

IMAGERIES DU GENOU TRAUMATIQUE DU BASKETTEUR



Bernard ROGER

GENOU DOULOUREUX DU BASKETTEUR

- Quel(s) examen(s)?
- Pour quel diagnostic?
- Pour quel bilan?
- Pour quel traitement?

CONTEXTES CLINIQUES

1. Traumatique aigu ou chronique
2. Micro-traumatique
3. Avant ou Après traitement

EXAMEN CLINIQUE

1. Diagnostic impossible
(douleur, épanchement...)
2. Diagnostic probable
(à confirmer)
3. Diagnostic certain
(choix thérapeutique)

BILAN DES LÉSIONS

- Ligaments
- Ménisques
- Cartilage
- Tendons
- Os

TECHNIQUES D'IMAGERIE

1. Radiographie standard
2. Radiographie dynamique
3. Echographie
4. Arthrographie
5. Arthro-Scanner
6. I.R.M

RADIOGRAPHIE STANDARD

- Face en appui monopodal à 30° de flexion
- Profil en appui, extension complète et 30° de flexion
- Clichés dynamiques
- Gonométrie en charge – Système EOS

Face en appui monopodal,
Face 30° de flexion(schuss)
et Profil en appui 30° de flexion



Encoche traumatique du condyle externe



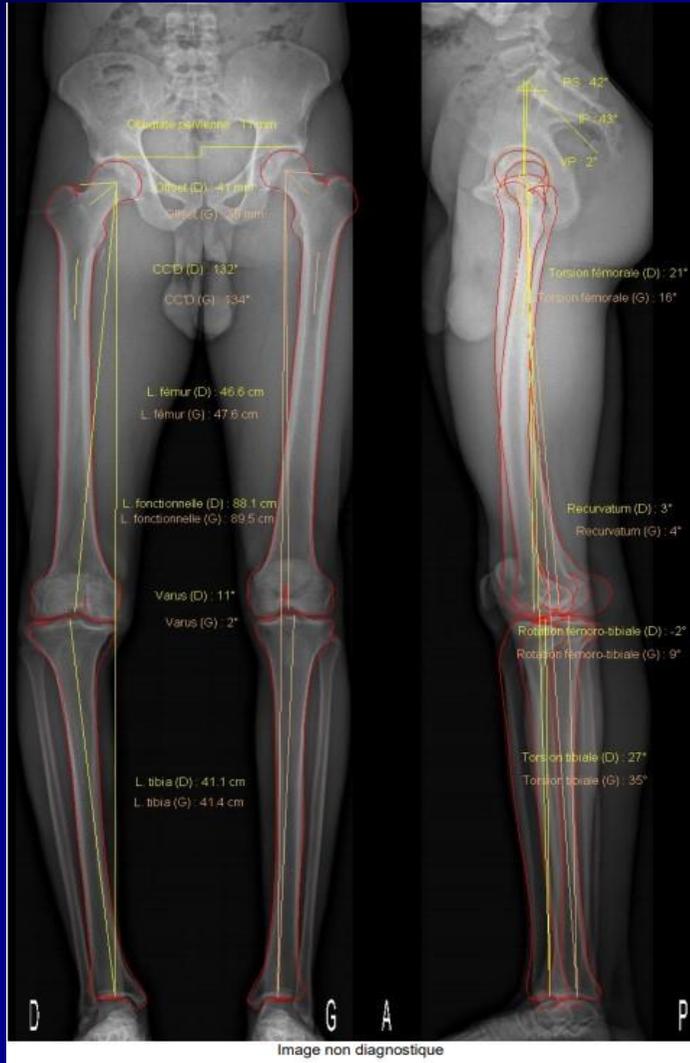
CLICHÉS DYNAMIQUES

- Manuel : varus – valgus
- Appareil : télos





GONOMÉTRIE EN CHARGE SYSTÈME EOS

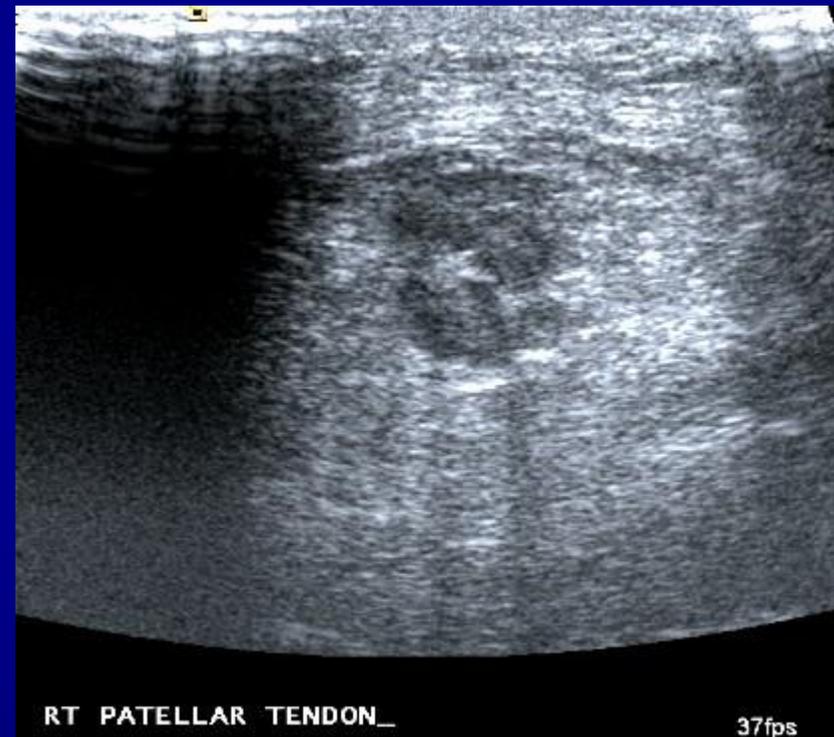
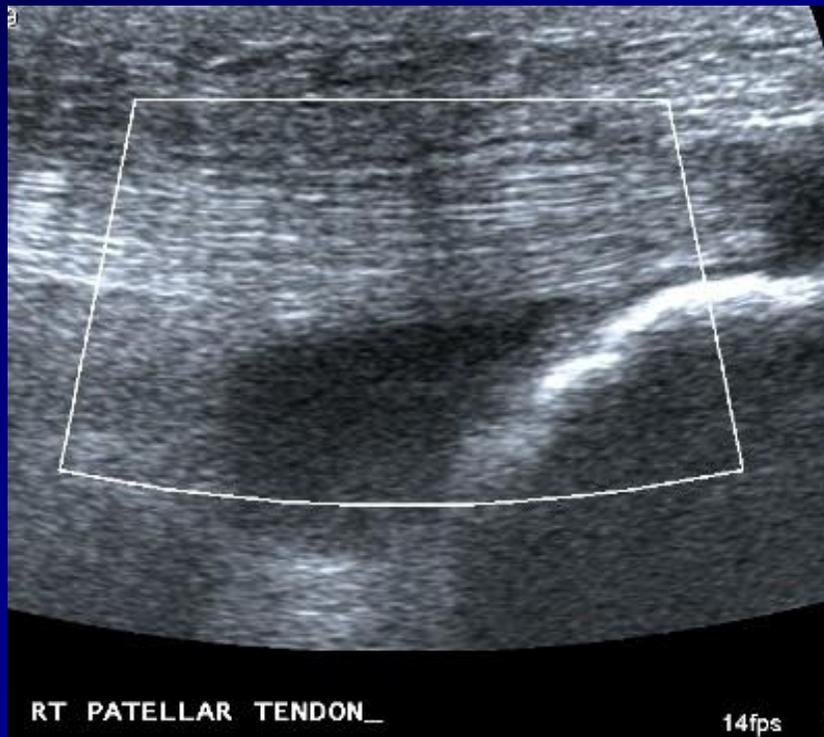


Hanche et genou			
Longueurs (3)	Droite	Gauche	
Longueur fémur	46.6 cm	47.6 cm	
Longueur tibia	41.1 cm	41.4 cm	
Longueur fonctionnelle	88.1 cm	89.5 cm	
Longueur anatomique	87.7 cm	89.0 cm	
Fémur (3)	Droite	Gauche	
Diamètre tête fémorale	47 mm	46 mm	
Longueur col	54 mm	53 mm	
Angle cervico-diaphysaire (CC'D)	132°	134°	
Offset fémoral	41 mm	39 mm	
Genou (4)	Droite	Gauche	
Valgus/Varus	Varus 11°	Varus 2°	
Flessum/Recurvatum	Recurv. 3°	Recurv. 4°	
HKS	6°	6°	
Angle fémoral mécanique	89°	92°	
Angle tibial mécanique	81°	87°	
Torsions (4)	Droite	Gauche	
Torsion fémorale	21°	16°	
Torsion tibiale	27°	35°	
Rotation fémoro-tibiale	-2°	9°	

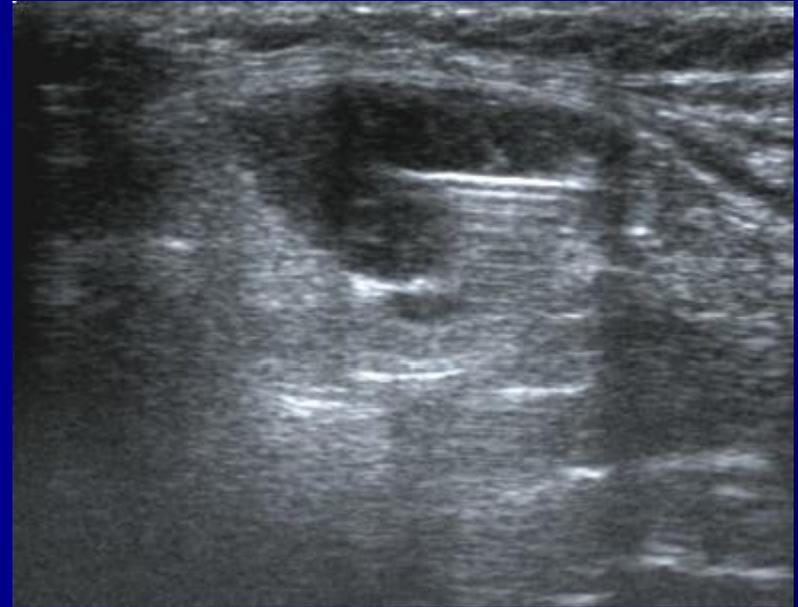
(3) Paramètres calculés en 3D.

(4) Paramètres calculés relativement au plan bicondylien.

ECHOGRAPHIE

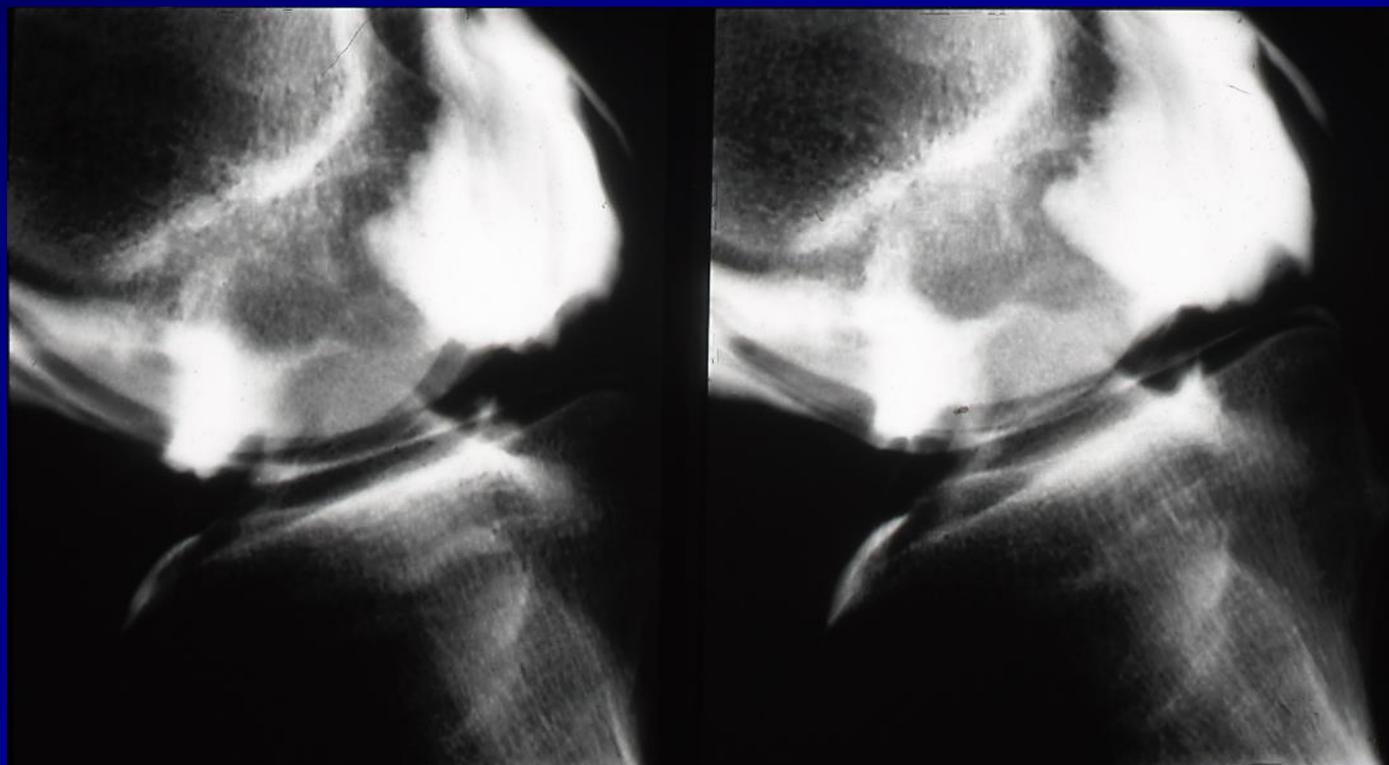


Bursite Tendon Rotulien



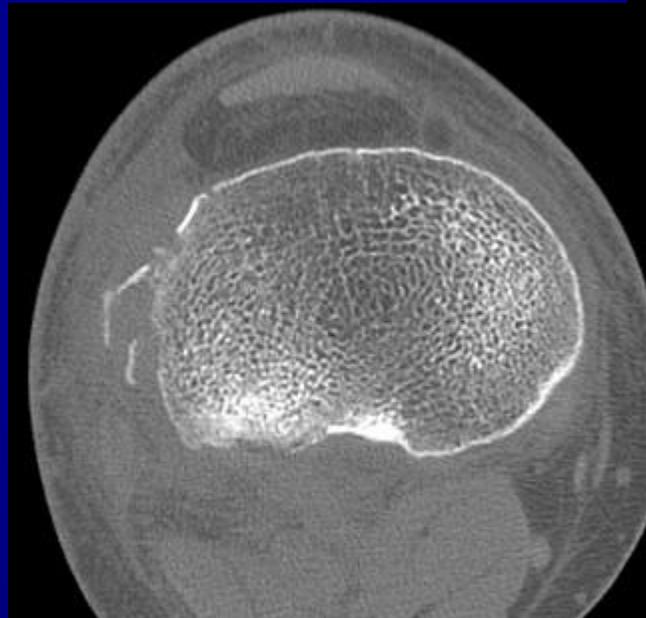
Tendinopathie Pointe de Rotule
Injection de PRP

ARTHROGRAPHIE



SCANNER

- *SCANNER*:
 - Traumatologie : fracture...
 - Bilan morphologique et rotationnel :
membres inférieur et rotule



ARTHRO-SCANNER

- *ARTHRO-SCANNER* :

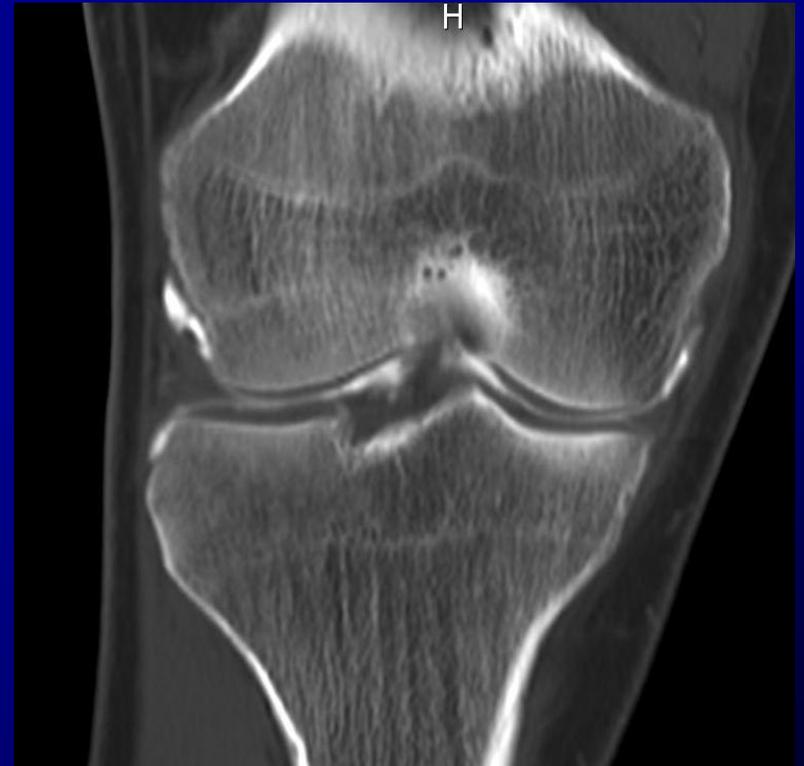
Cartilage

Ménisques

Pivot central

Corps étrangers...

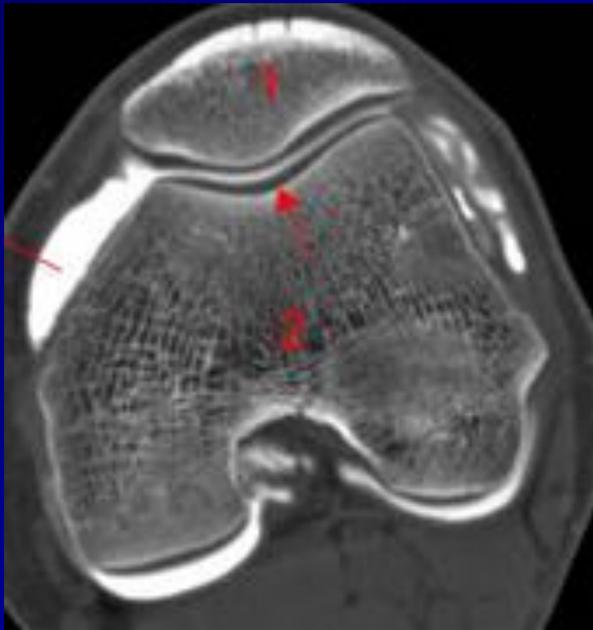
- *CET EXAMEN SE RÉALISE EN 2 TEMPS*



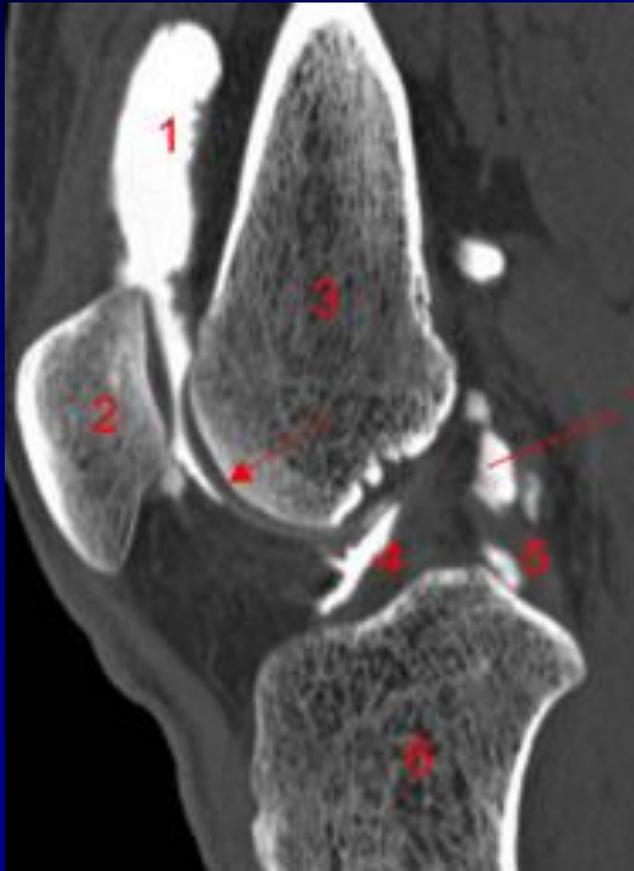
1er TEMPS : ARTHROGRAPHIE



2ème TEMPS : SCANNER

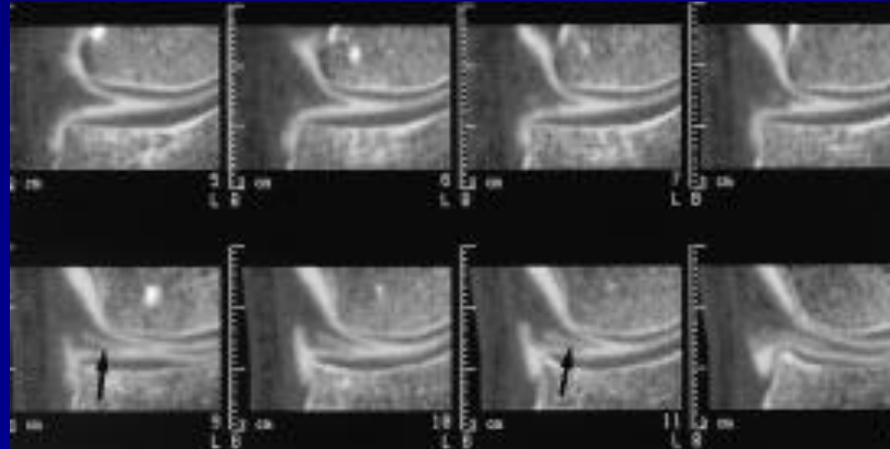
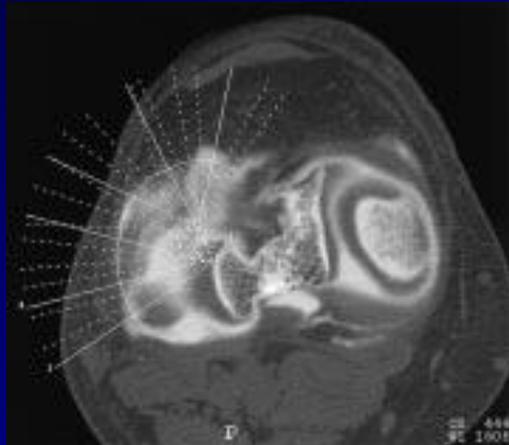


Pour étude du cartilage et de la synoviale



Pour étude des ligaments croisés et des ménisques

Reconstructions radiaires – étude des ménisques

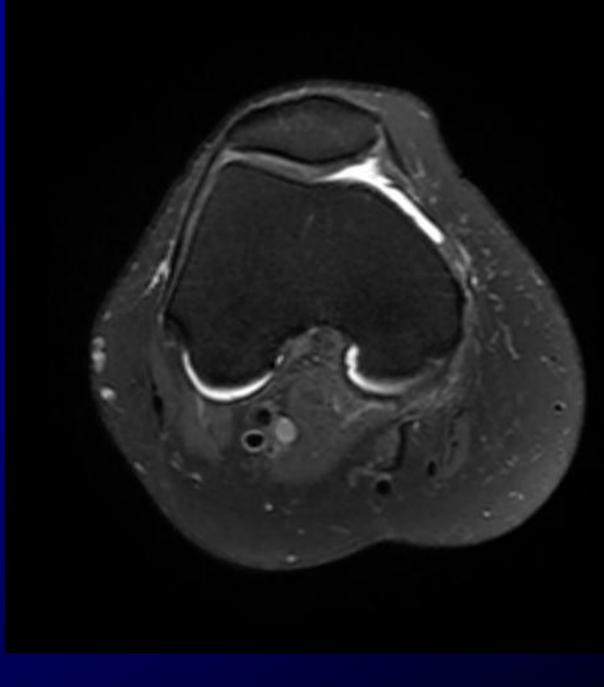
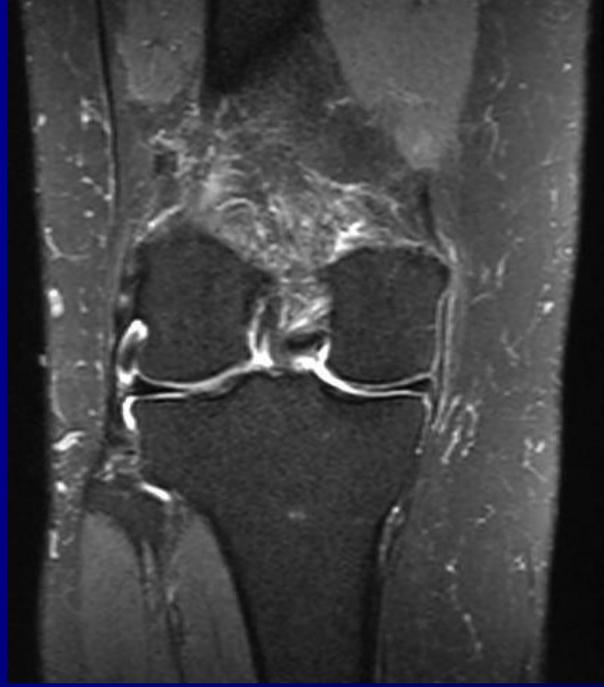
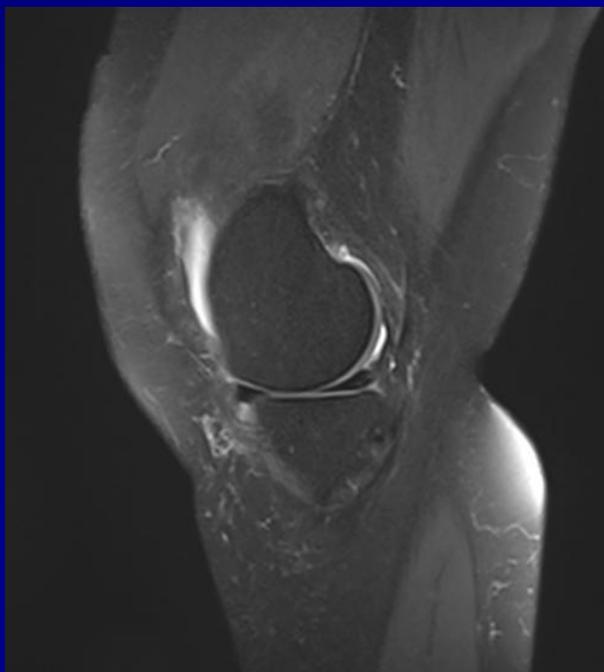
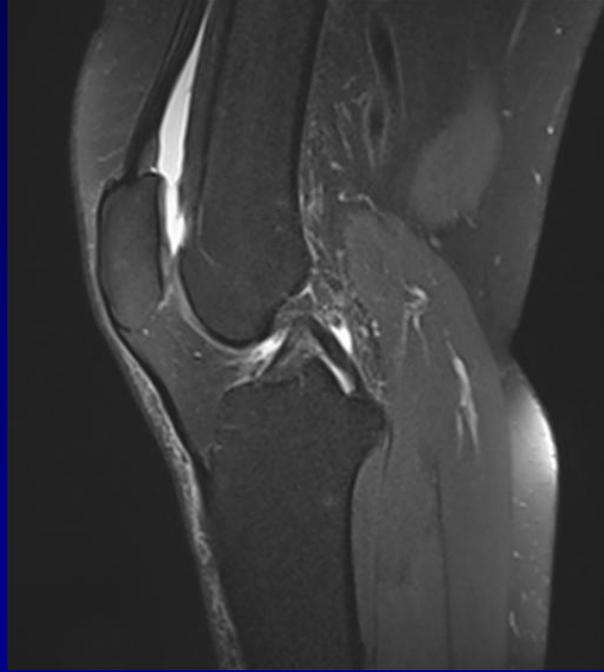
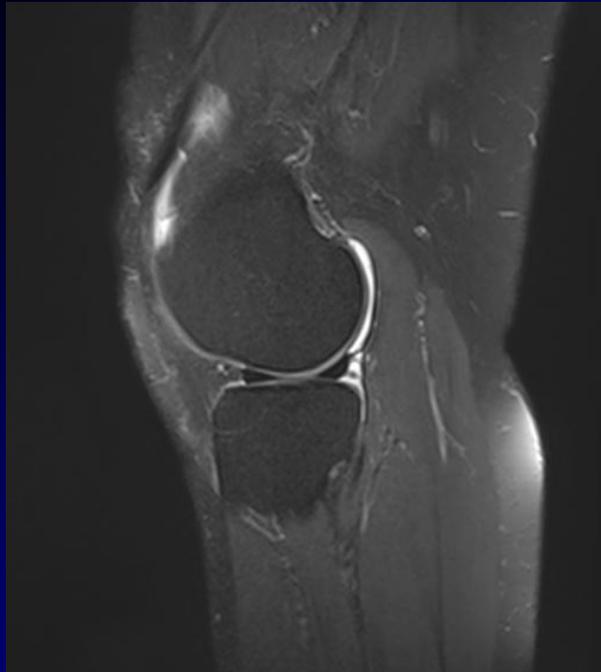


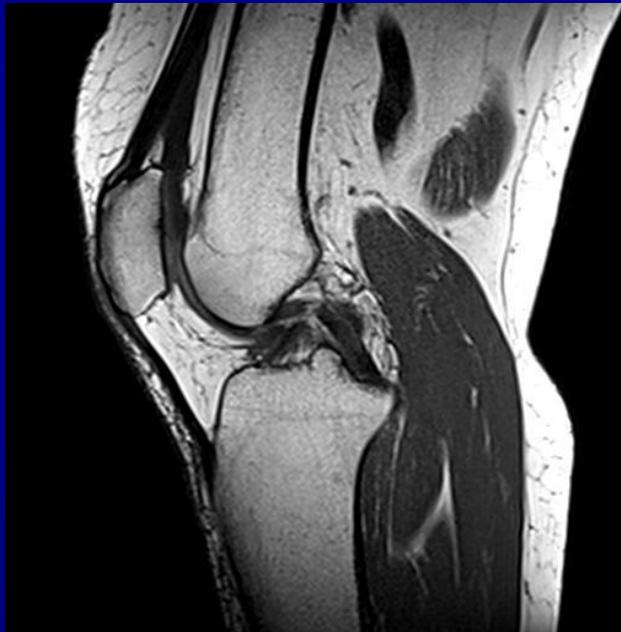
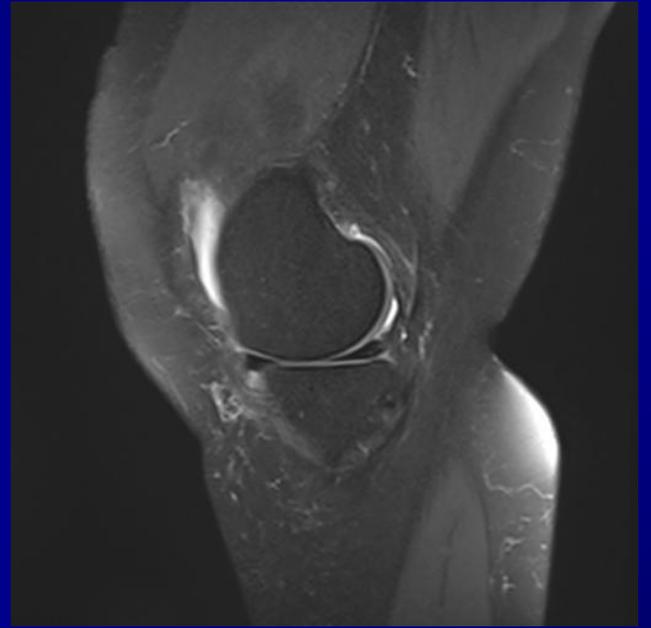
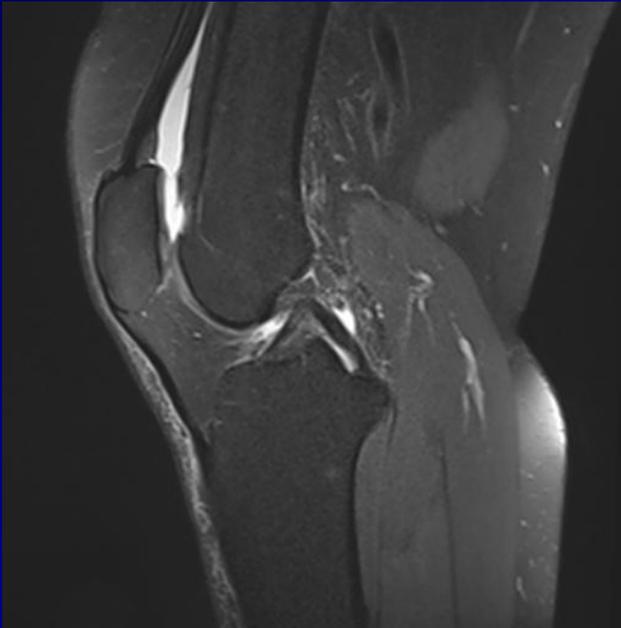
Languette de la corne postérieure
du ménisque interne

Désinsertions capsuloméniscales
Languettes méniscales
Anses de seau

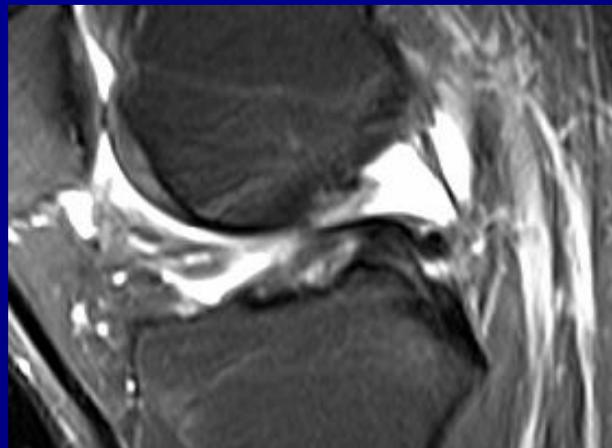
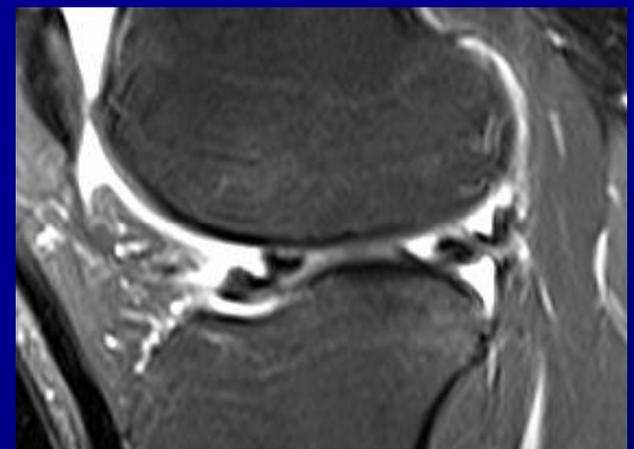
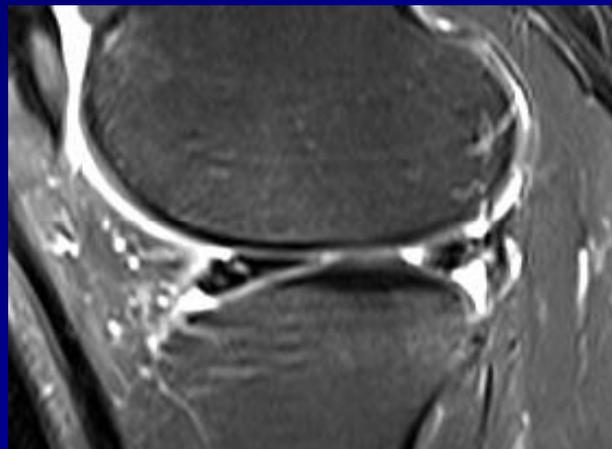
I. R. M.

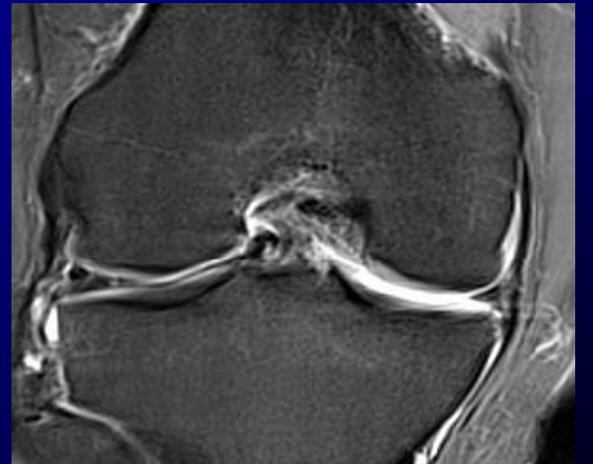
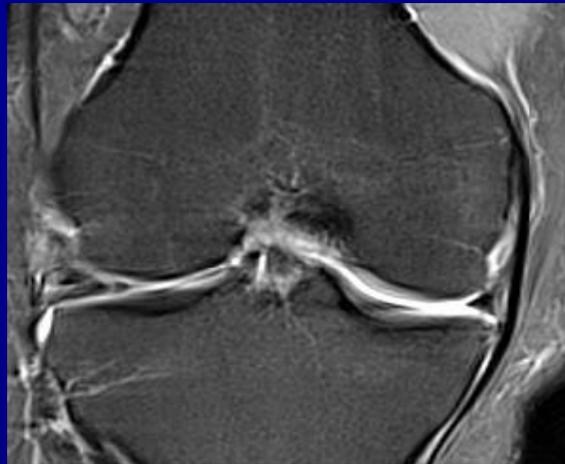
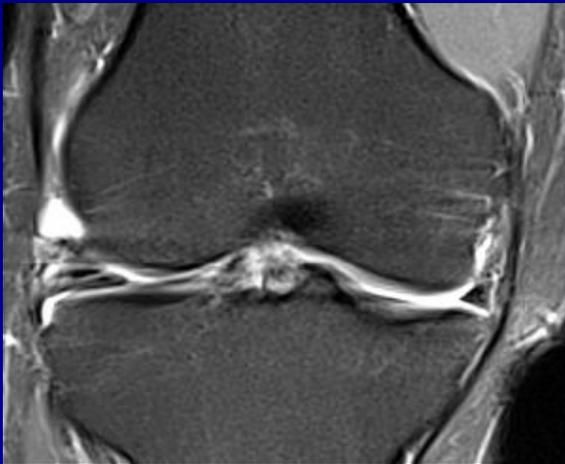
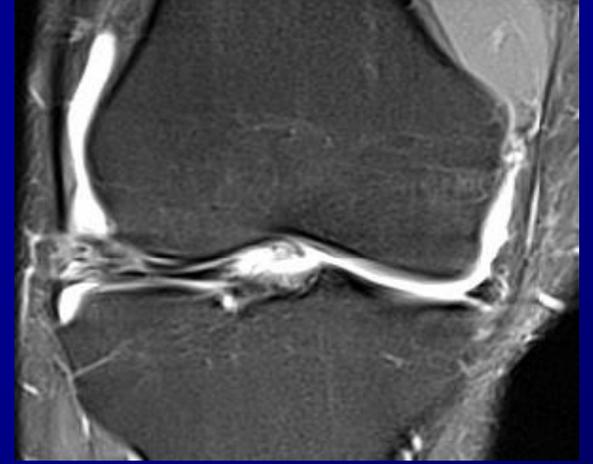
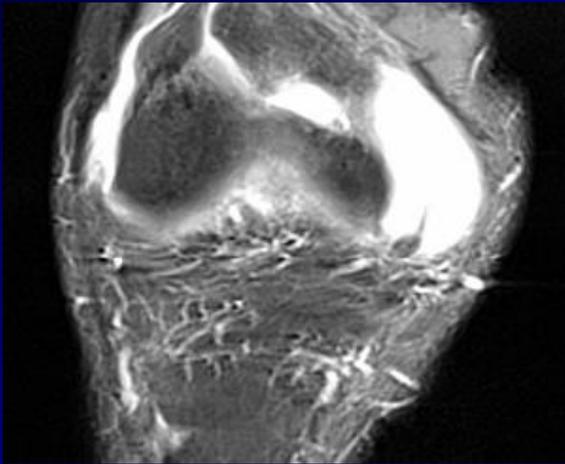
- Etude anatomique globale
- Séquence volumique 3D (millimétrique)
- Analyse du signal : T1 – T2 – Gado IV
- Pas d'étude dynamique





LESION MENISCALE en anse de seau

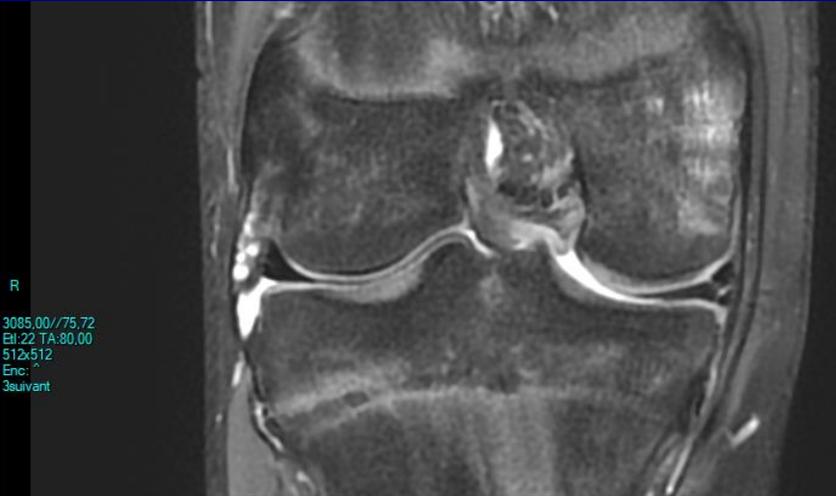




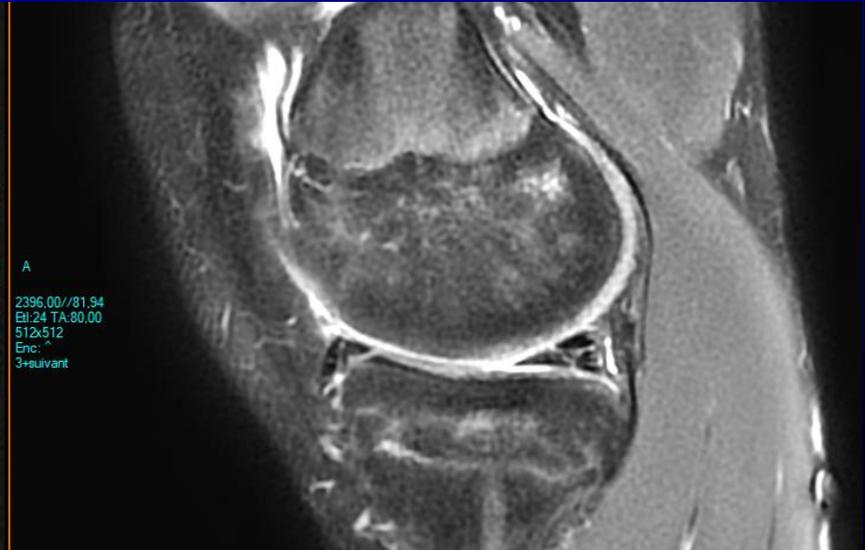
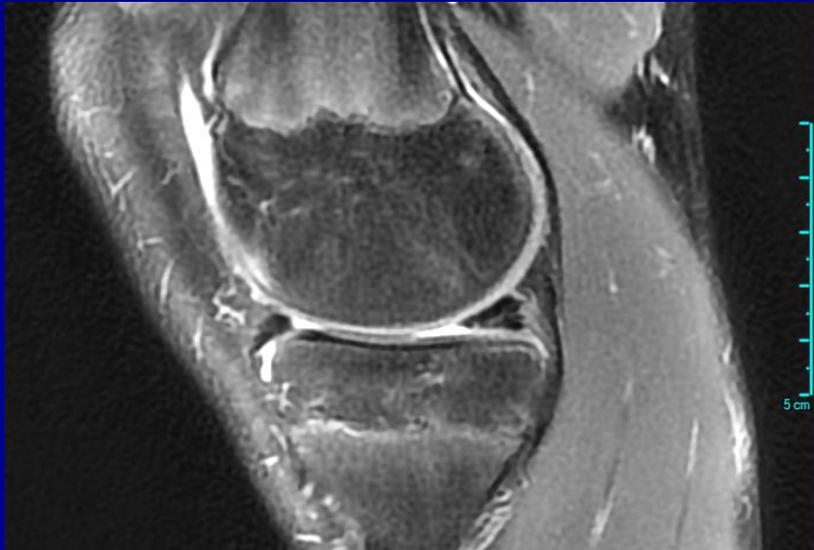
SUTURE LESION MENISCALE en anse de seau



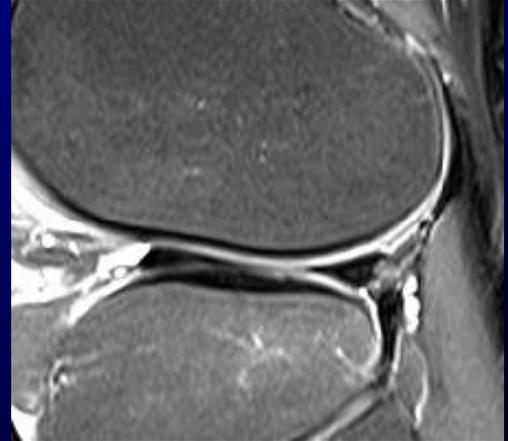
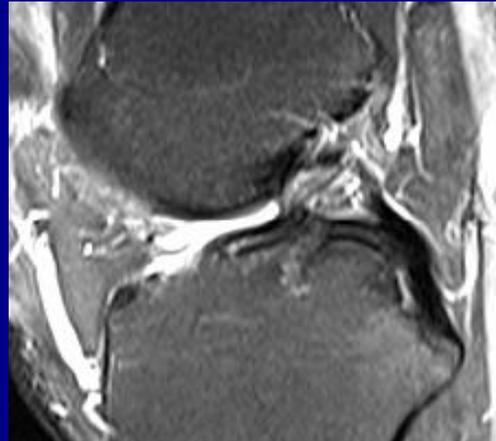
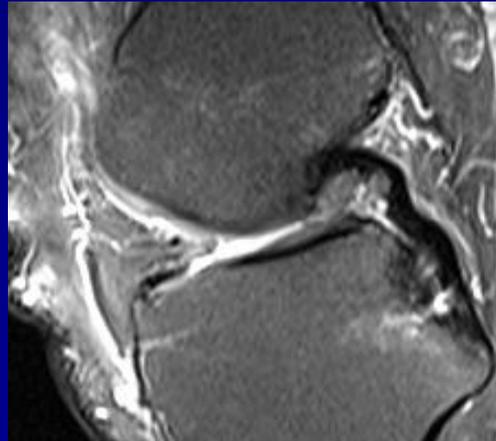
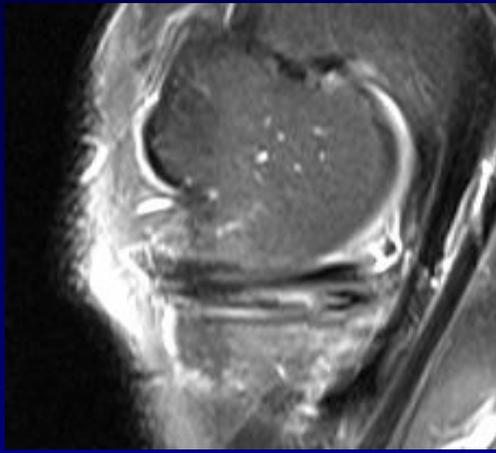
Avant

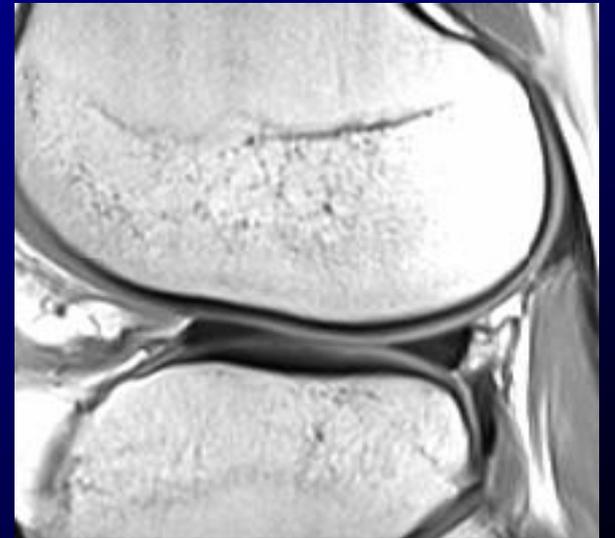
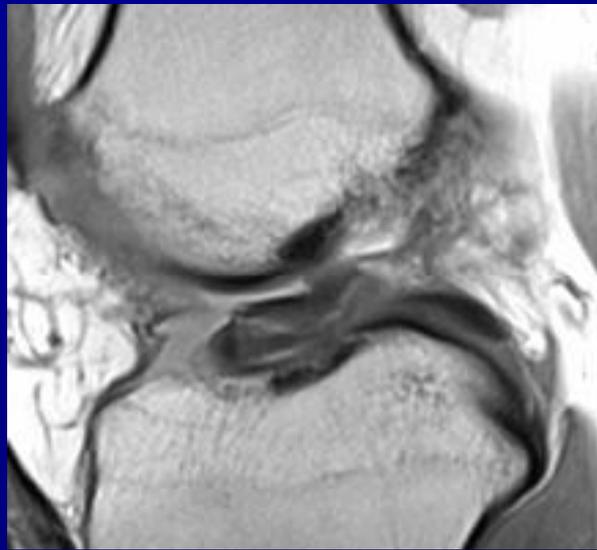
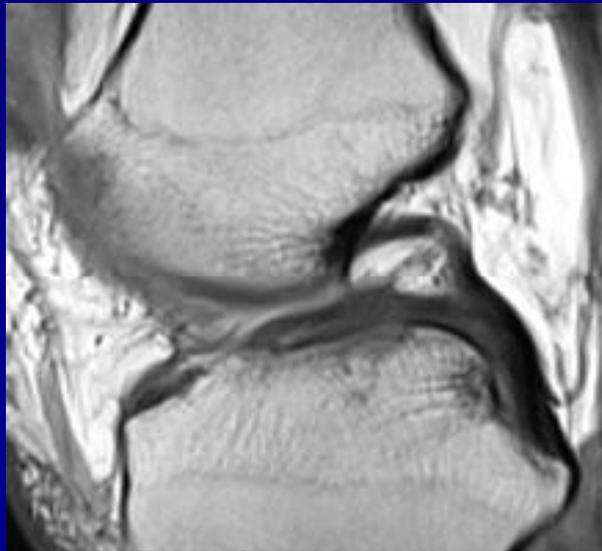
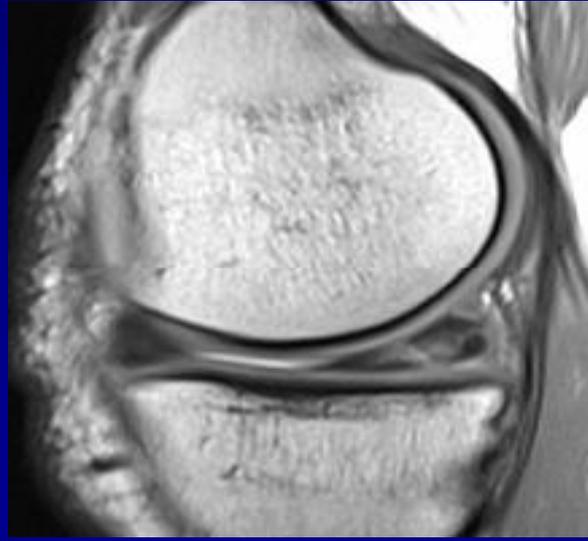
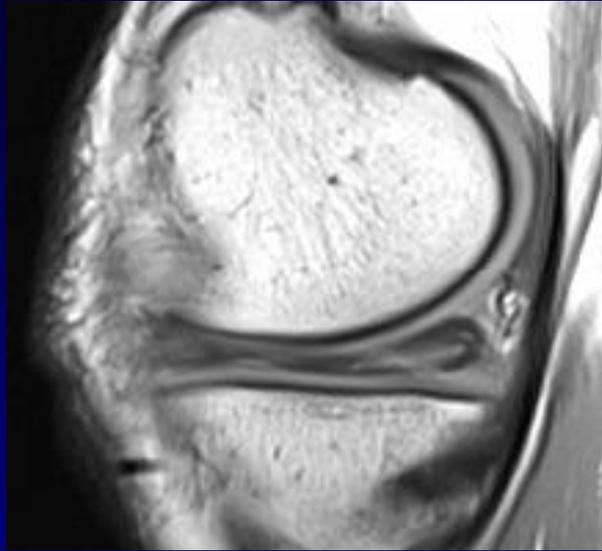


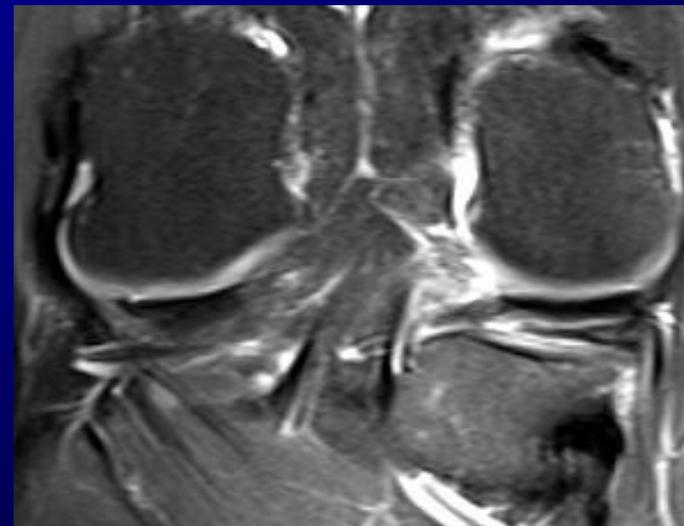
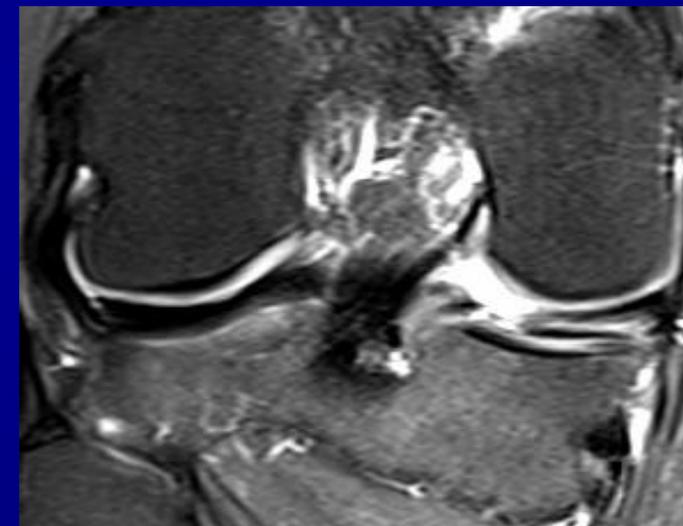
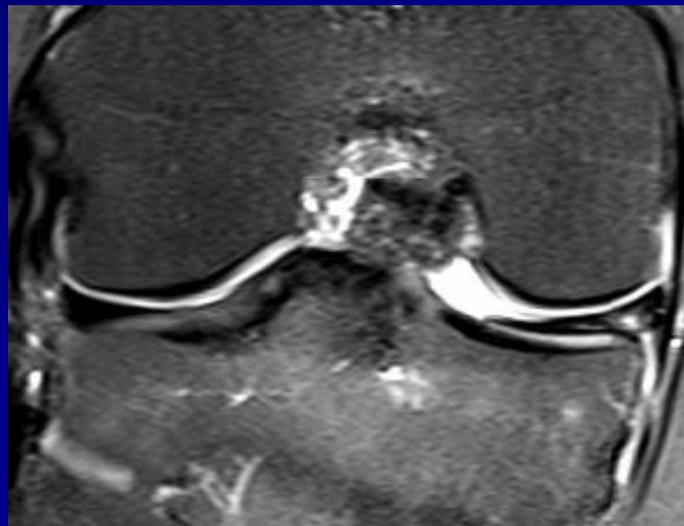
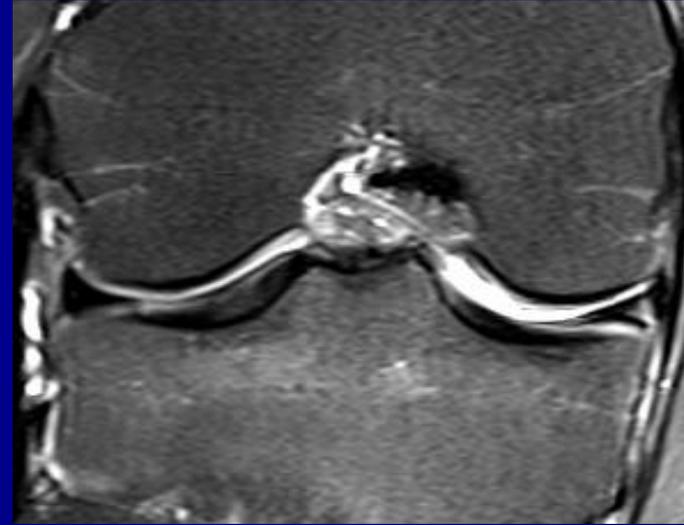
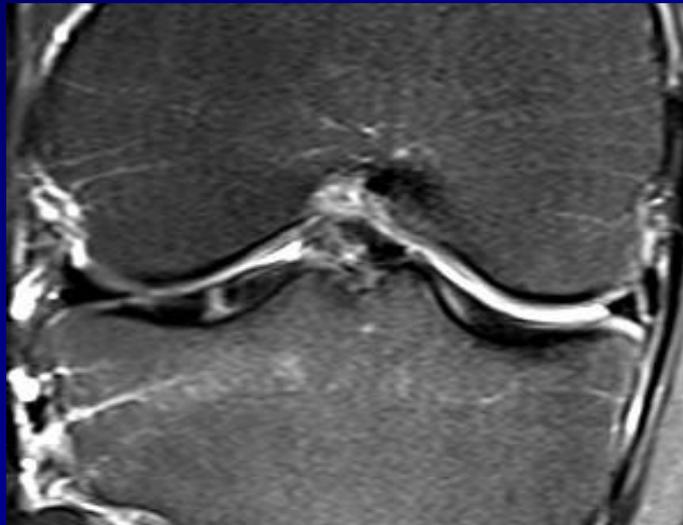
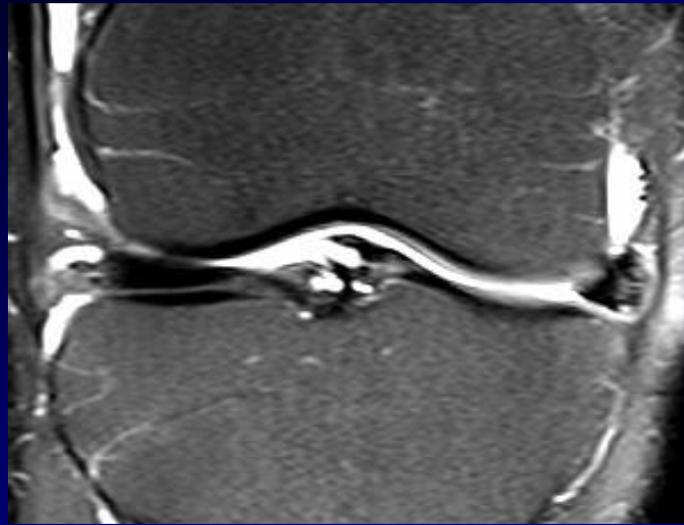
Après



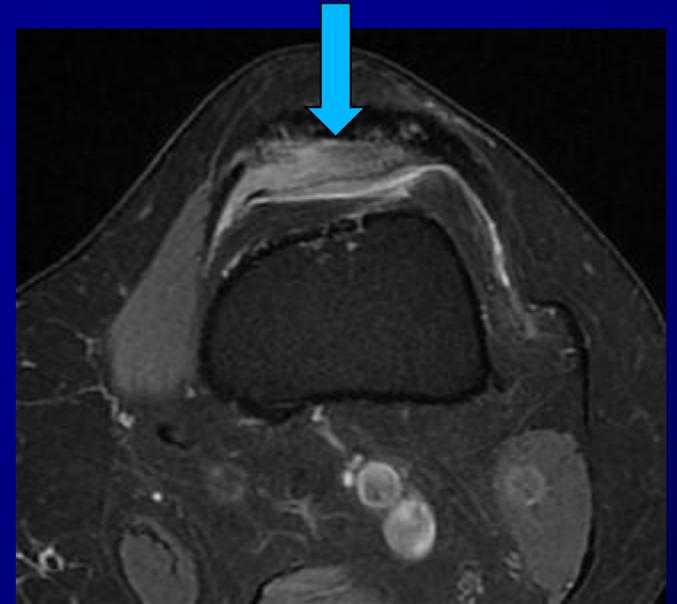
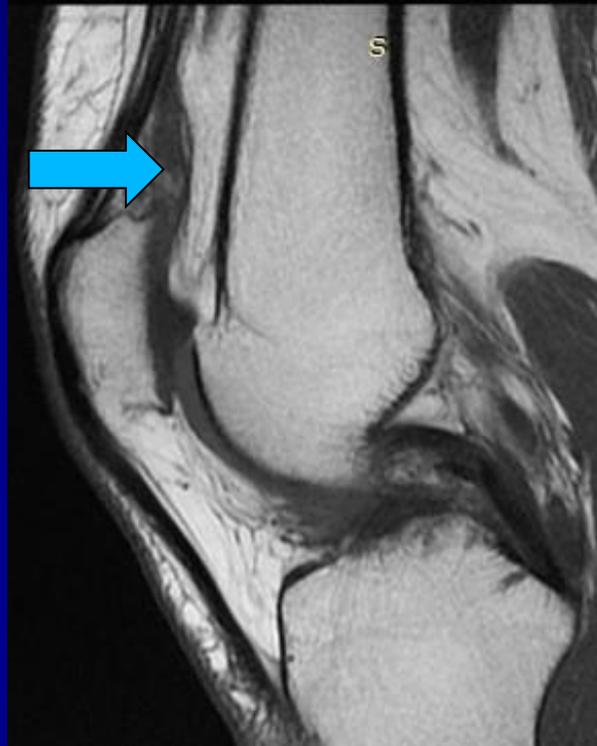
LESION MENISCALE complexe







Conflit Supra-Patellaire



COMPLEXE LIGAMENTAIRE COLLATERAL LATERAL

C.L.C.L.

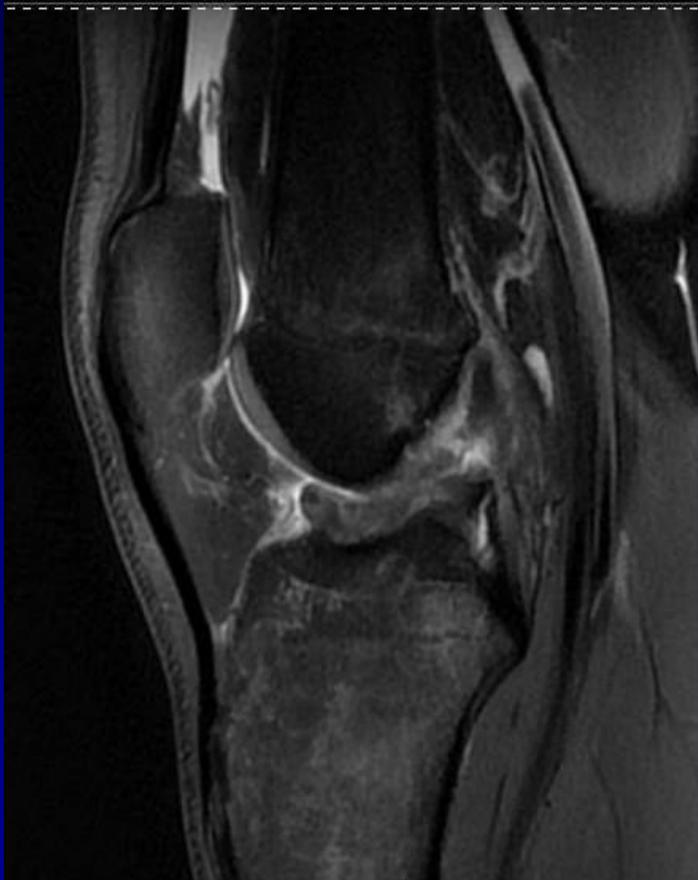
Lig. Collatéral Latéral



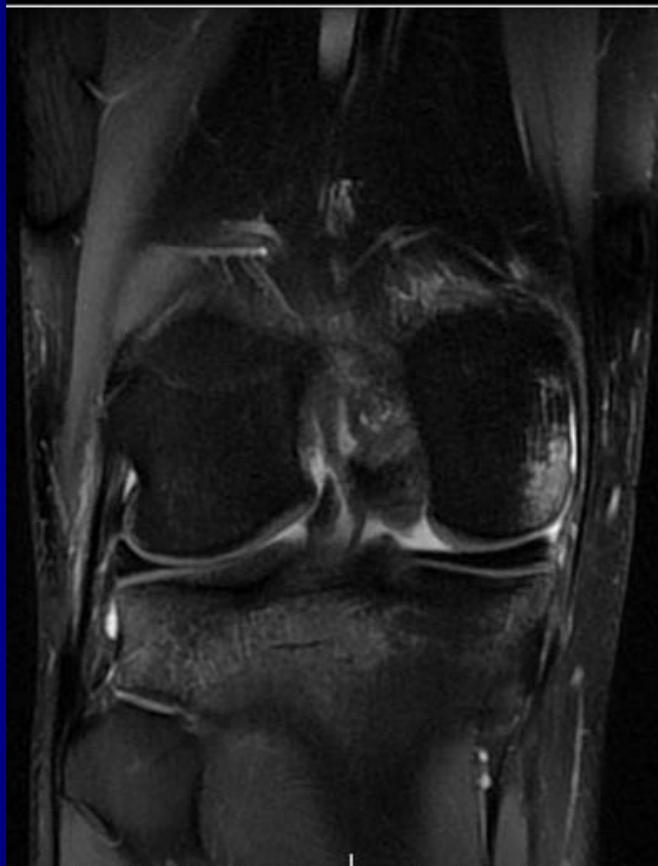
Lig. Antéro-Latéral



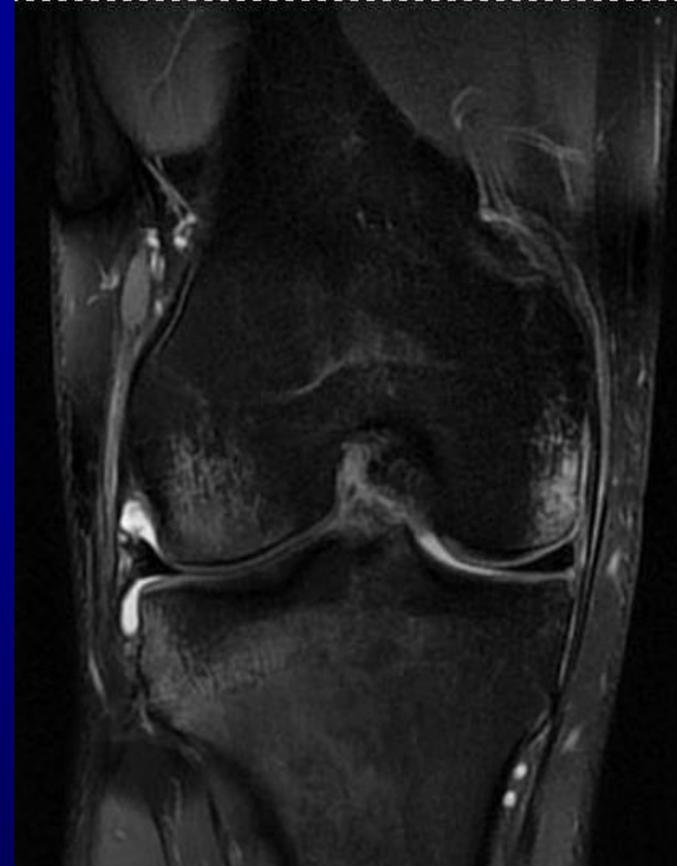
RUPTURE LCA



LCL



LAL



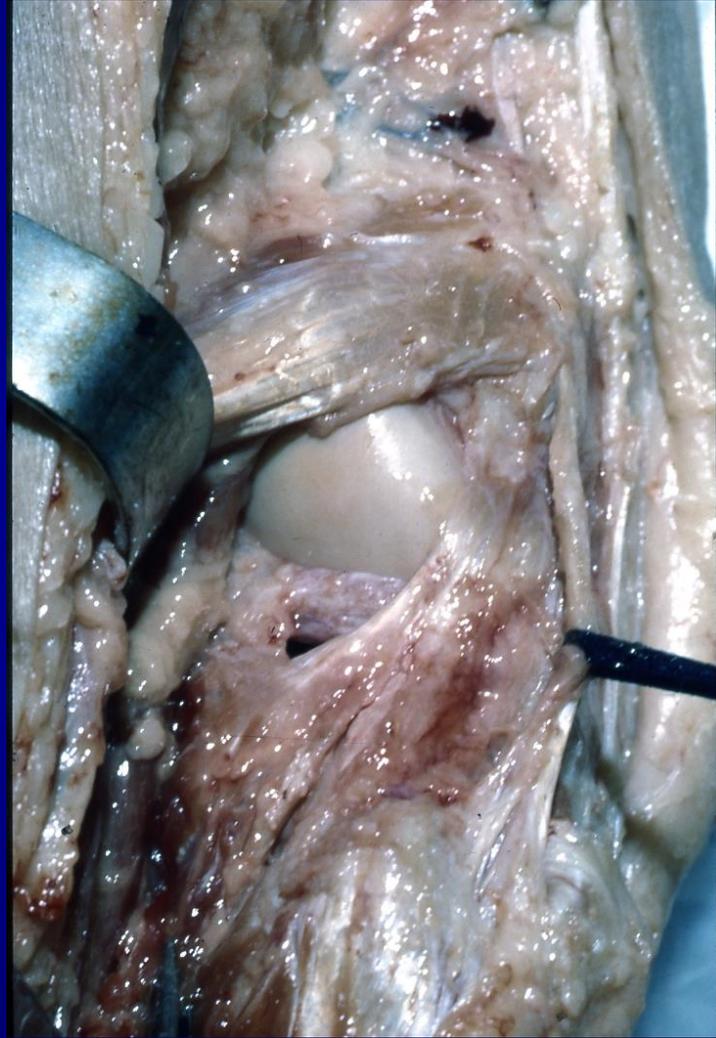
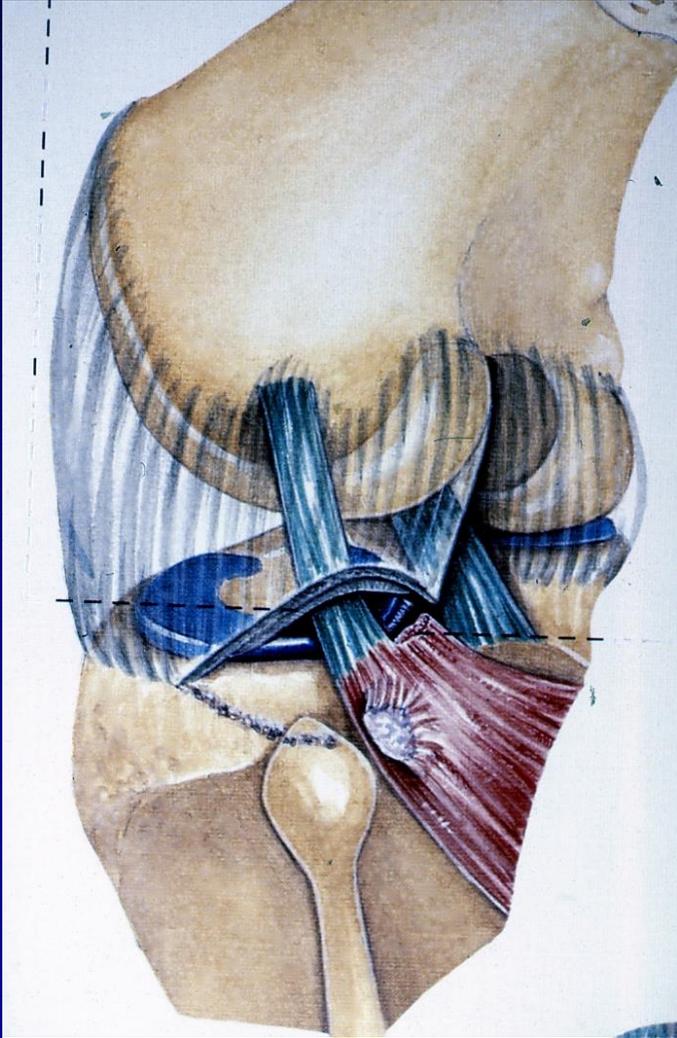
RUPTURE DU LCA :
DESINSERTION DU SEGMENT POST.
DU MENISQUE INTERNE
ENCOCHE CONDYLE EXTERNE



Exemple de lésions complexes
traumatiques associées :
le point d'angle postéro-externe
(P.A.P.E.)

P.A.P.E. – Anatomie

- Muscle et tendon poplités
- Ligament poplité-arqué
- Ligament fabello-péronier
- Coque condylienne externe
- Corne postérieure du ménisque externe
- Ligament latéral externe et tendon biceps



Muscle poplité

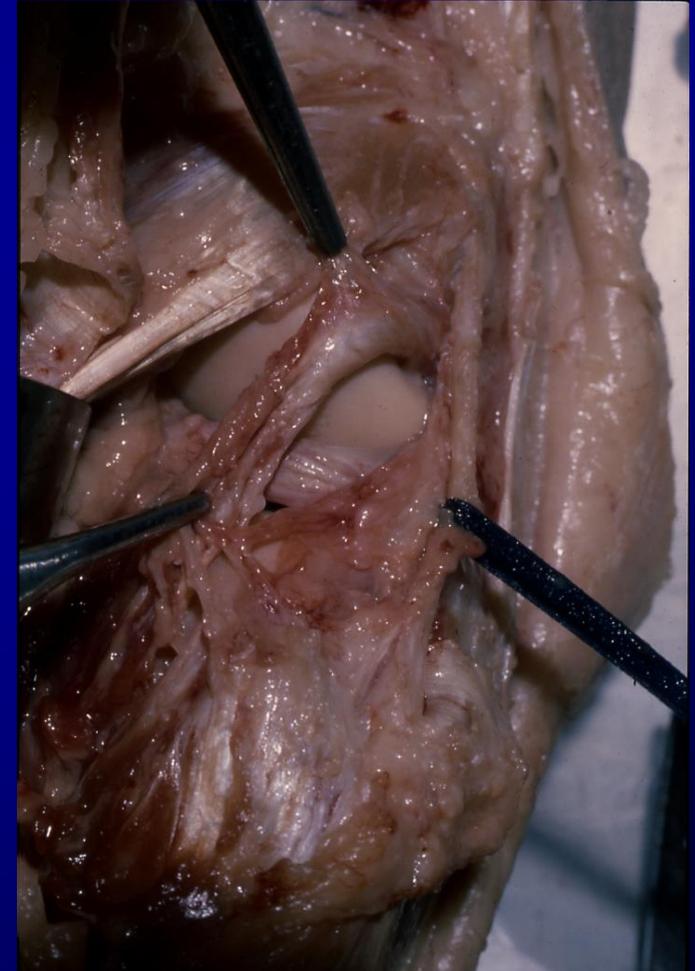
Faisceau principal

→ Face externe condyle externe

Rôle

Rotateurs actifs :
interne du tibia
externe du fémur

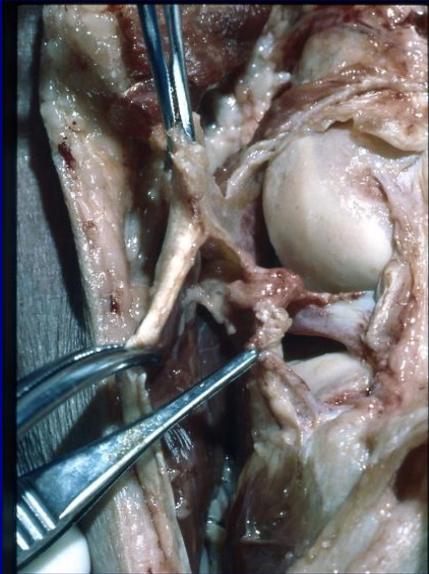
Frein passif :
rotation ext. du tibia
laxité en varus



Muscle poplité

Faisceau accessoire

S'insère sur le péroné



Faisceau ménisco-poplité

S'insère sur la corne post. du ménisque externe



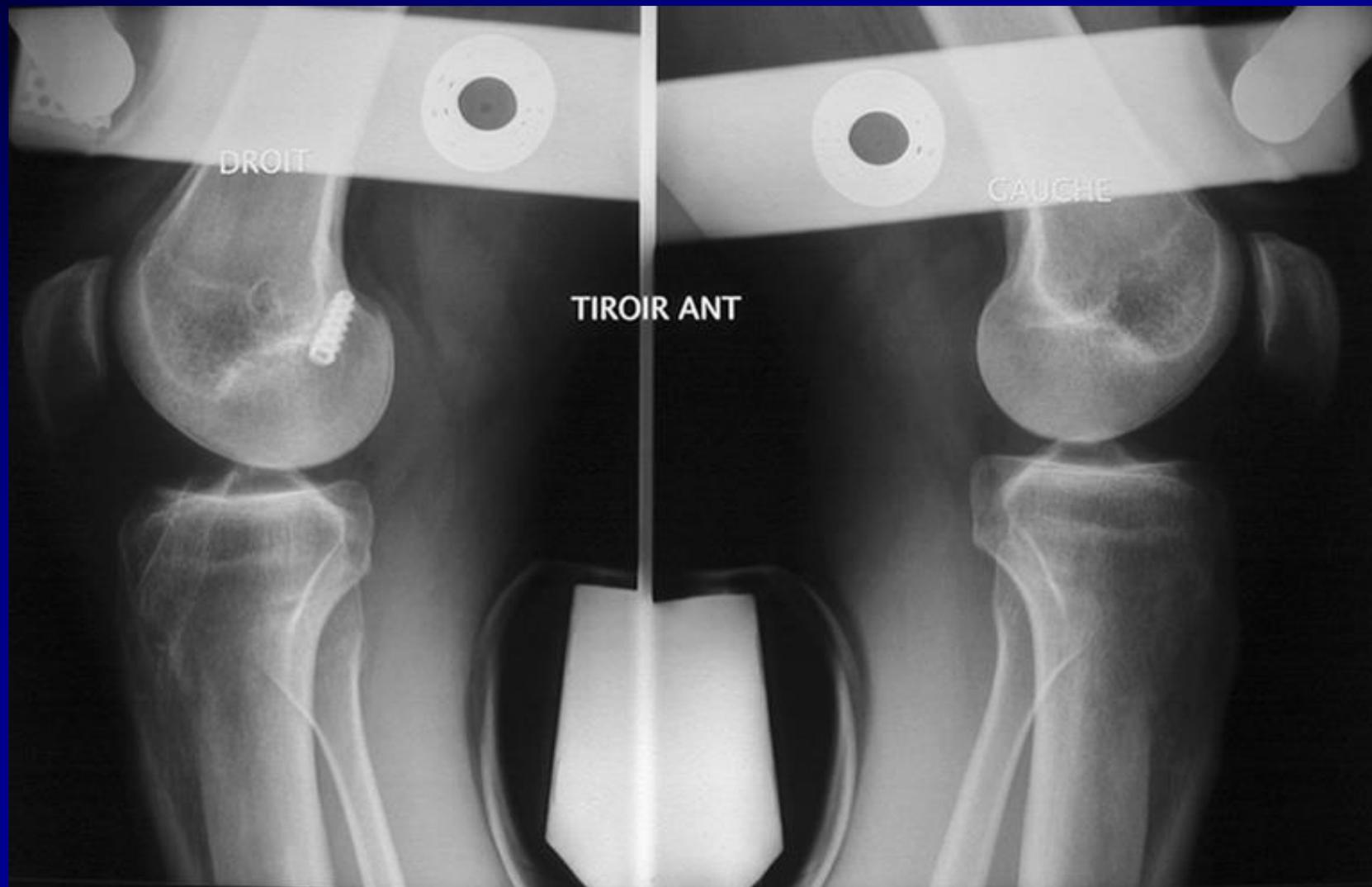
Maintien la direction du faisceau principal

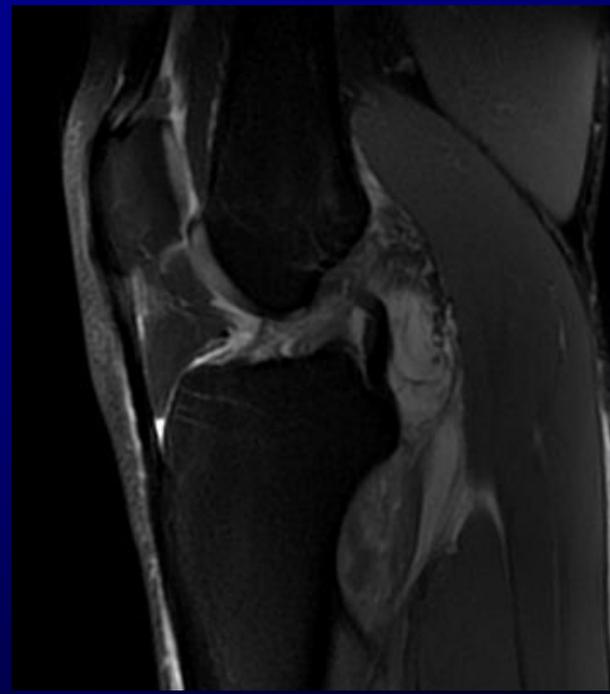
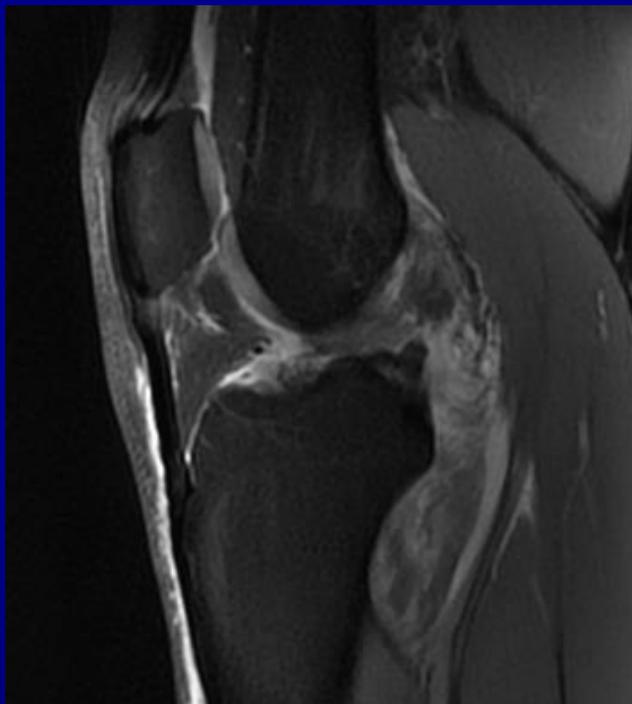
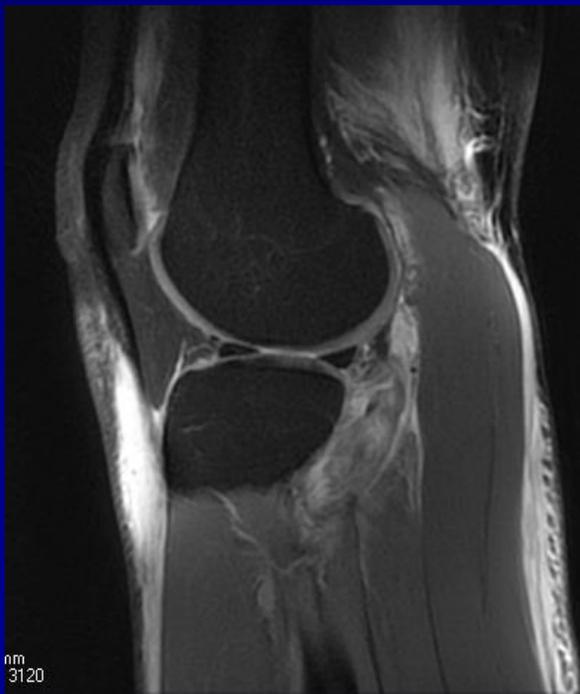
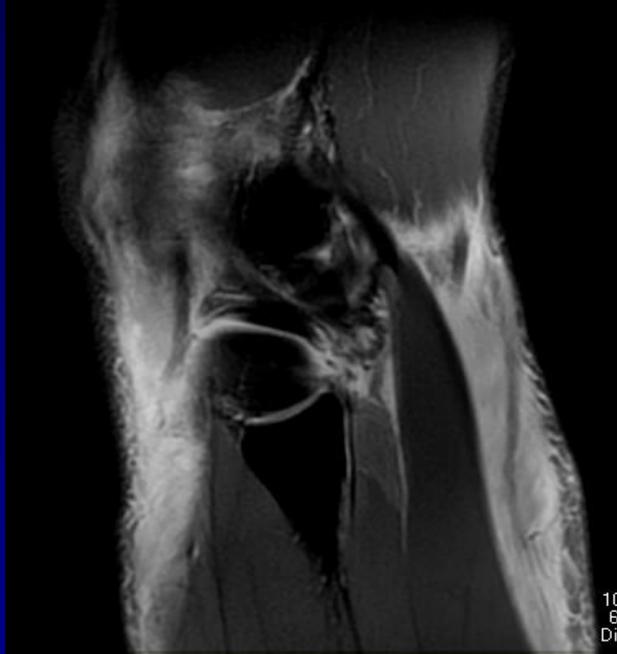
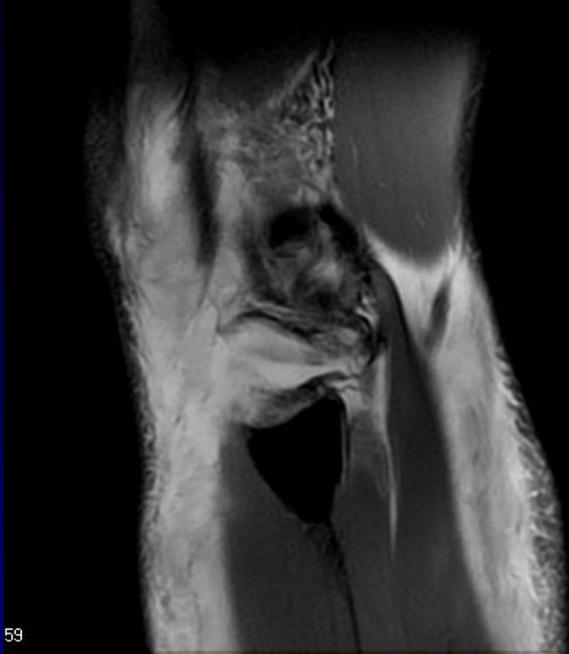
Imagerie des lésions ligamentaires et du P.A.P.E

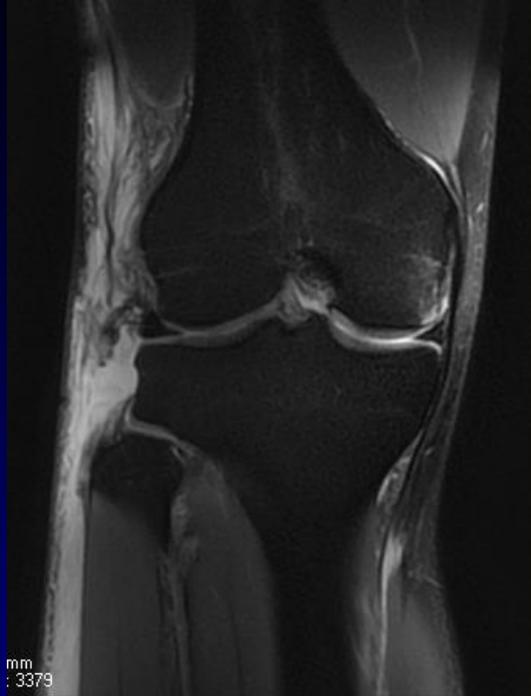
Lésions des points d'angle postérieurs et Incidences thérapeutiques

- Importance de l'examen clinique
- Complété par le couple imagerie :

radiographies dynamiques et I.R.M.







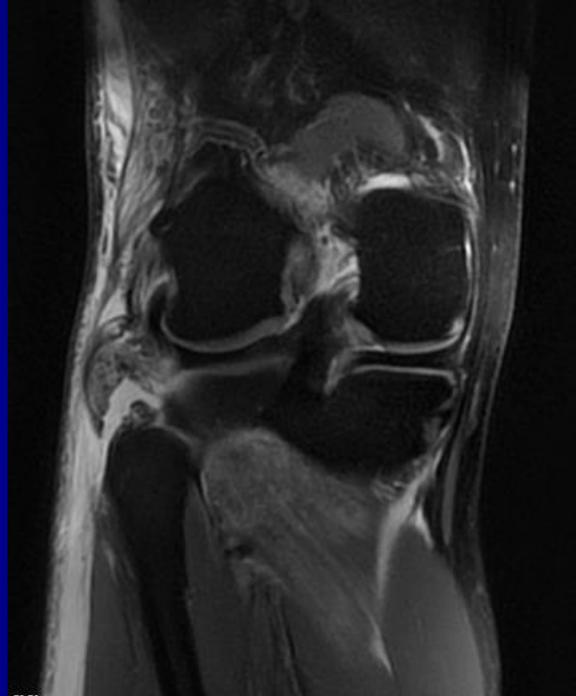
mm
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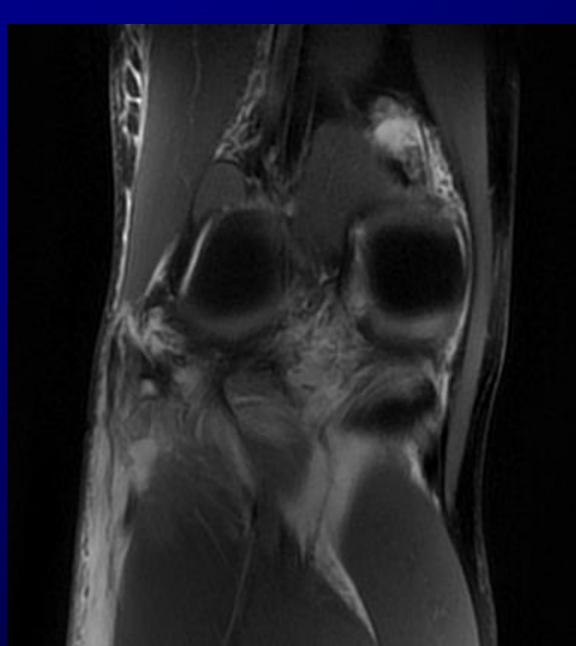
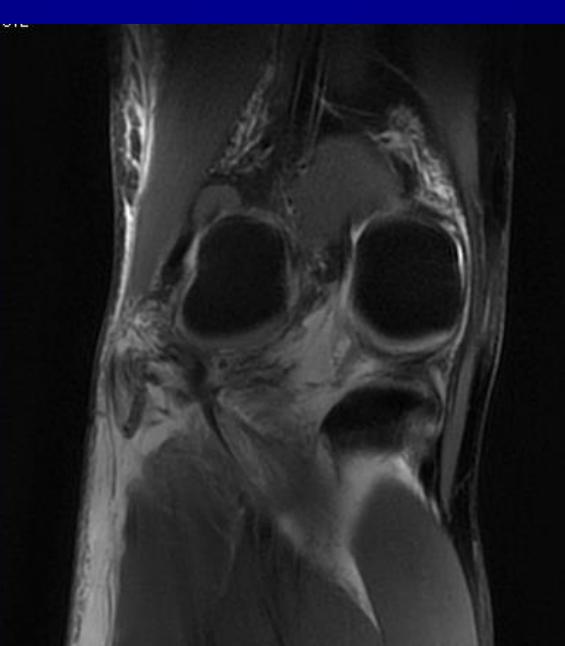
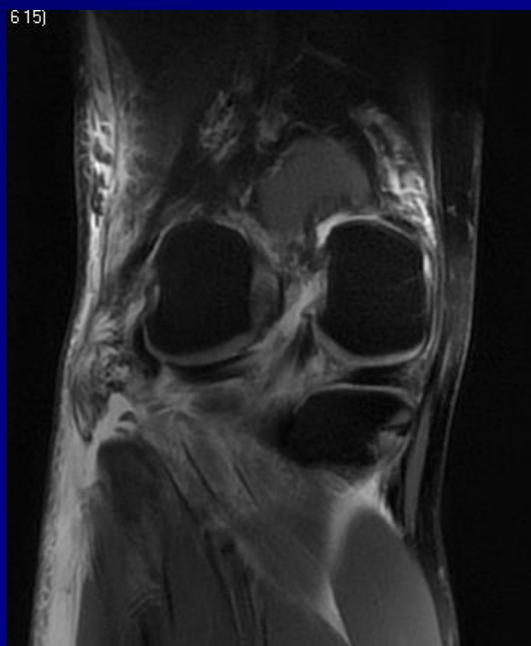


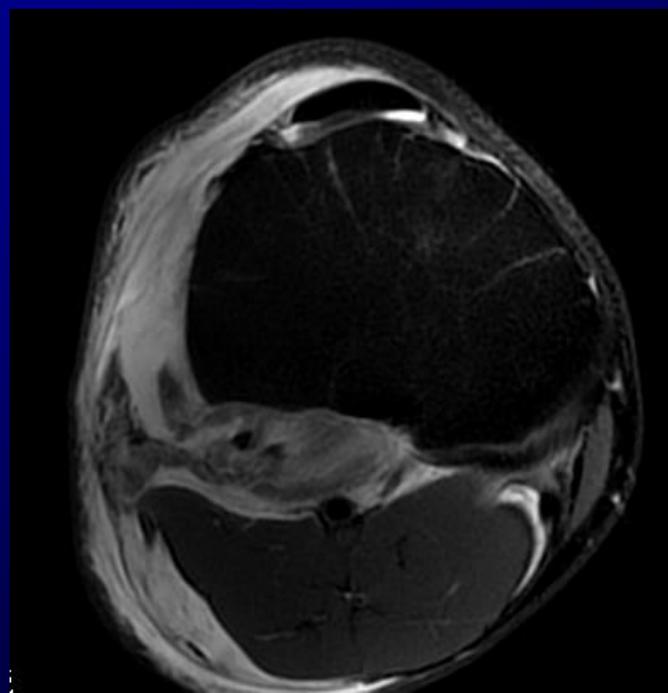
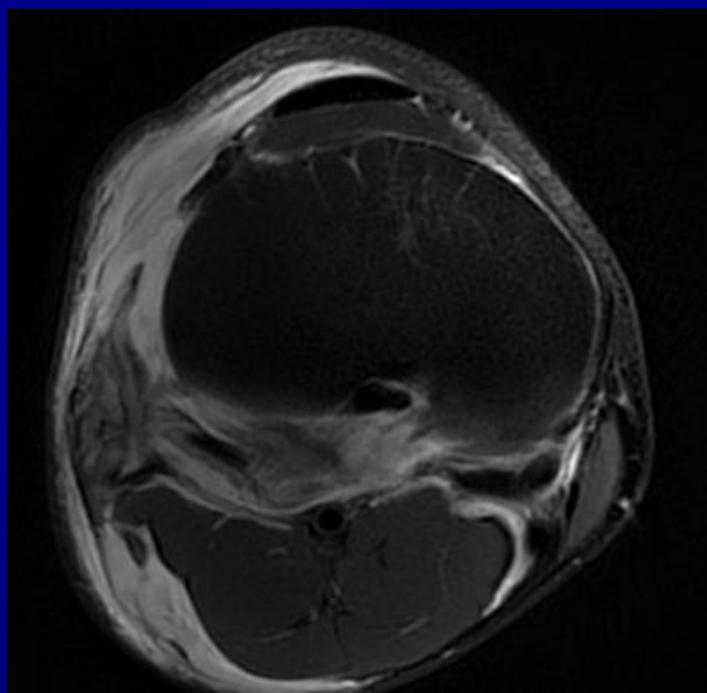
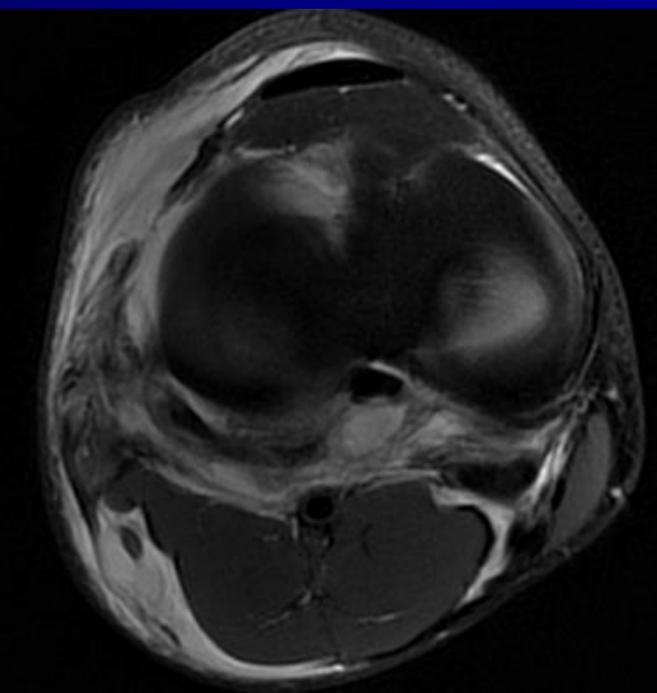
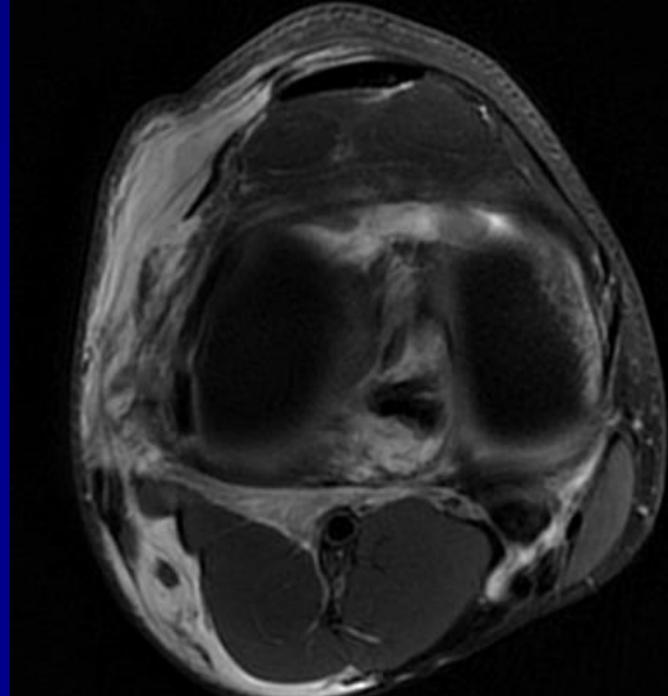
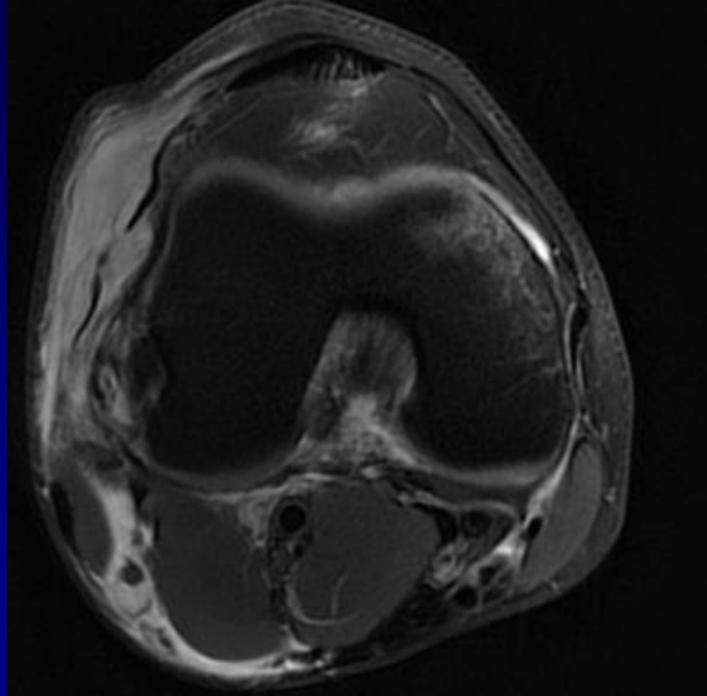
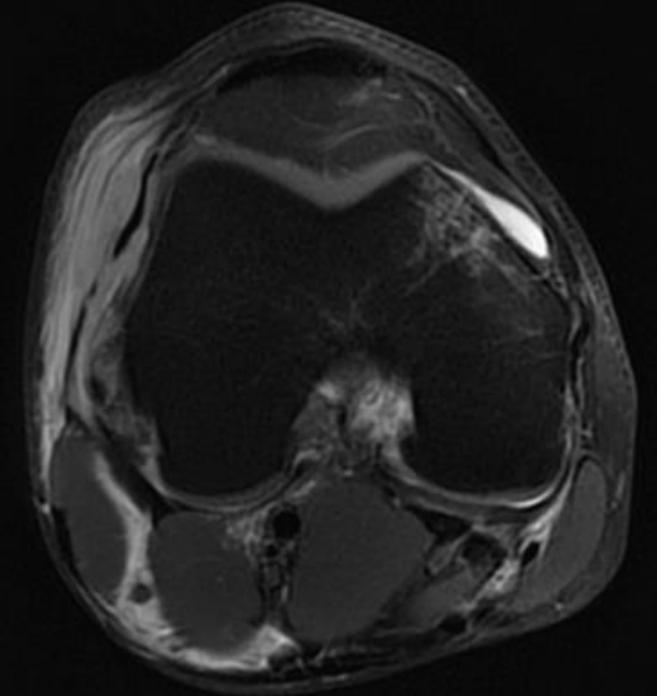
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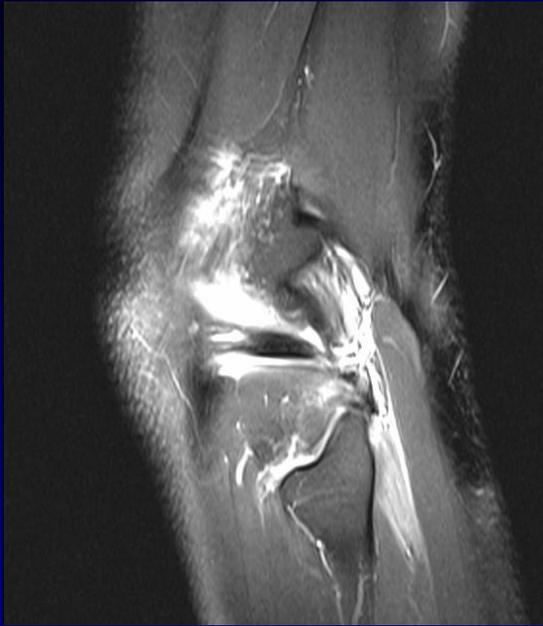


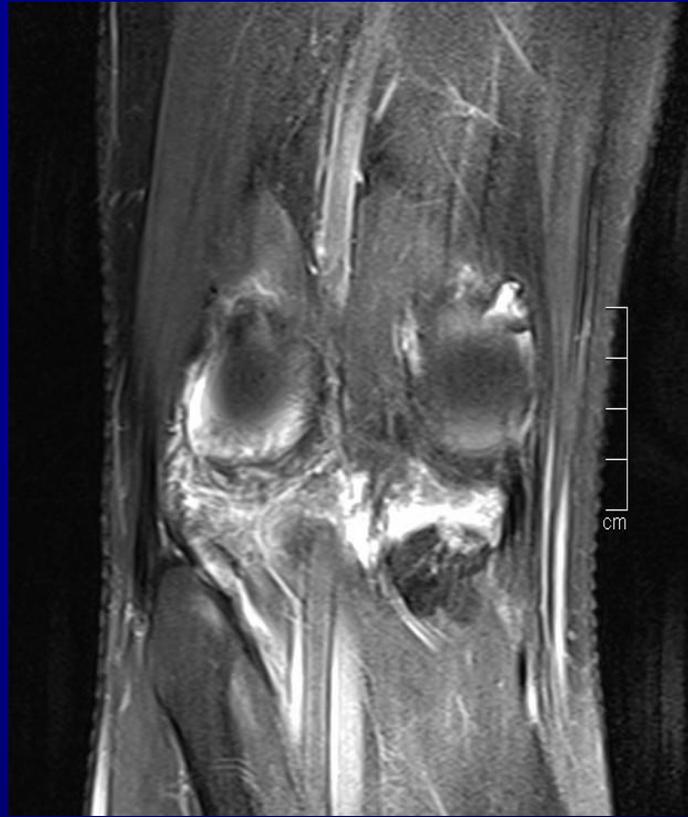
mm







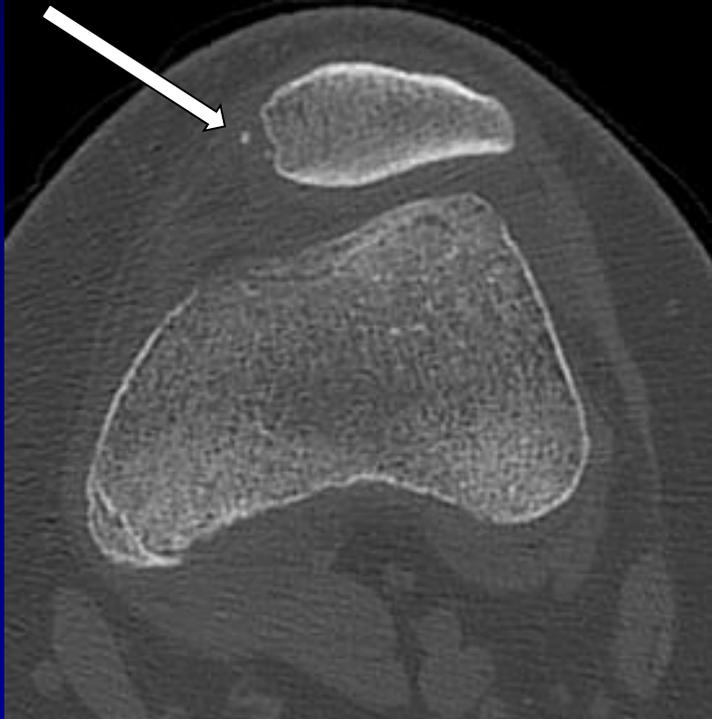




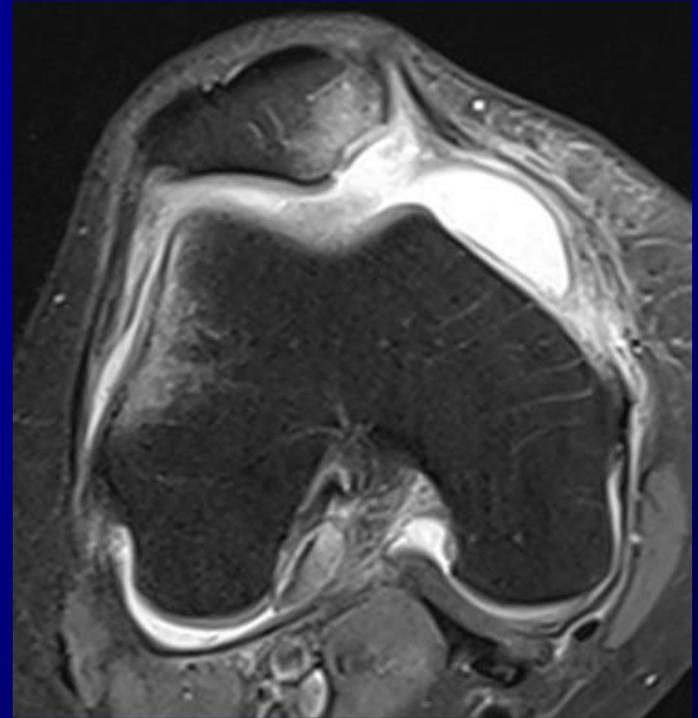
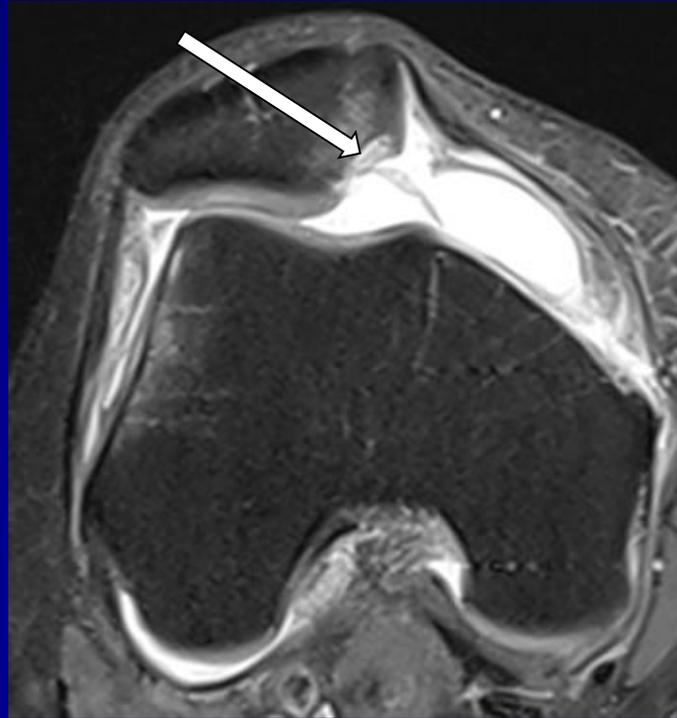
RUPTURE DE LA PLASTIE DU LCA :
DESINSERTION DU SEGMENT POST.
DU MENISQUE INTERNE
ENCOCHE CONDYLE EXTERNE



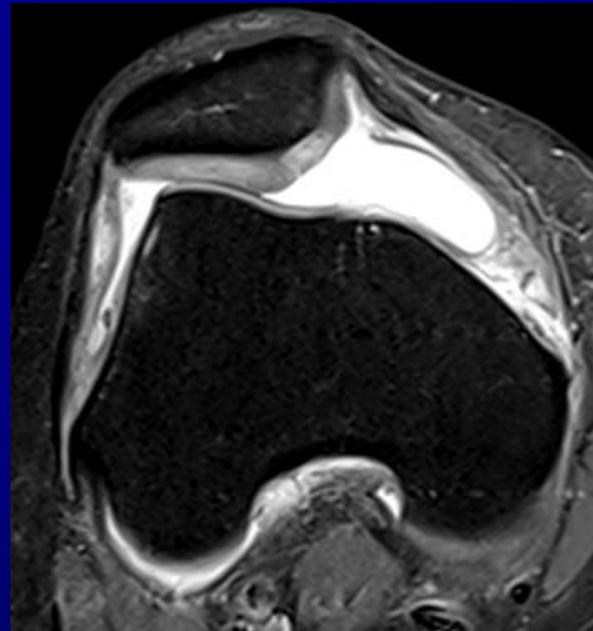
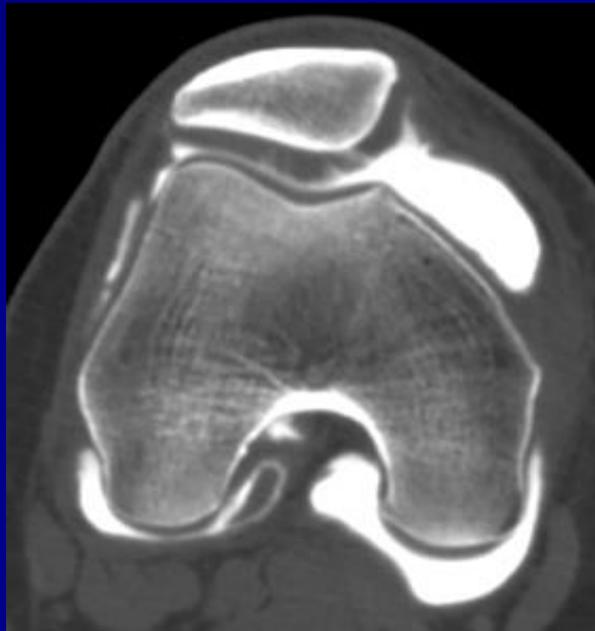
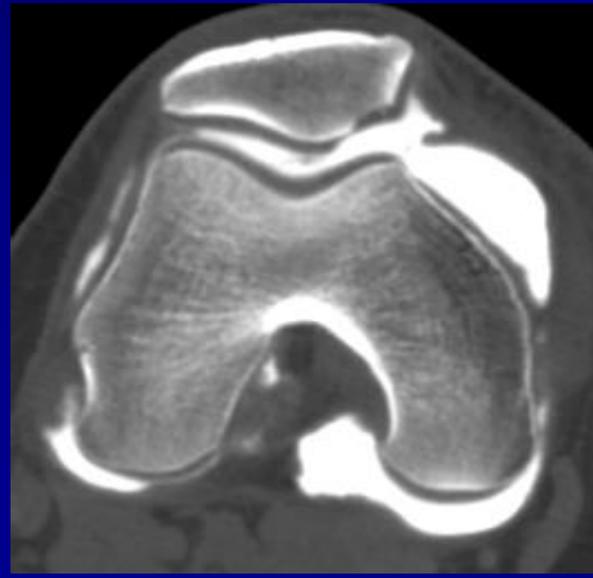
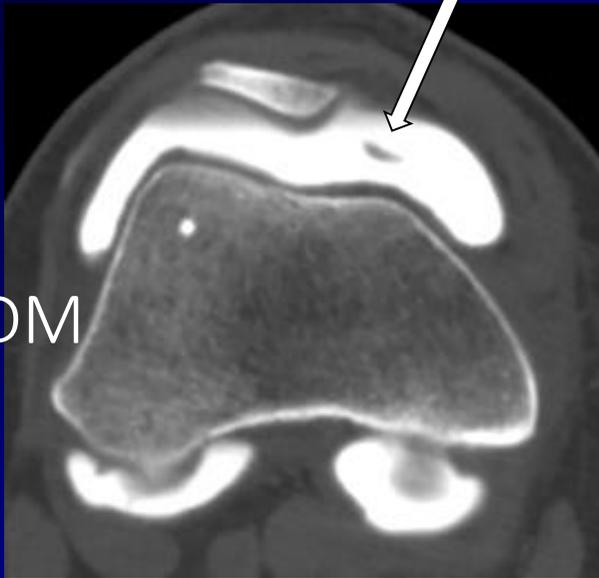
LUXATION EXTERNE DE ROTULE
ET
ARRACHEMENTS OSSEUX
AU SCANNER



LUXATION EXTERNE DE ROTULE
ET
CONTUSIONS OSSEUSES
EN I.R.M



Arthro-TDM



Arthro-I.R.M.

ATTITUDE PRATIQUE

- RADIOGRAPHIES STANDARDS ET DYNAMIQUES
- ECHOGRAPHIE
- SCANNER
- ARTHRO-SCANNER
- IRM