

DIU
Arthroscopie



Anatomie et Biomécanique du LCA

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Introduction

Pivot central

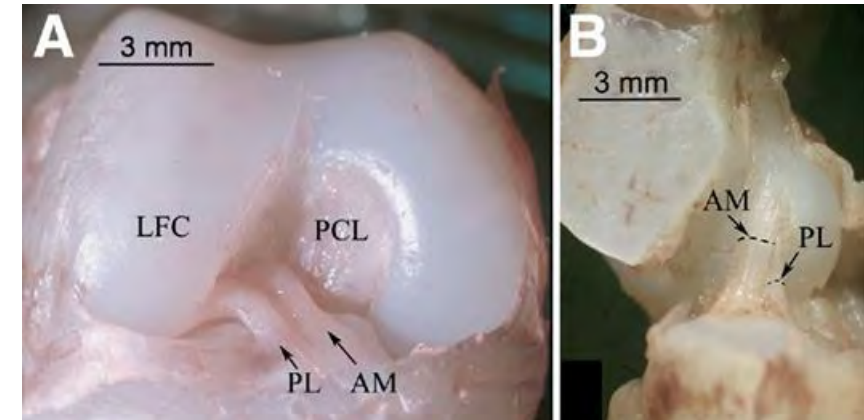
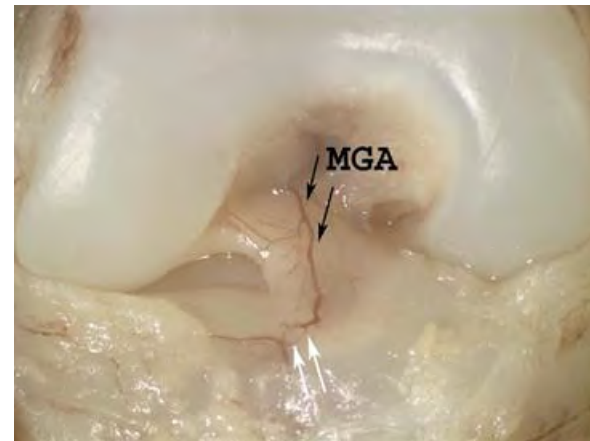
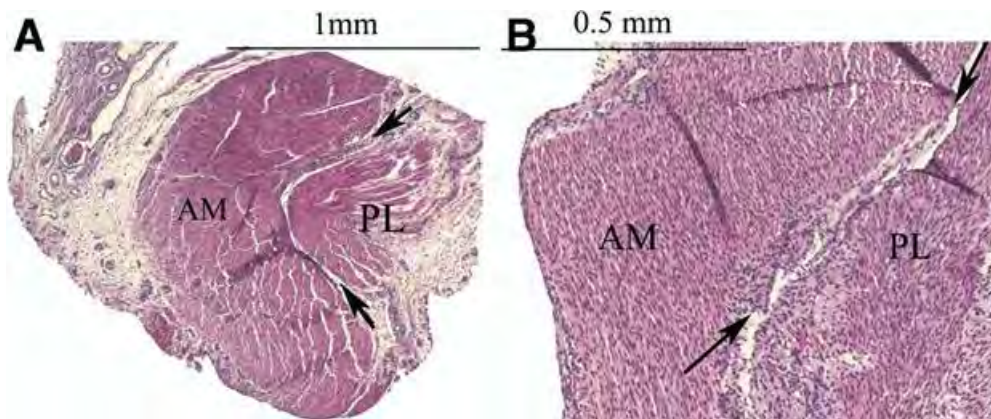


Embryologie

6,5 semaines

Gaine synoviale de la capsule postérieure

2 faisceaux

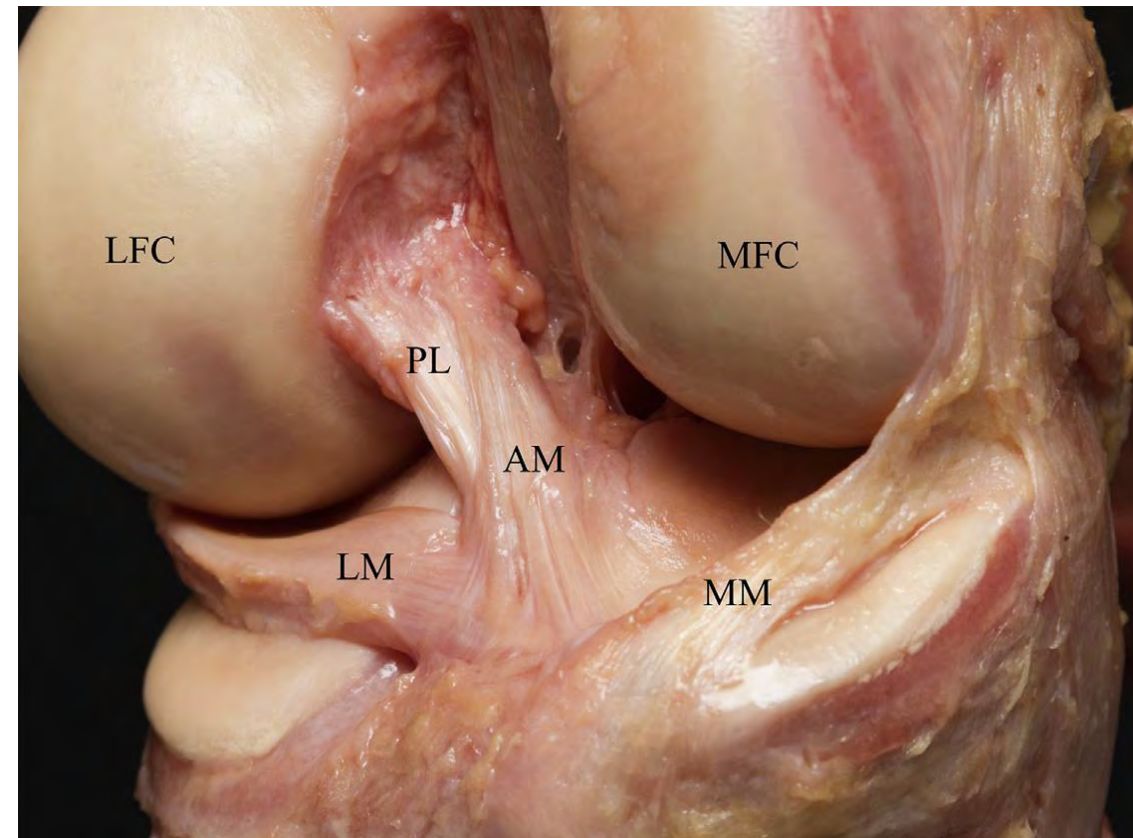


Ferretti et al. 2007

Anatomie macroscopique

Fosse (ou échancrure) intercondyloire du fémur

Intra-articulaire mais extra-synovial

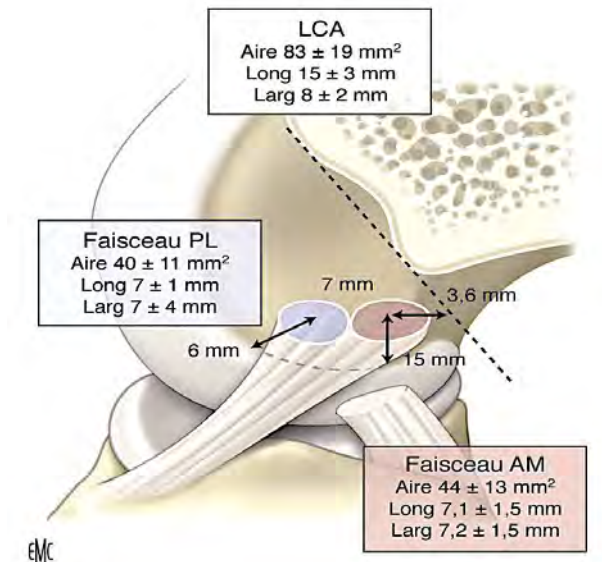
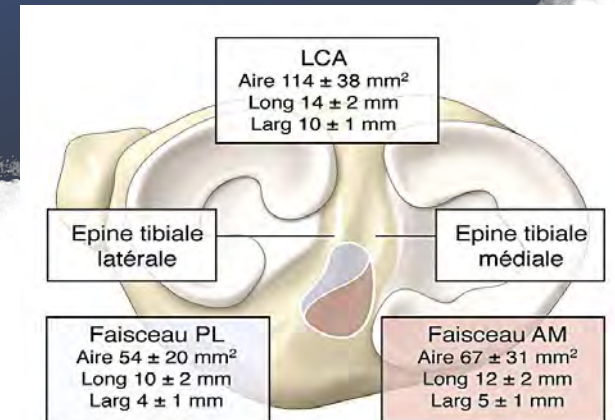
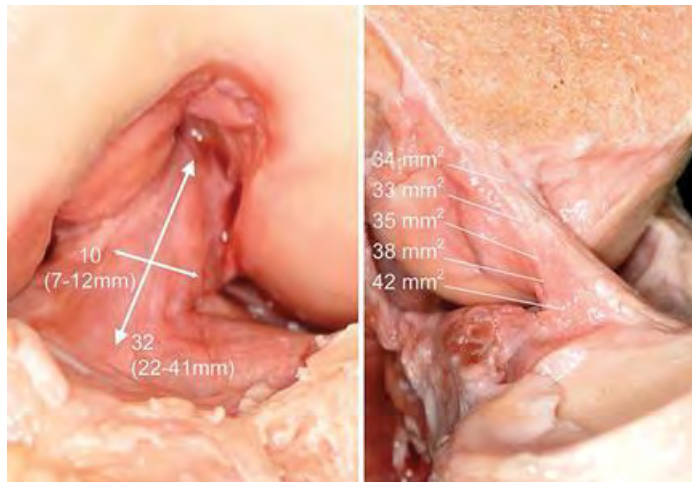


Portion centrale

L=32 mm (22-41)

l= 10 mm (7-12)

Portion intermédiaire fine: 36 mm² ♀ 49 mm² ♂



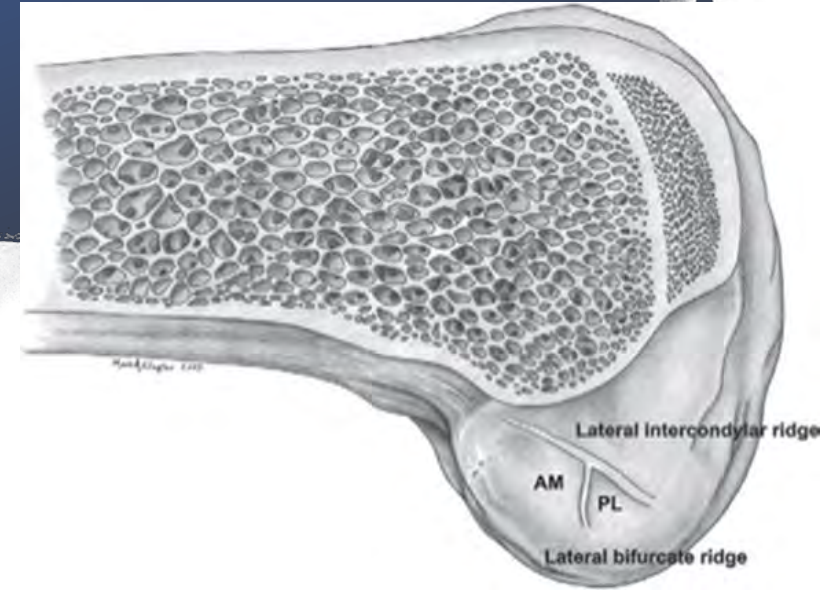
Insertion fémorale

Partie postérieure du versant médial du condyle fémoral latéral

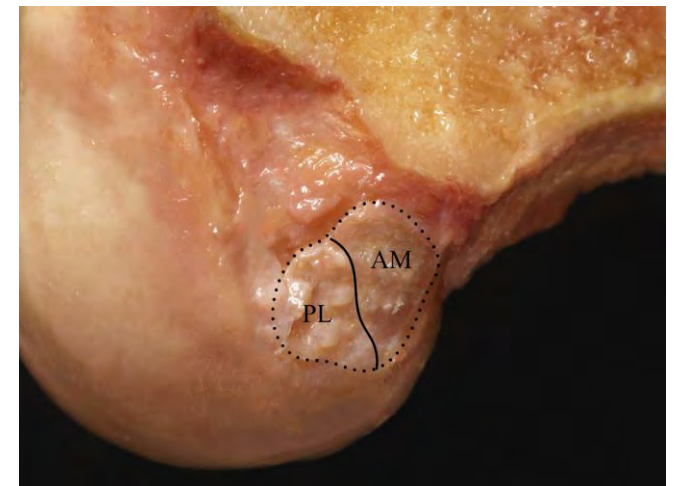
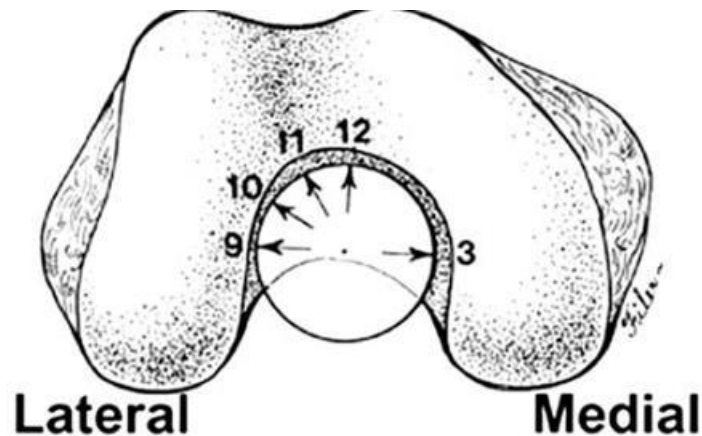
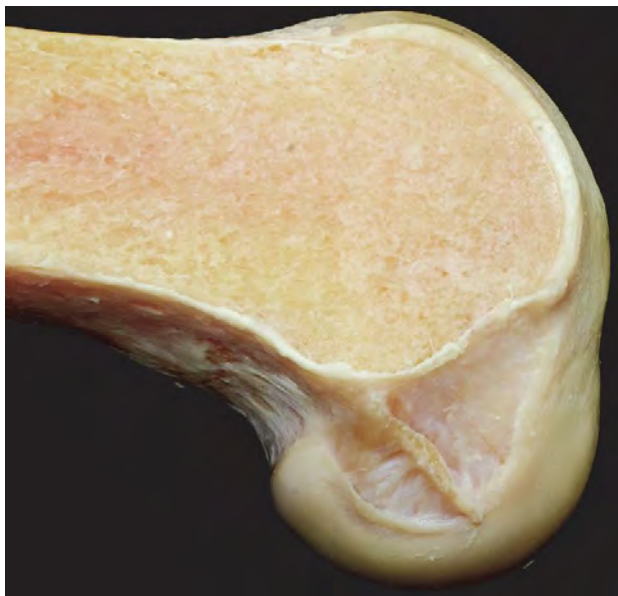
65-85 mm²

AM 35 mm² 11h-13h

PL 32 mm² 9h30-14h30



Ferretti et al. 2007



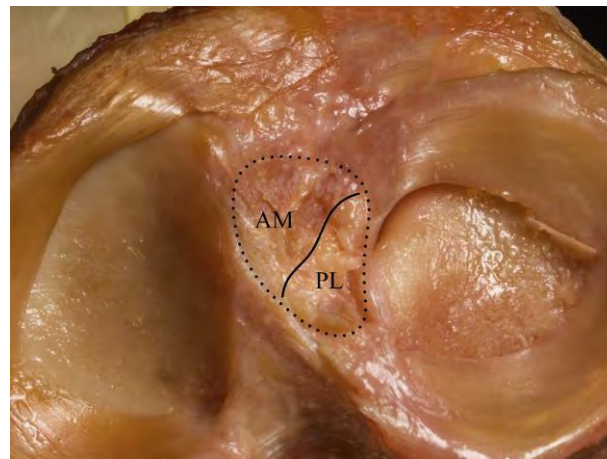
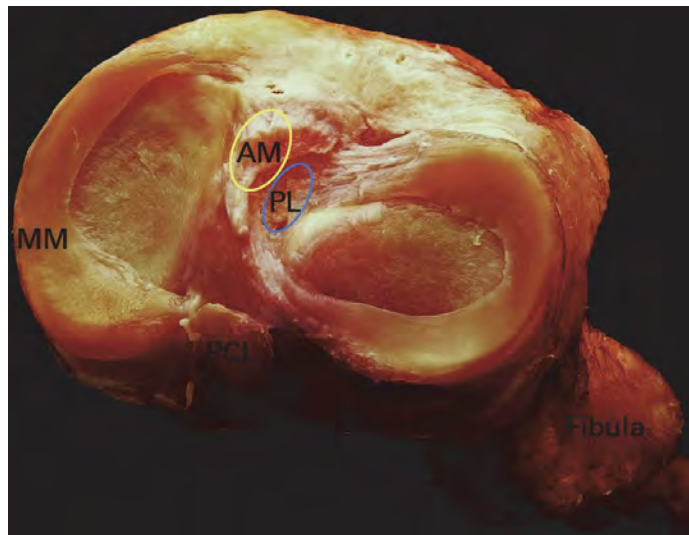
Insertion tibiale

Versant antéro-latéral de l'épine tibiale médiale

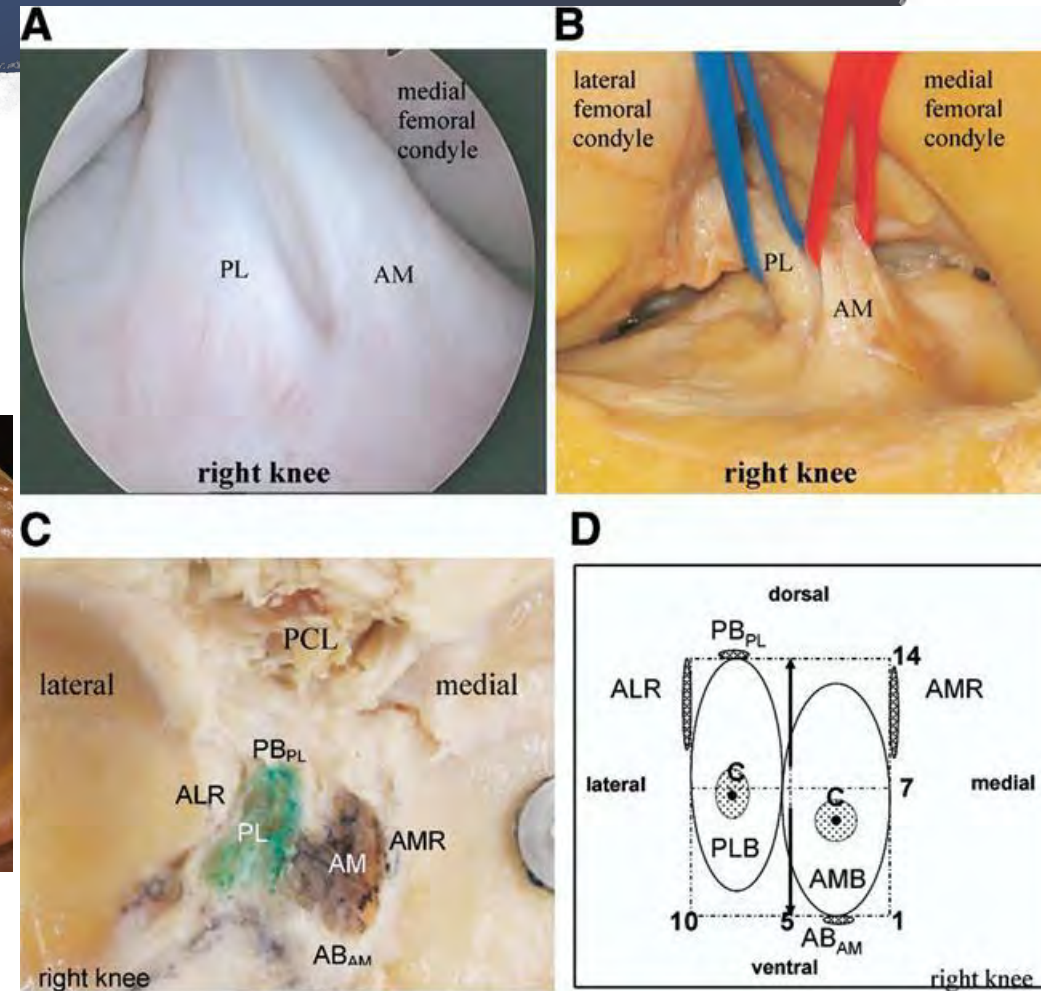
120% de l'insertion fémorale

AM 60 mm²

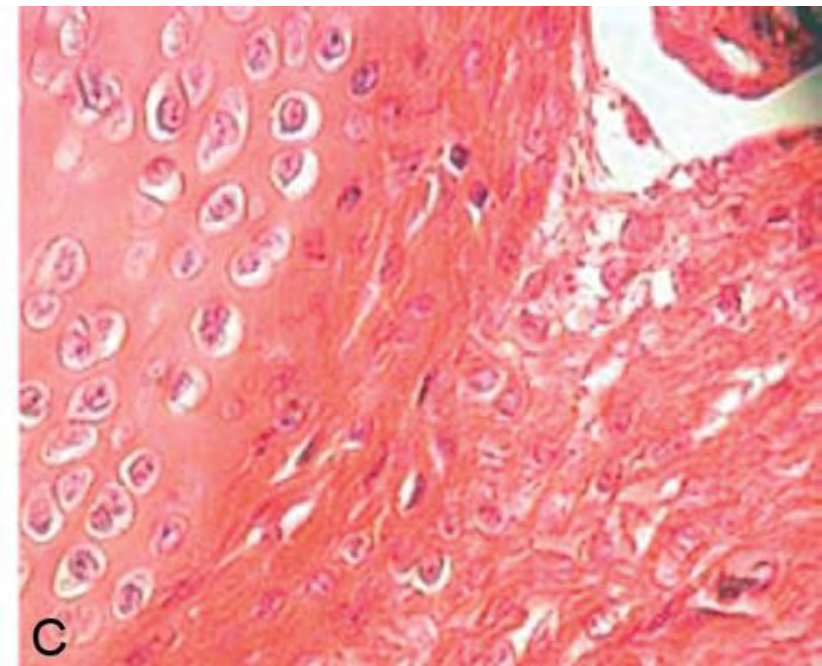
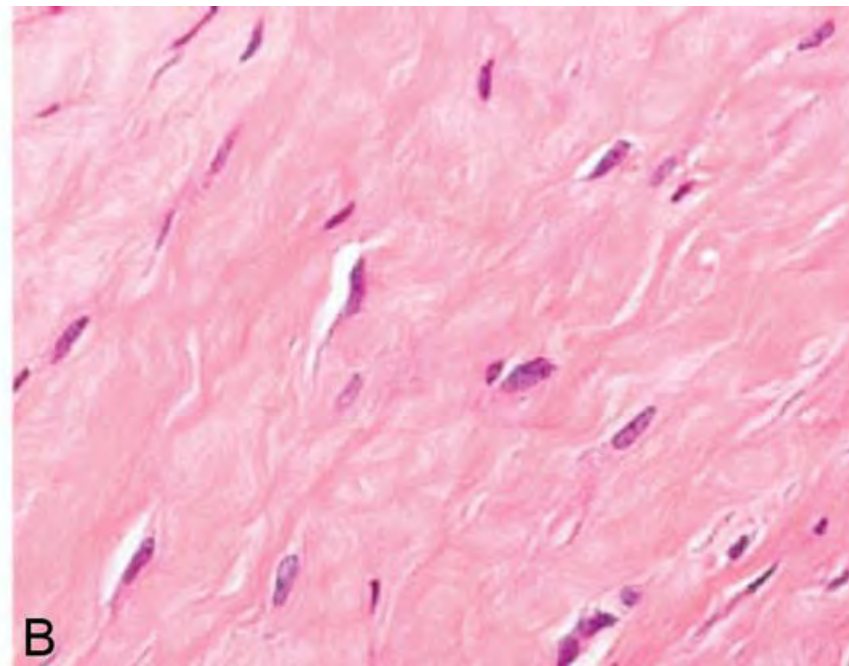
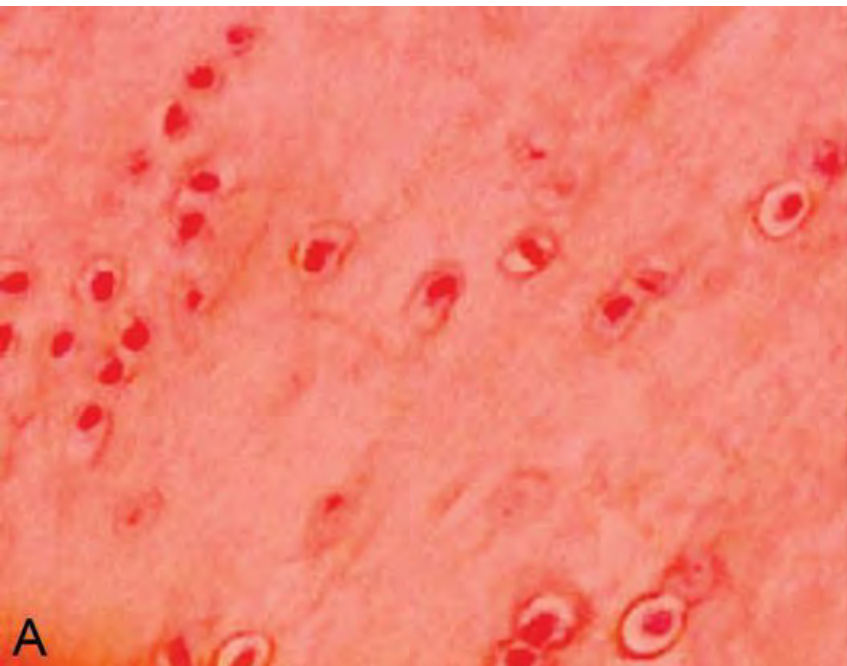
PL 50 mm²



Siebold et al. 2008



Anatomie microscopique



Innervation

Branches articulaires postérieures du nerf tibial

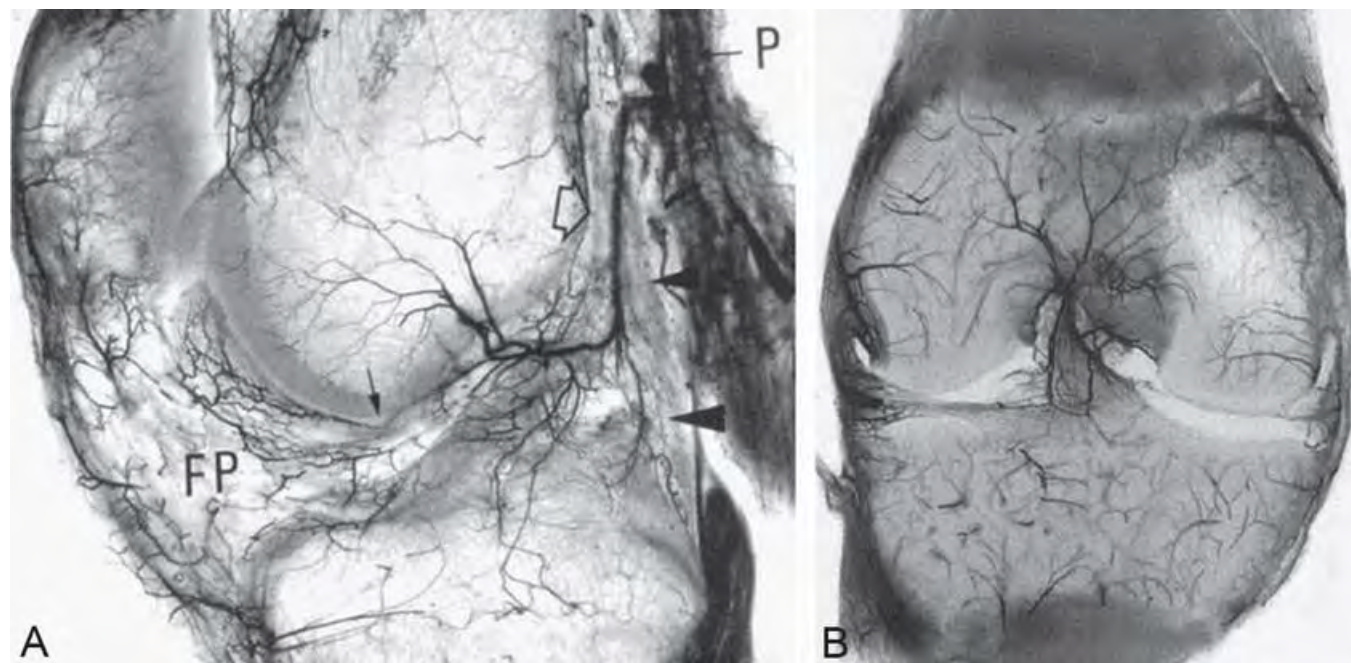
3 récepteurs:

mécanorécepteurs: réponse lente (Ruffini et Golgi) et rapide (Vater-Pacini)

nocicepteurs: terminaisons libres

Mécanorécepteurs=proprioception

Vascularisation

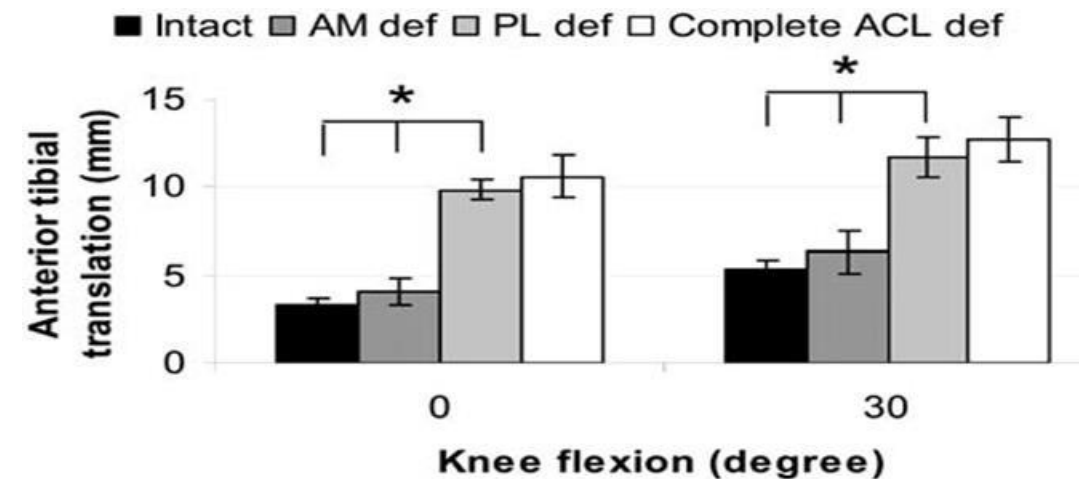
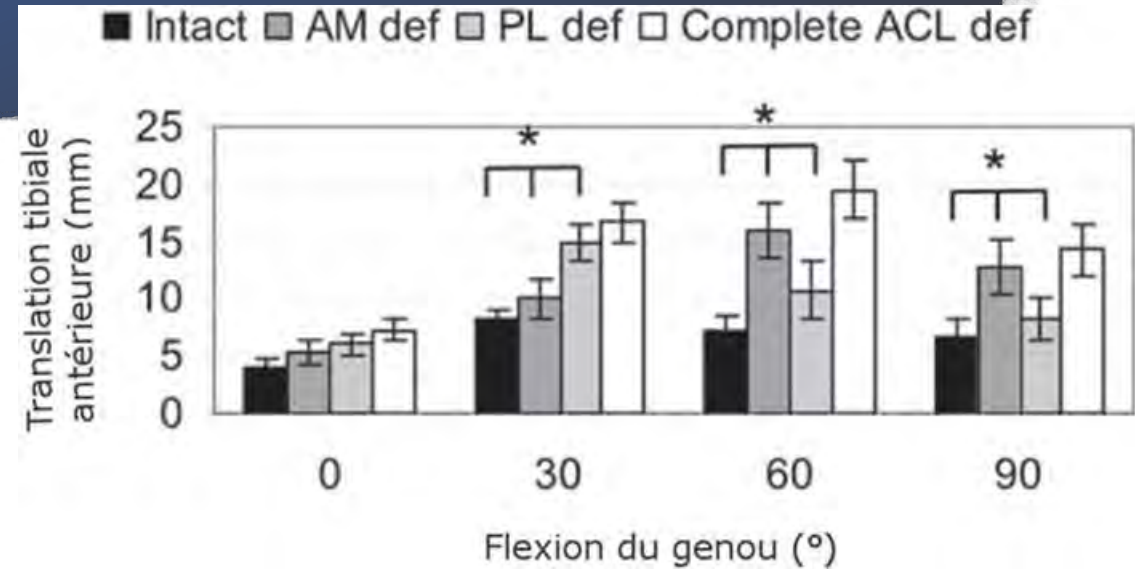
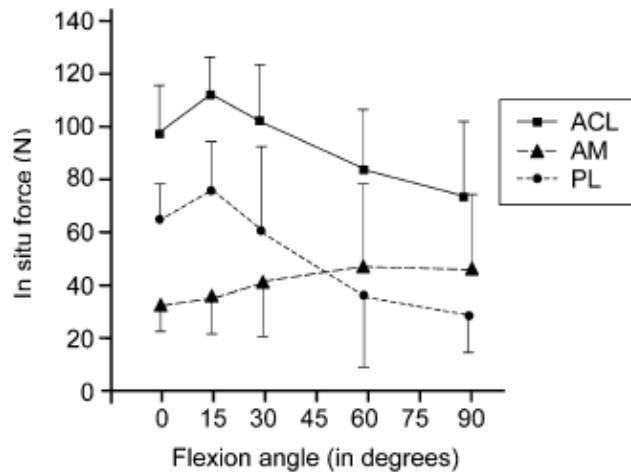


Biomécanique du LCA

Frein primaire au tiroir antérieur

Frein secondaire majeur (60%) à la rotation médiale (fx PL)

Frein secondaire mineur au valgus

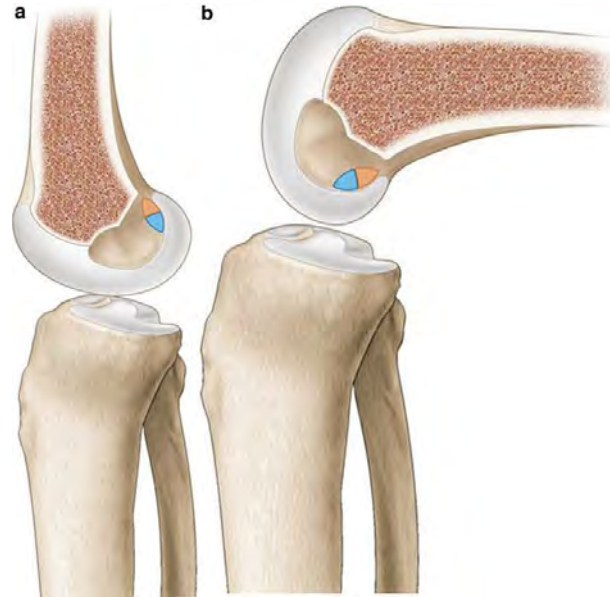
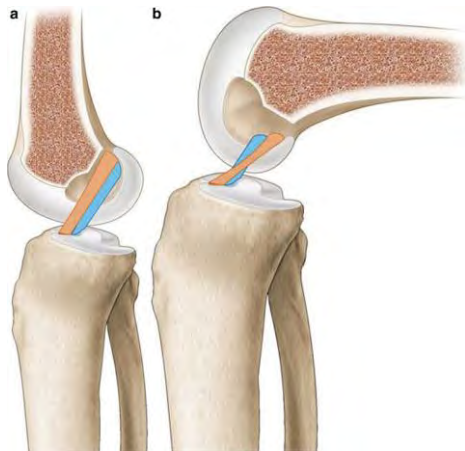


Biomécanique des faisceaux

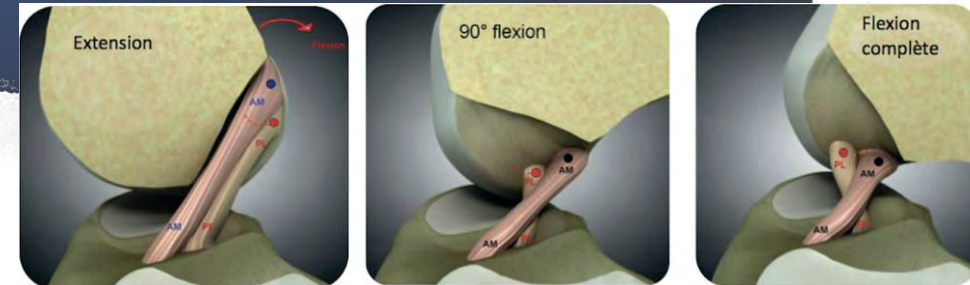
Anisométrie

AM: tendu en flexion

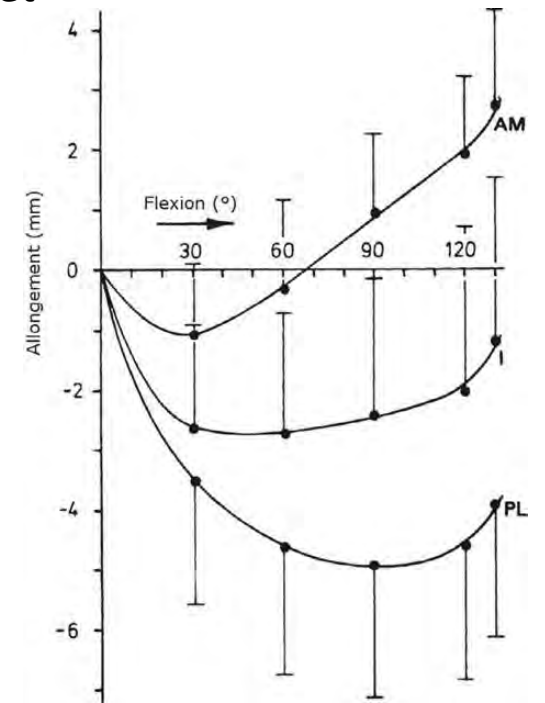
PL: tendu en extension



Bicer. 2009



Colombet

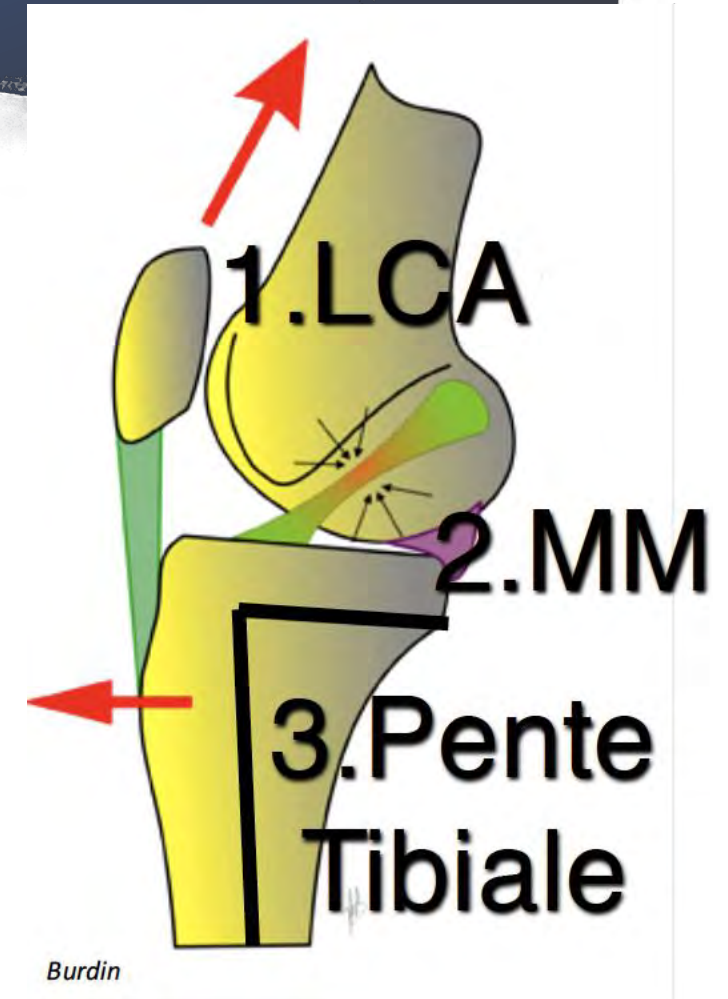
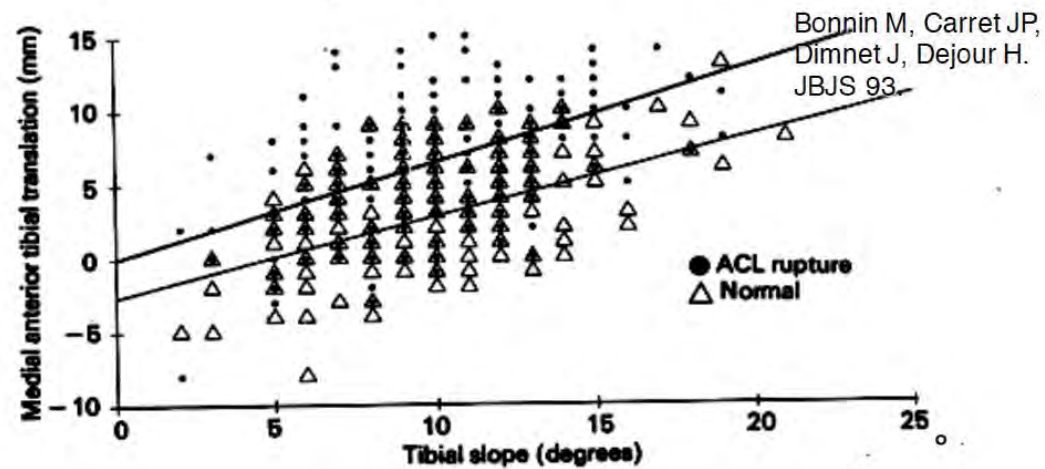


Amis

Conclusion

LCA: frein au tiroir antérieur et à la rotation médiale

Proprioception ++





Merci