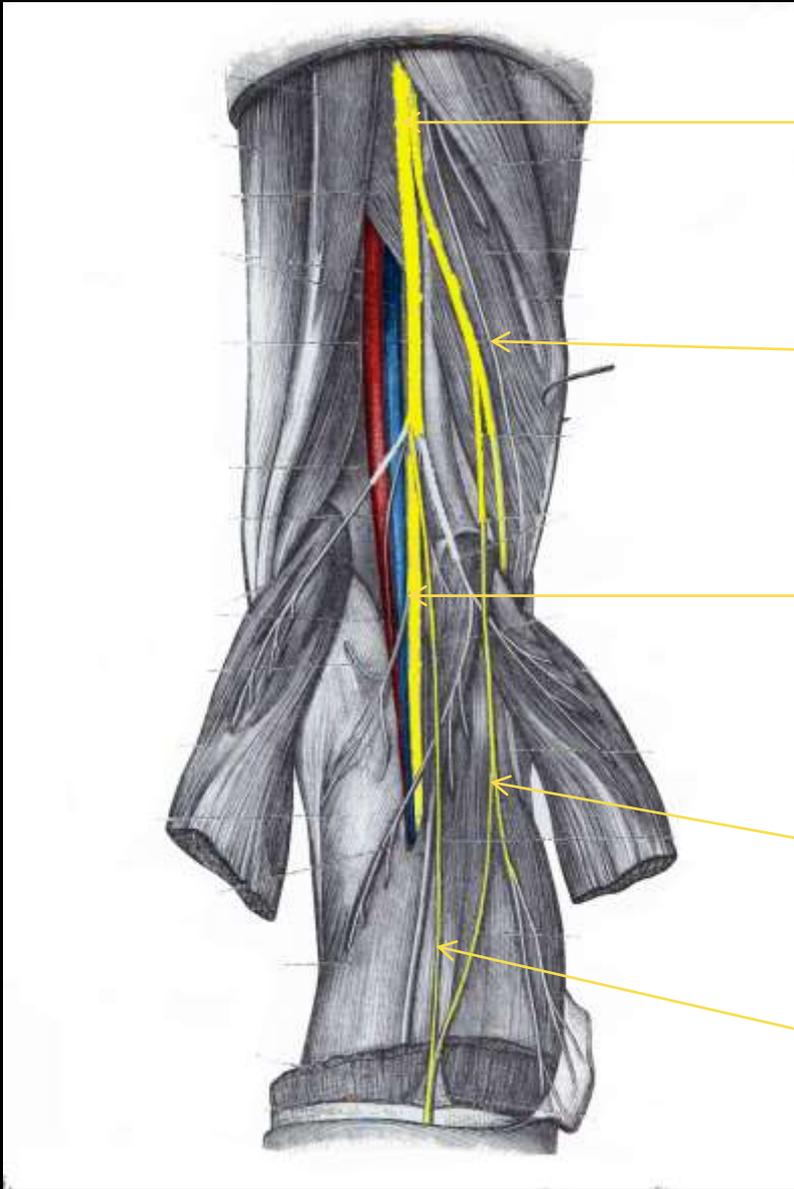
- Nerf saphène

- Nerf sural

Division du nerf sciatique



Vue postérieure



N sciatique

N fibulaire commun

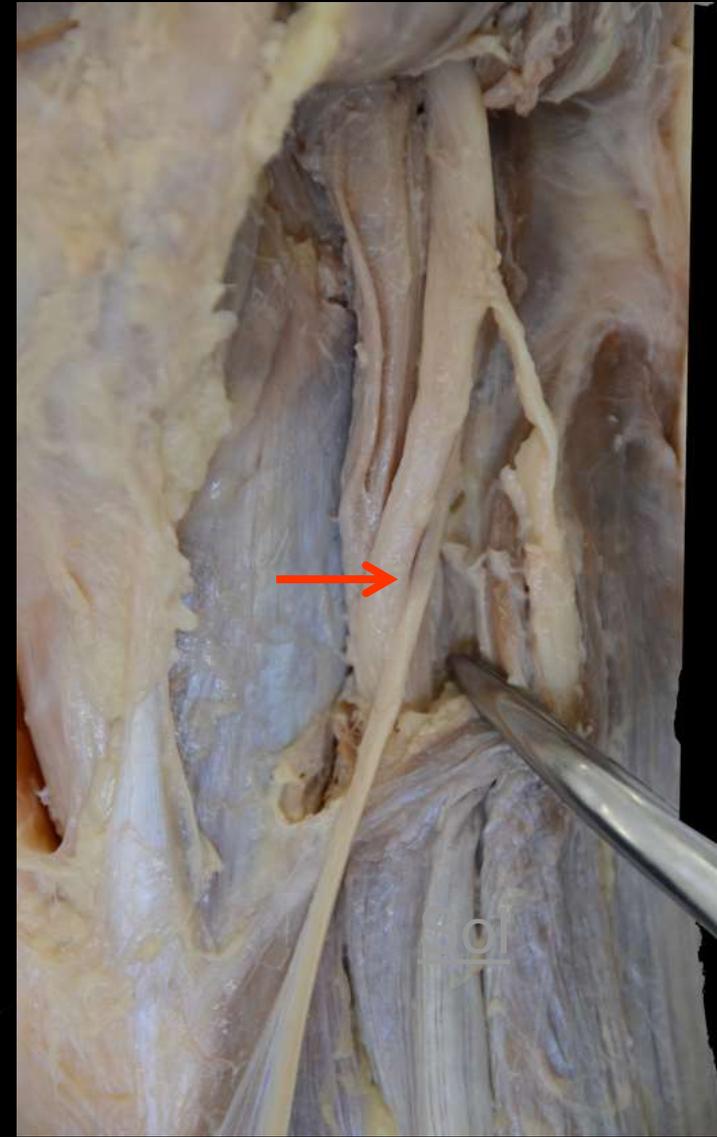
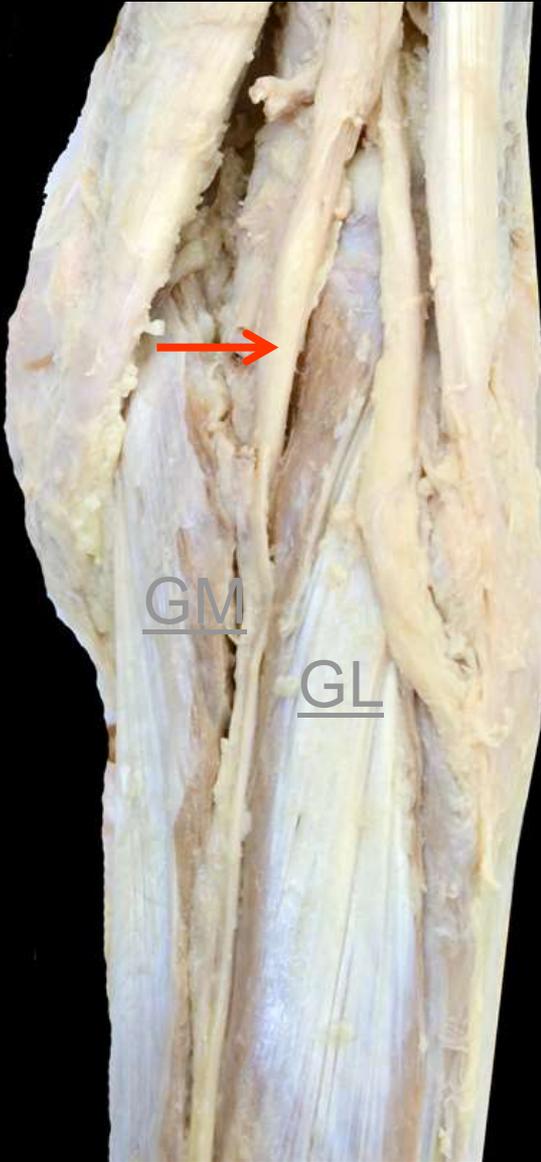
N tibial

N cutané sural latéral

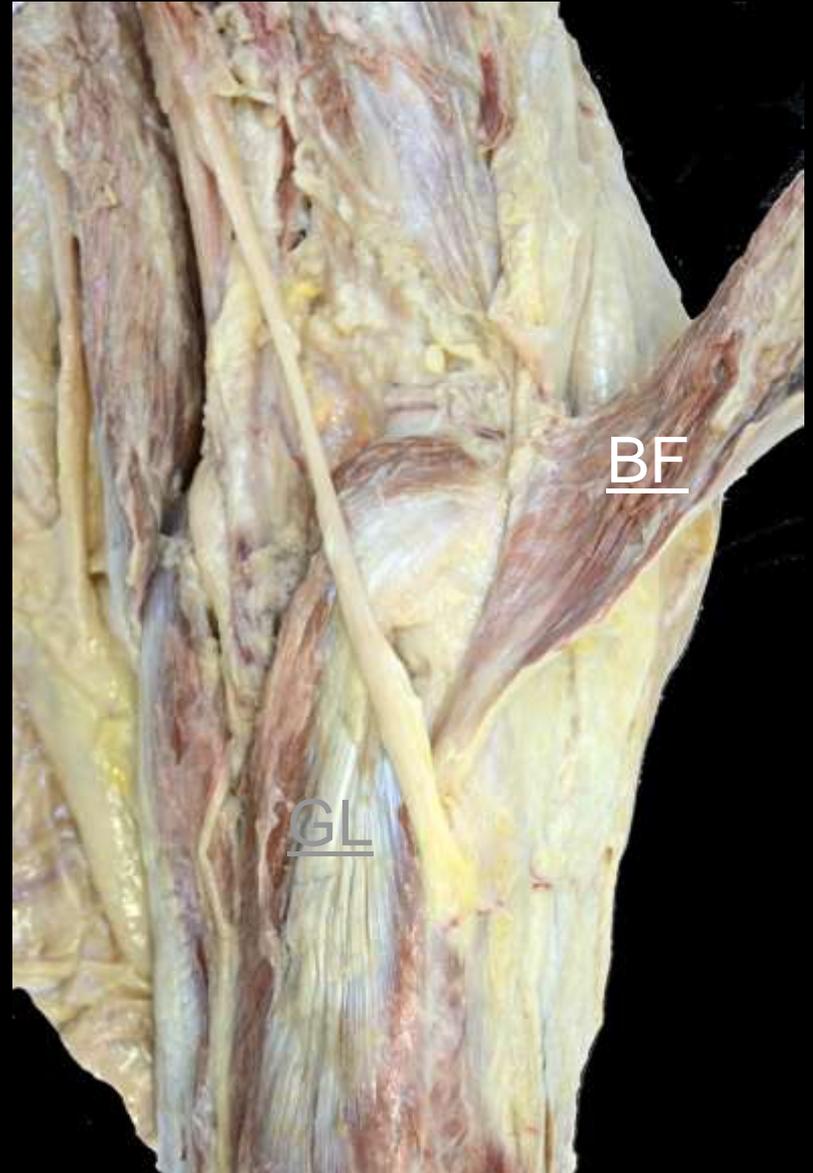
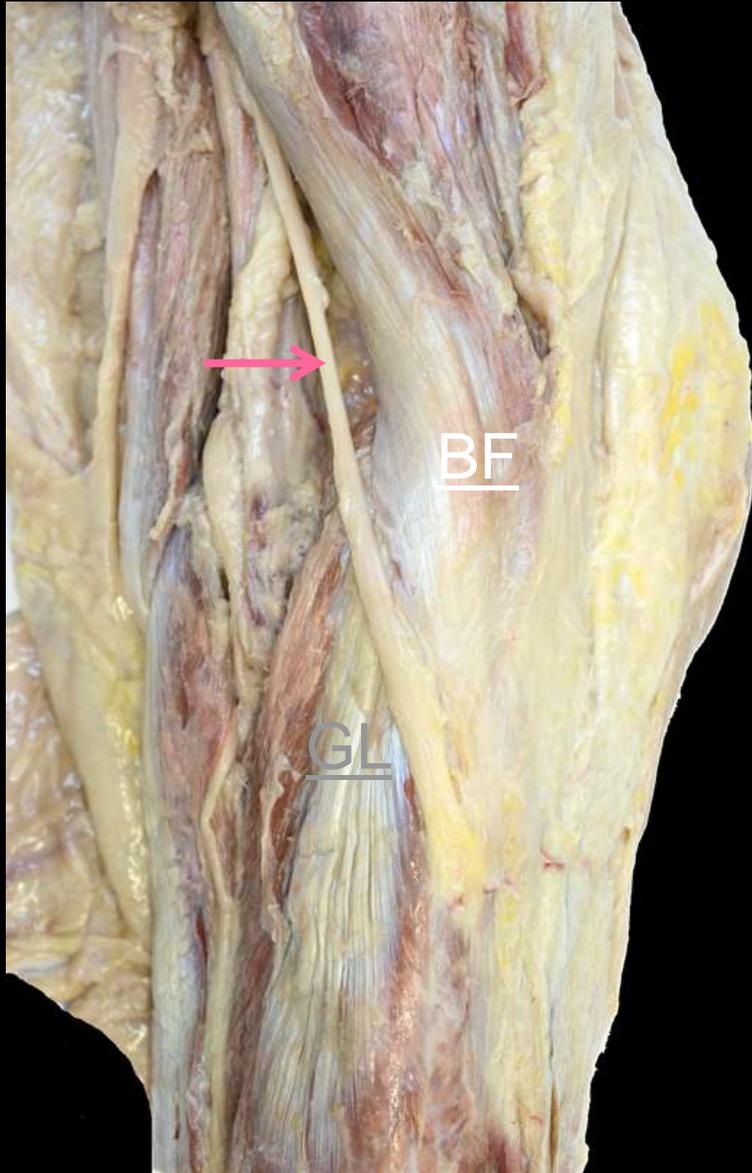
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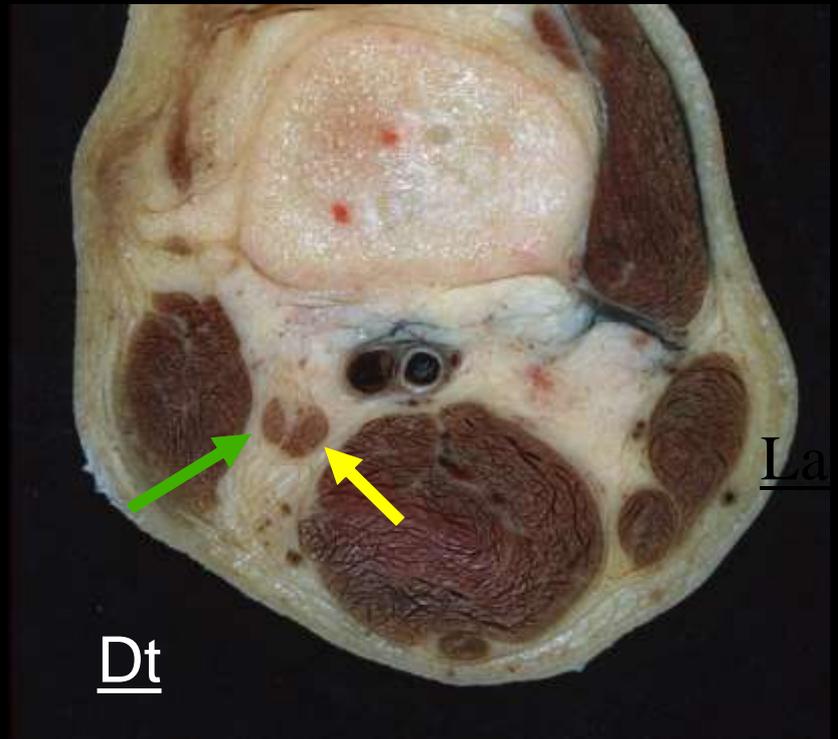
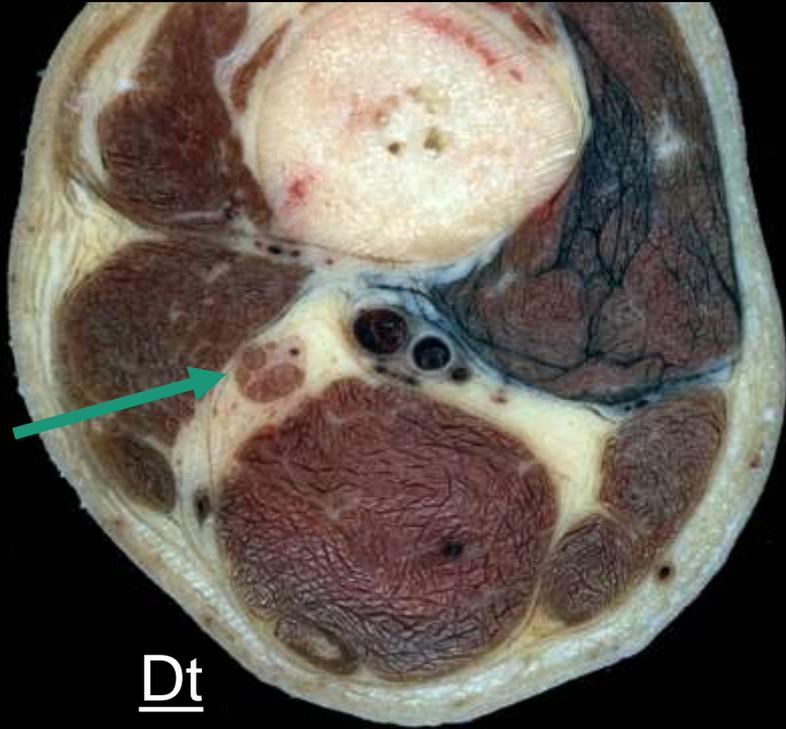
Toldt

Nerf Tibial

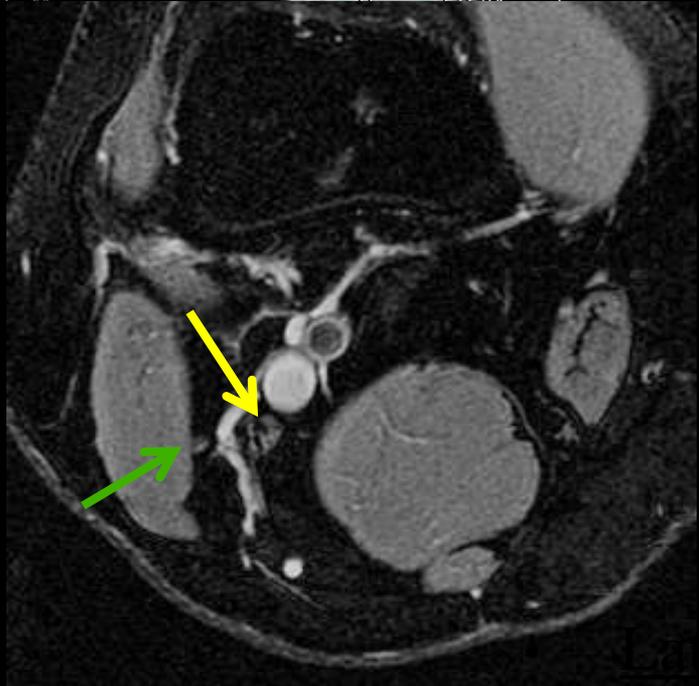
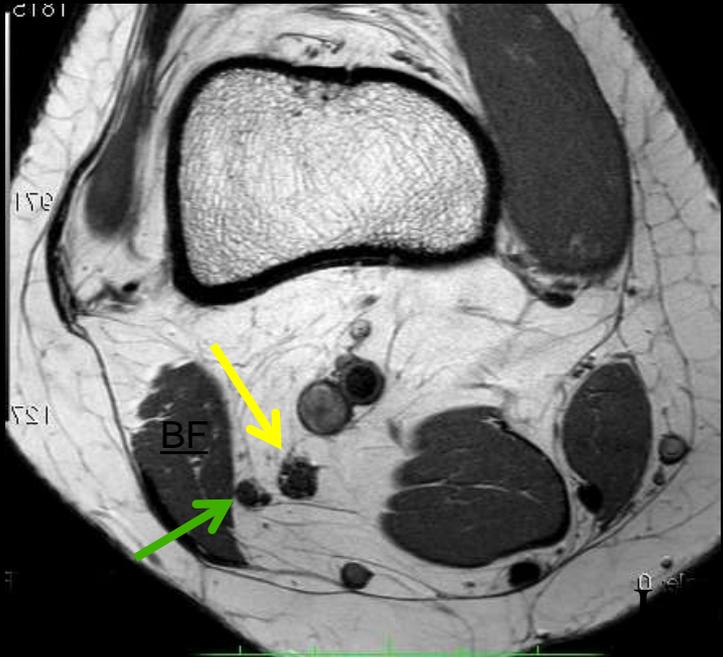
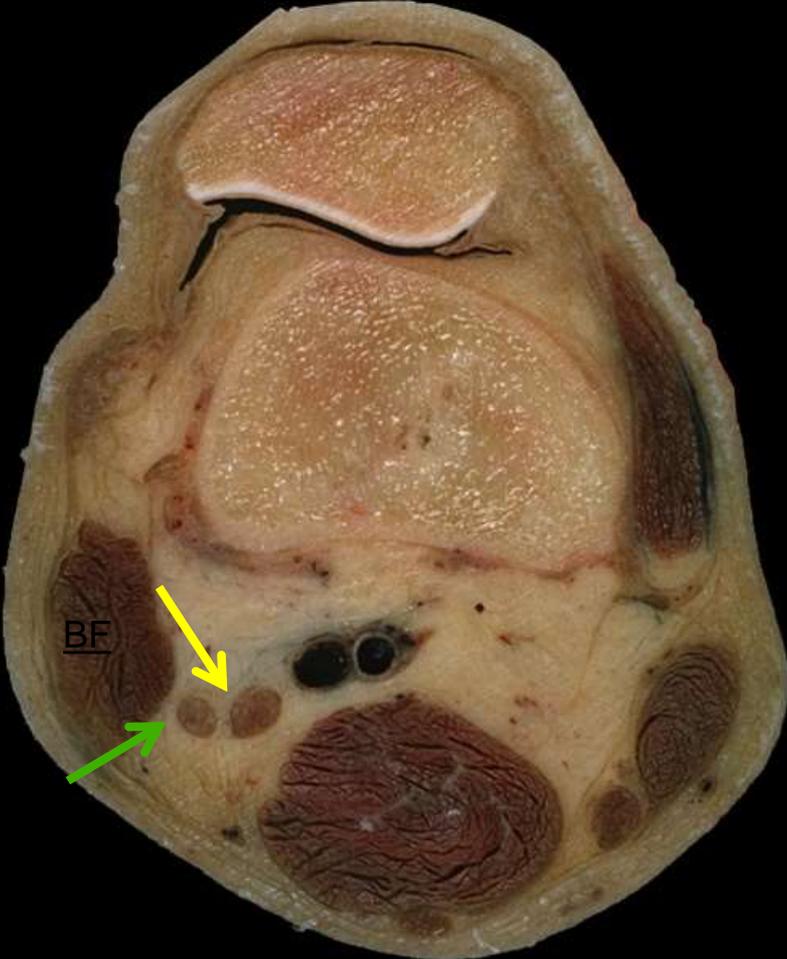


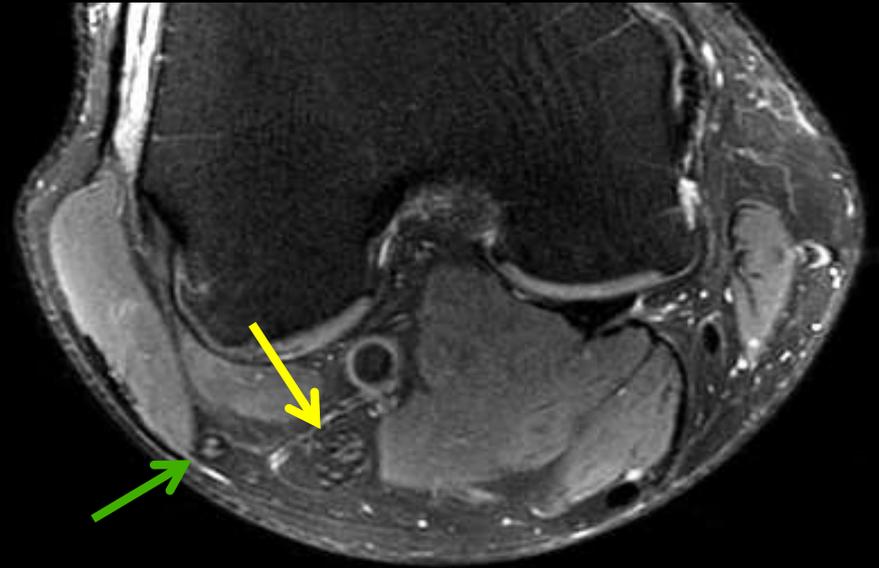
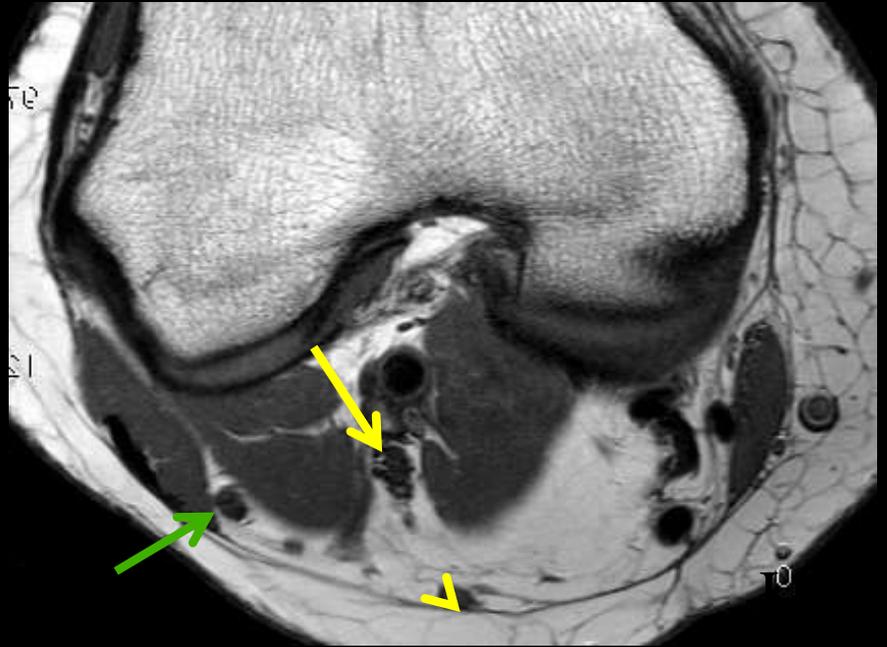
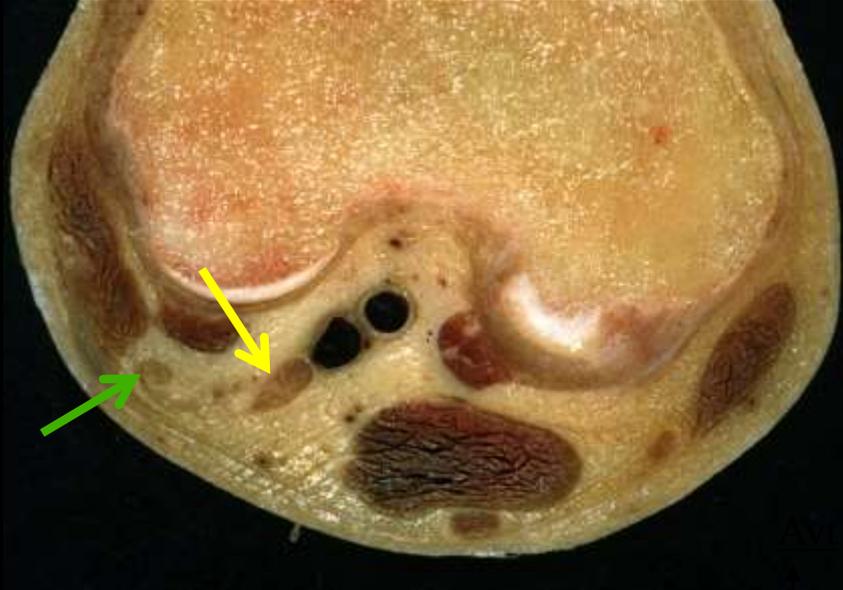
Fibulaire commun

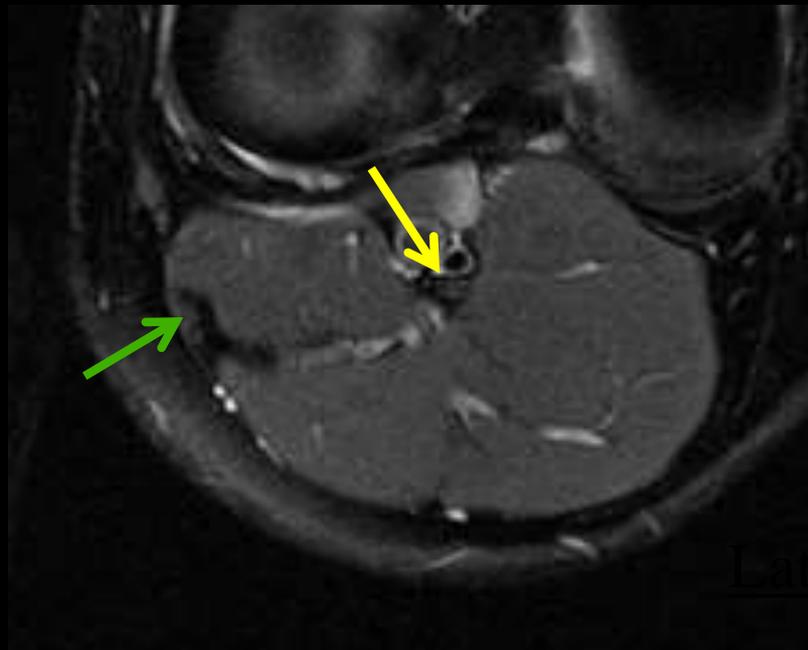
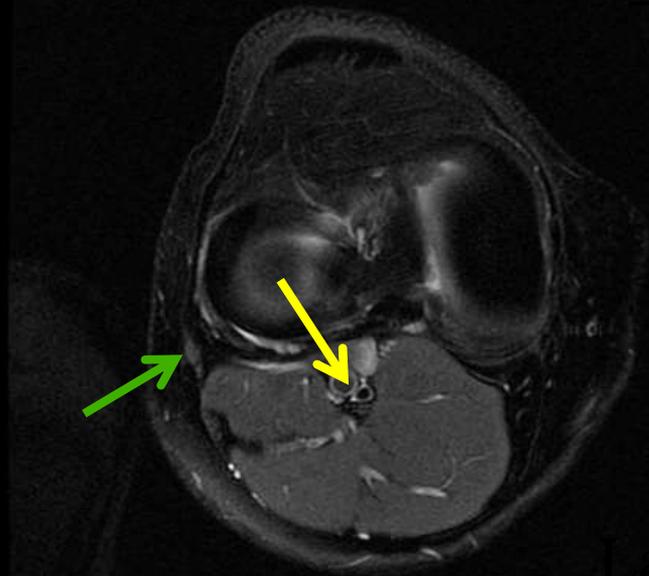
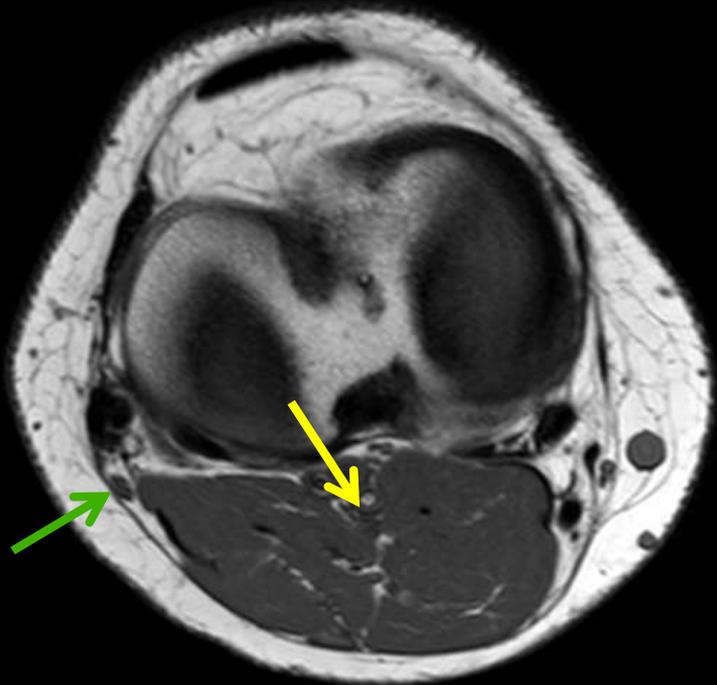
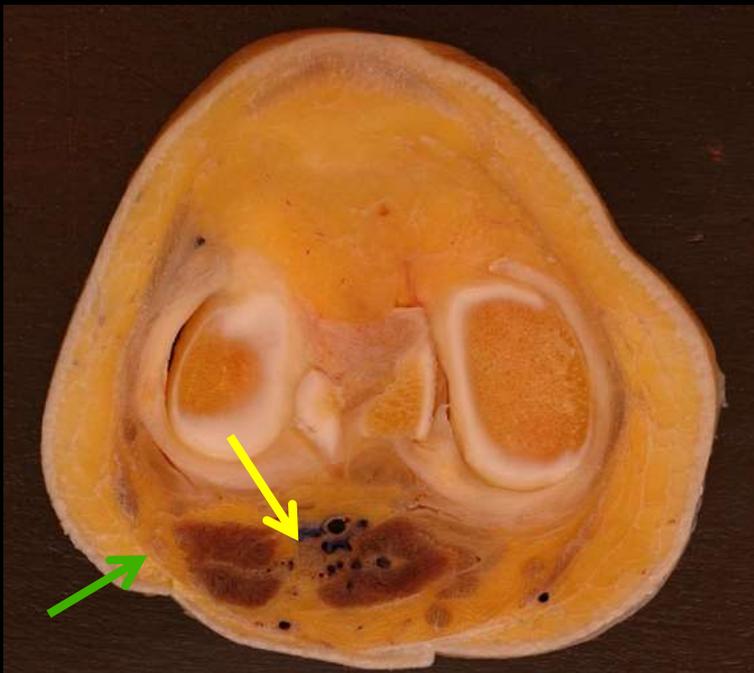




Nerf Tibial Fibulaire commun

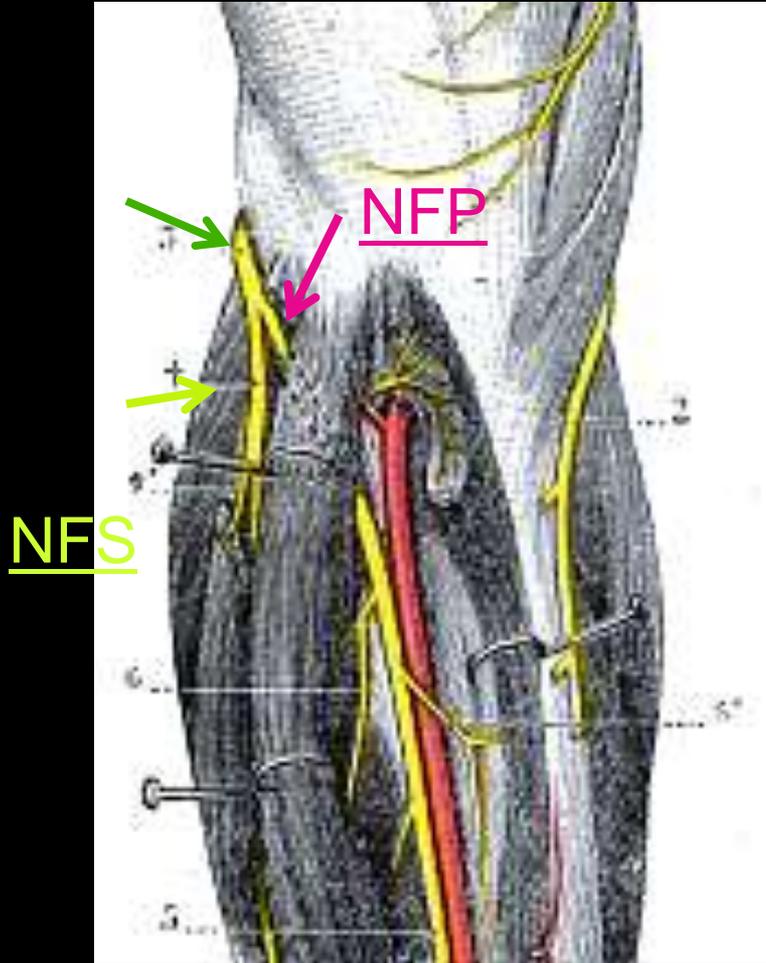


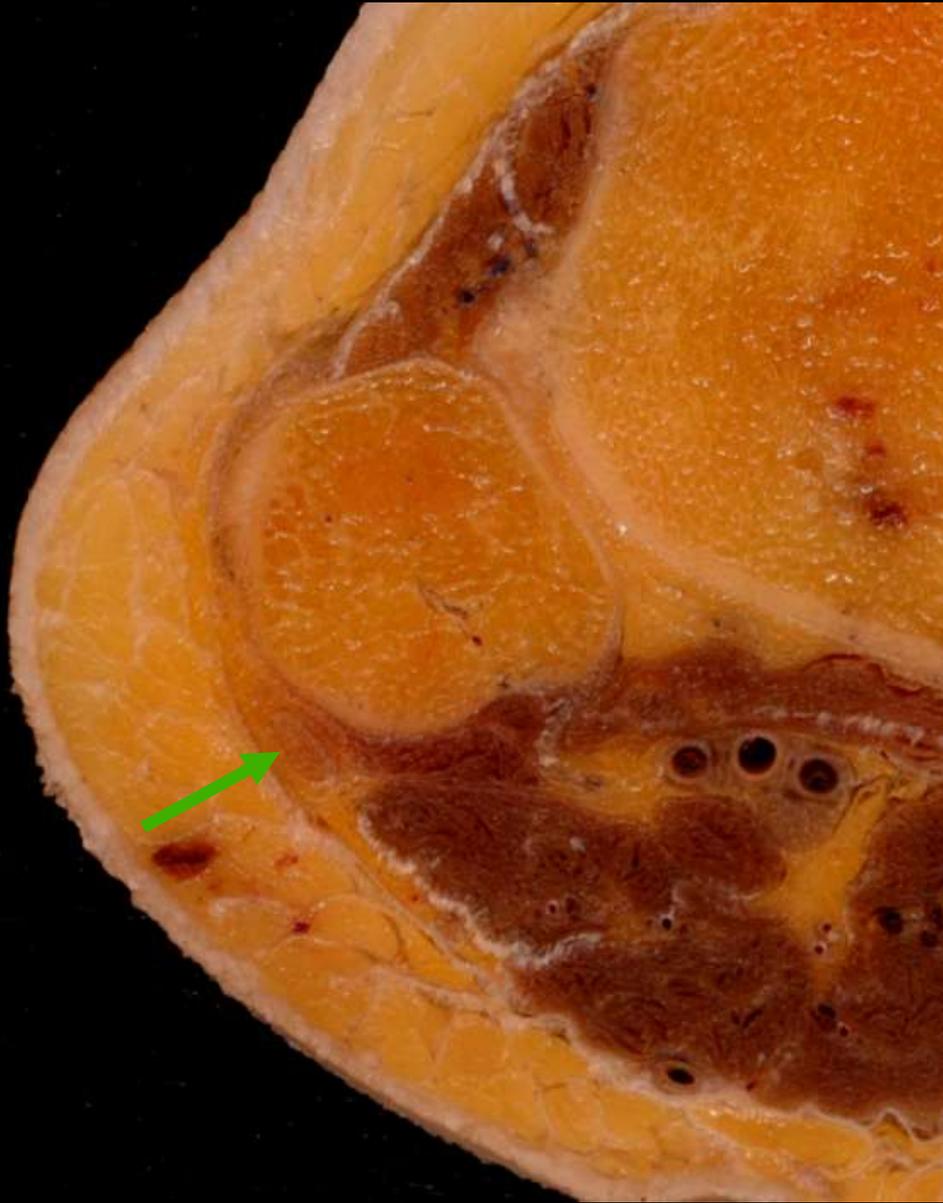


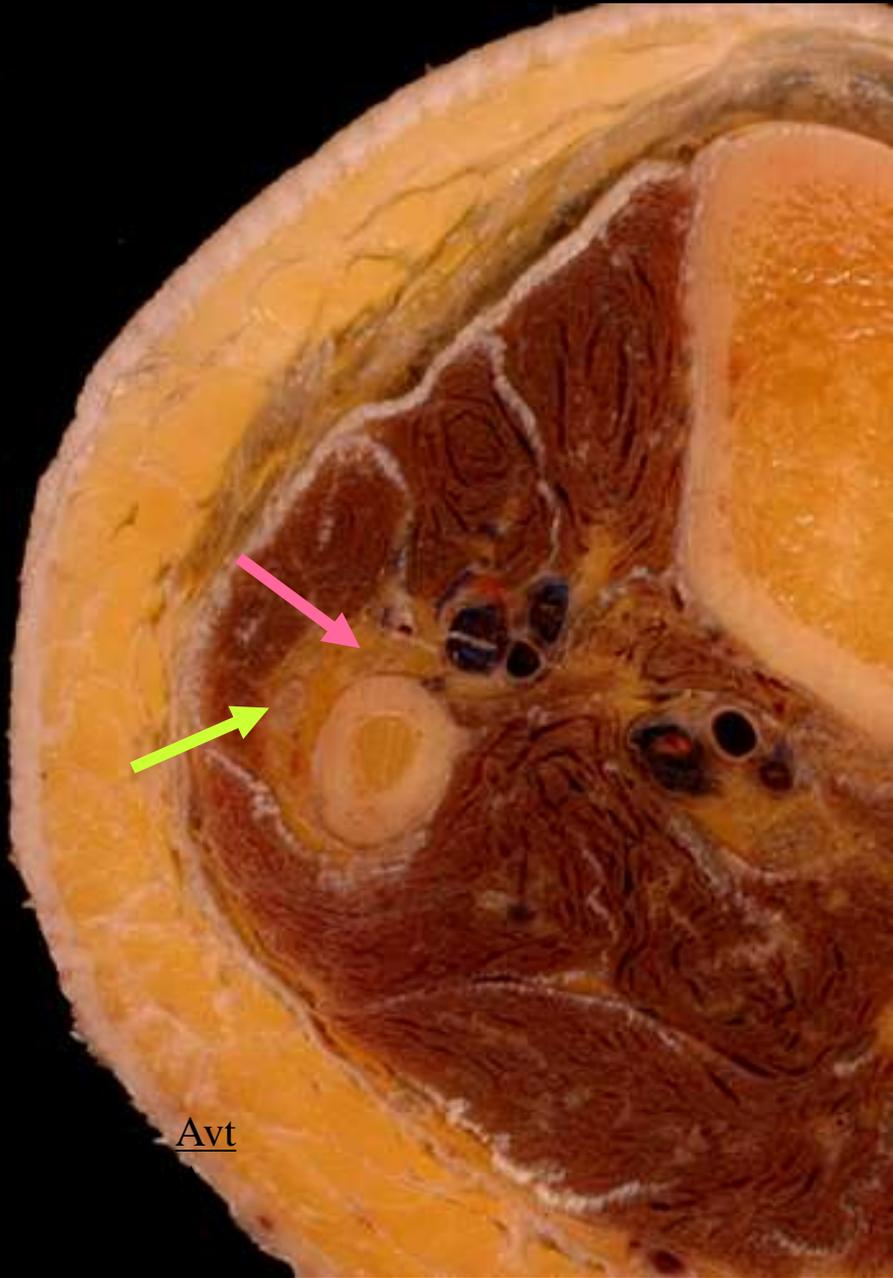


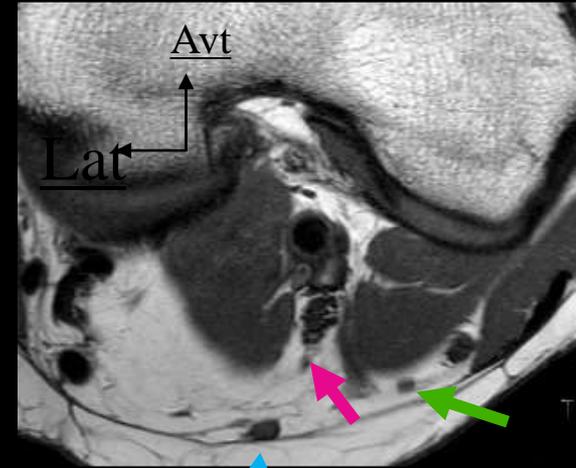
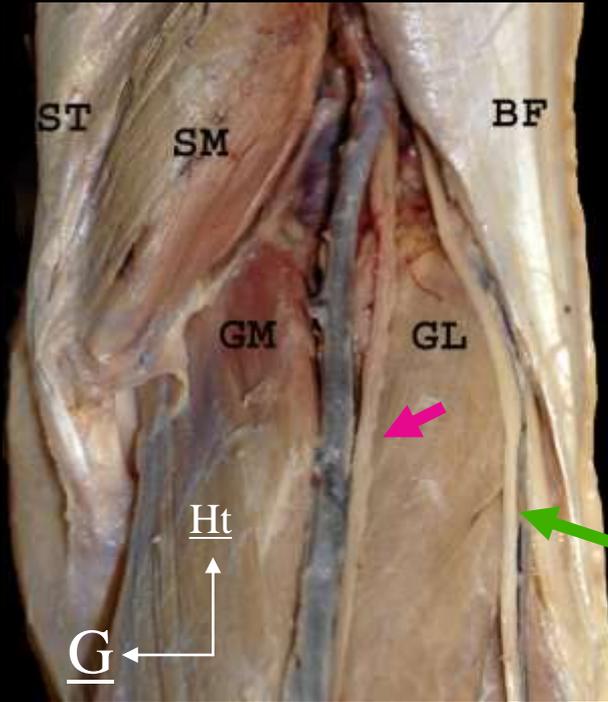
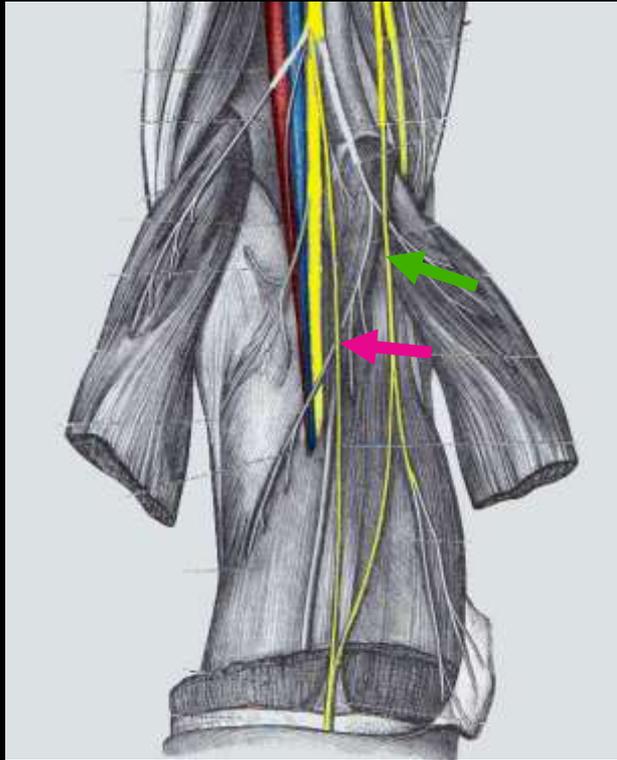
Fibulaire commun

Division en nerf fibulaire superficiel et profond

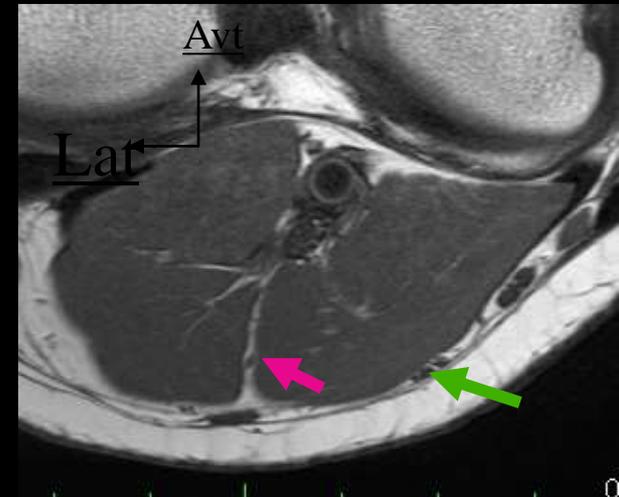
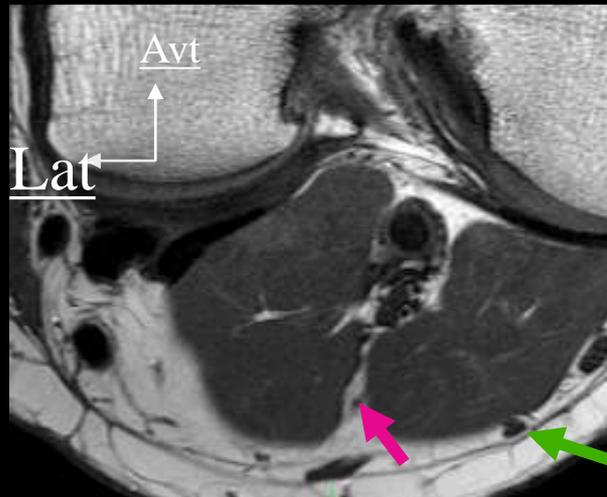








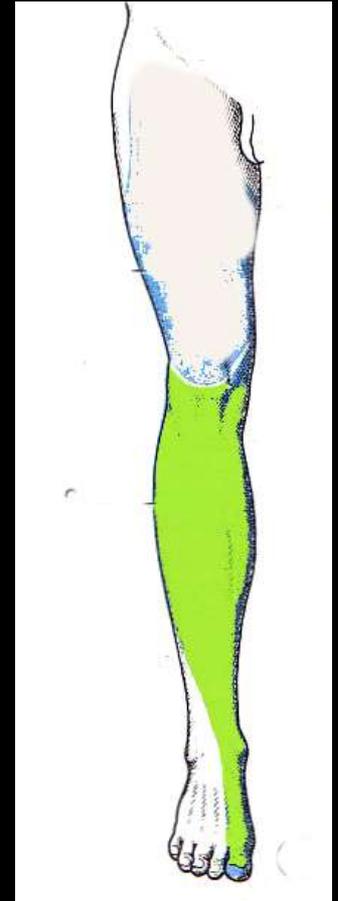
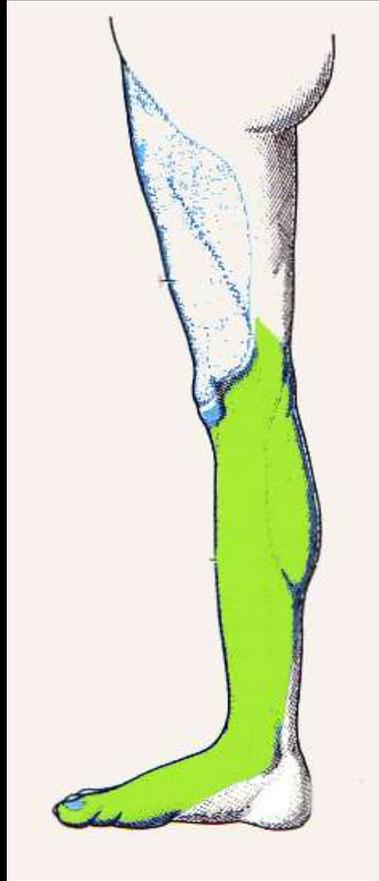
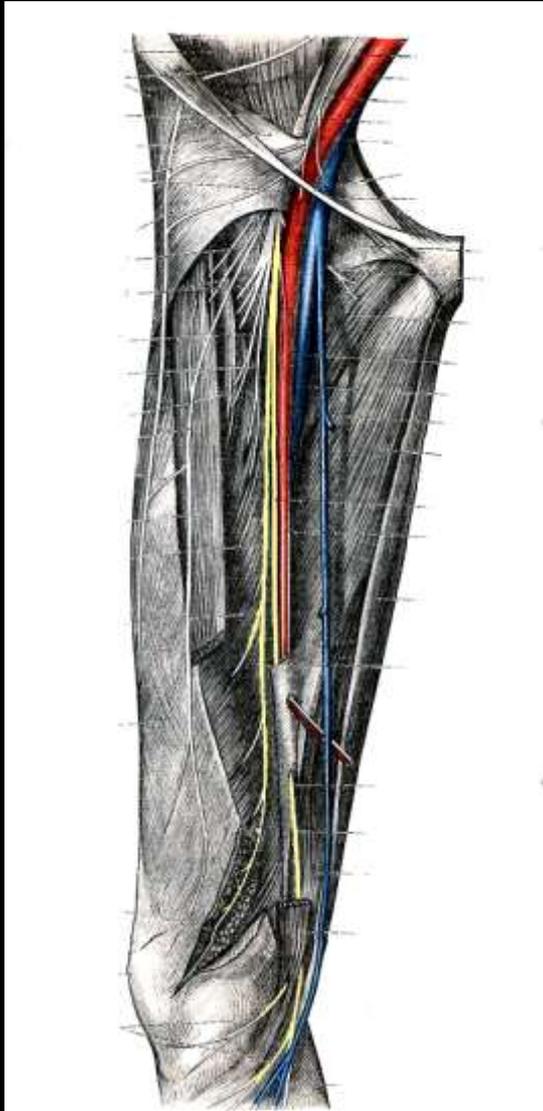
Veine petite saphène



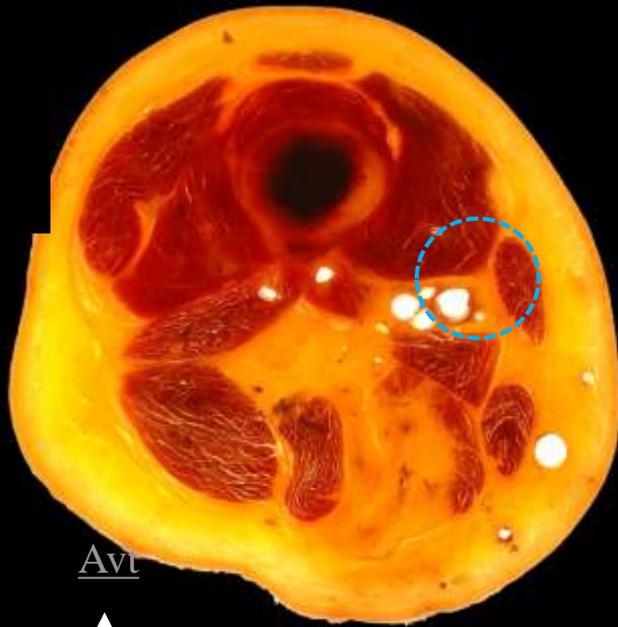
← N cutané sural latéral

← N cutané sural médial

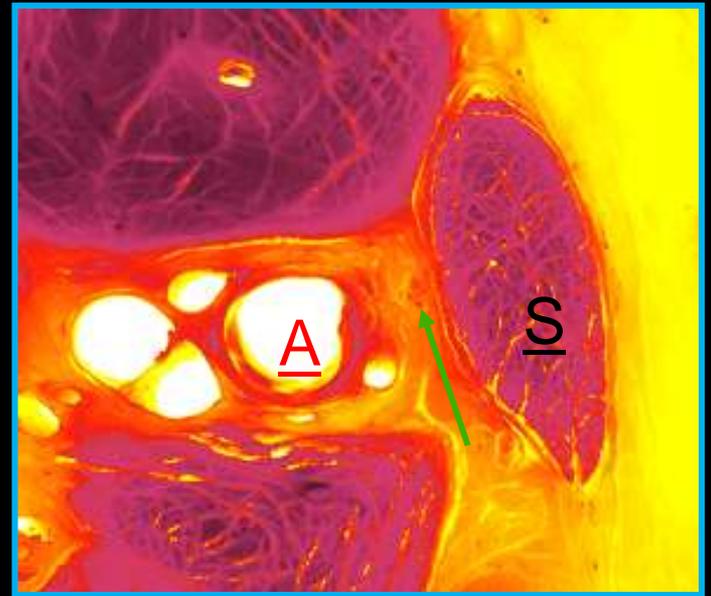
Nerf saphène

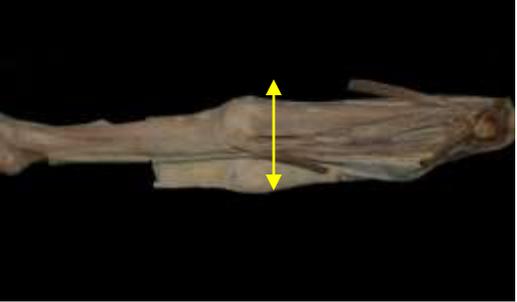


Gray

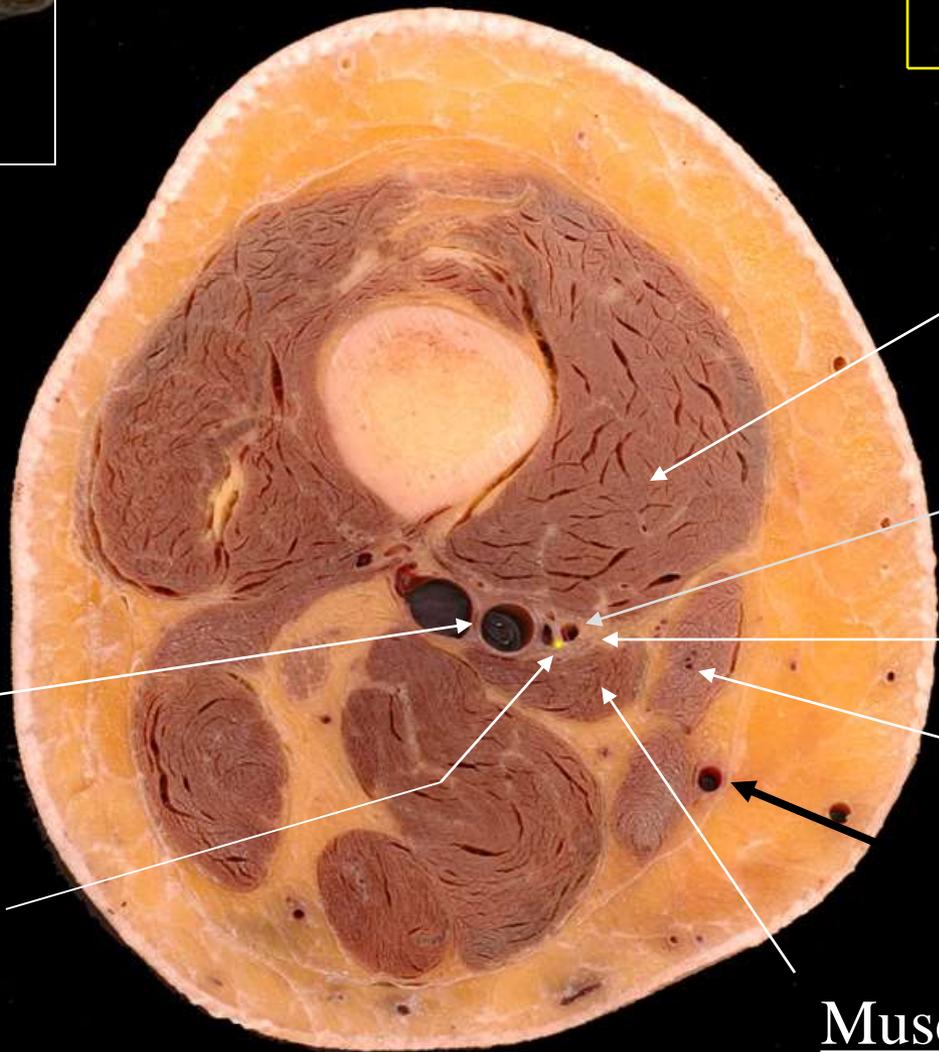


Lat ← ↑ Ant





ant
↑
↓
→ méd



Artère
fémorale

Nerf
saphène

Muscle
vaste
médial
Artère
descendante
du genou

Muscle
grand
adducteur

