



Université Claude Bernard



Lyon 1



FIFA
FIFA MEDICAL CENTRE
OF EXCELLENCE

TECHNIQUES CHIRURGICALES ET INDICATIONS THÉRAPEUTIQUES

Pr E. Servien

DIU chir genou 2018



Hôpitaux de Lyon

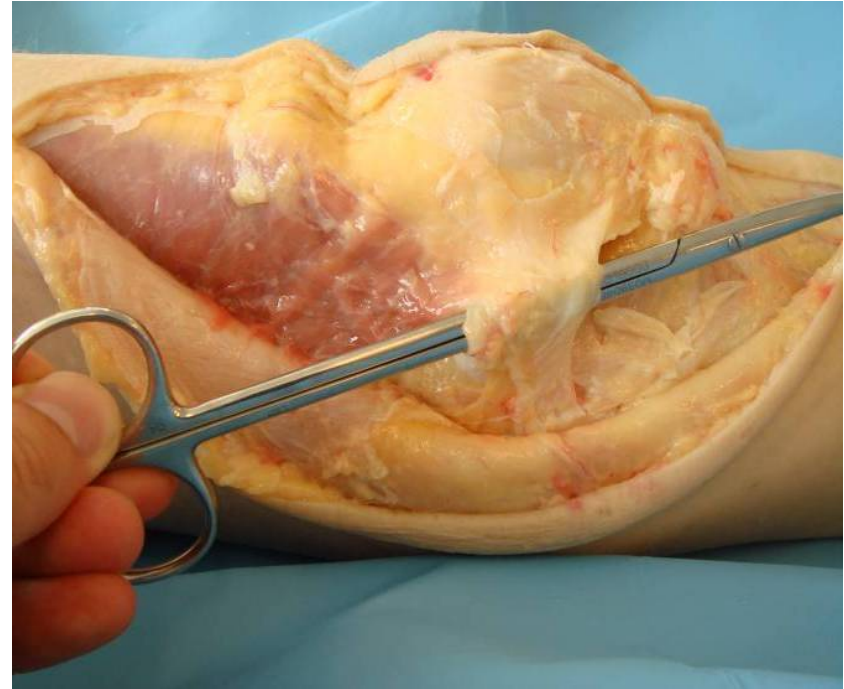


LYON KNEE
SCHOOL of SURGERY

MPFL ANATOMY

Femoral insertion : 15.4 mm

- MCL – adductor tubercle
(Tuxoe et al., Conlan et al.)
- Anterior / MCL
(Feller et al.)
- 9.5 mm proximal § 5 mm posterior
(Nomura et al.)



Reconstruction du MPFL

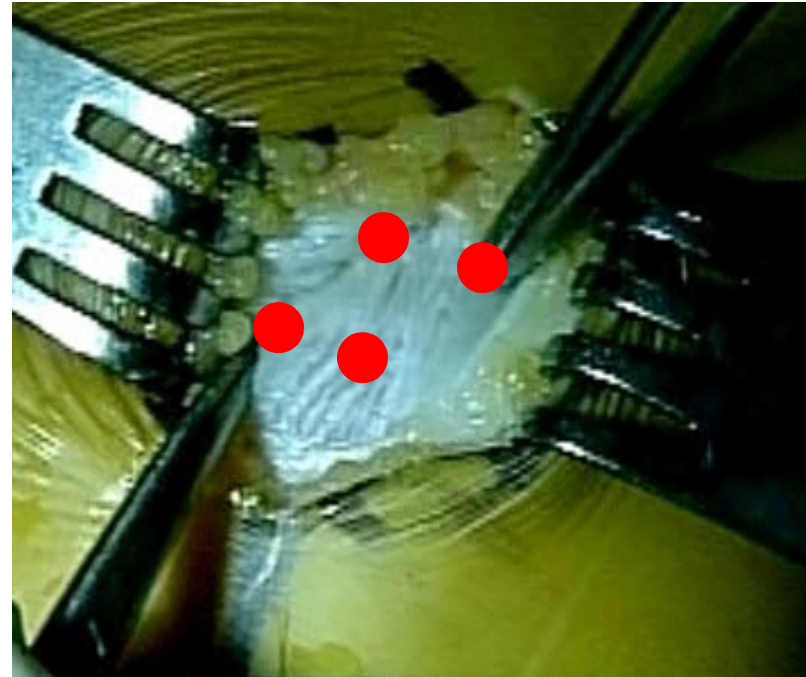
Quelle greffe?
Gracilis



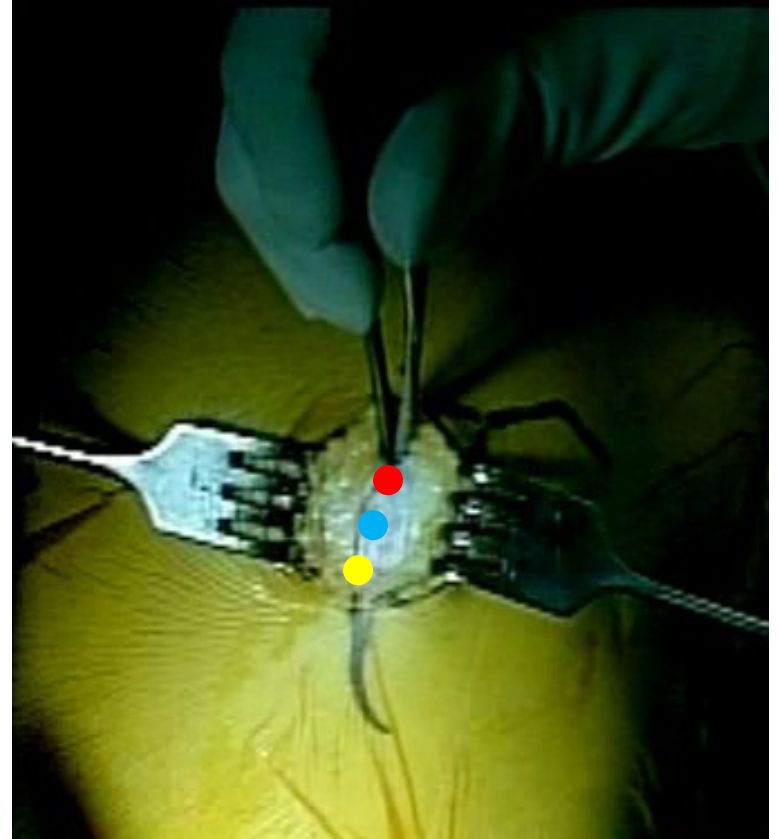


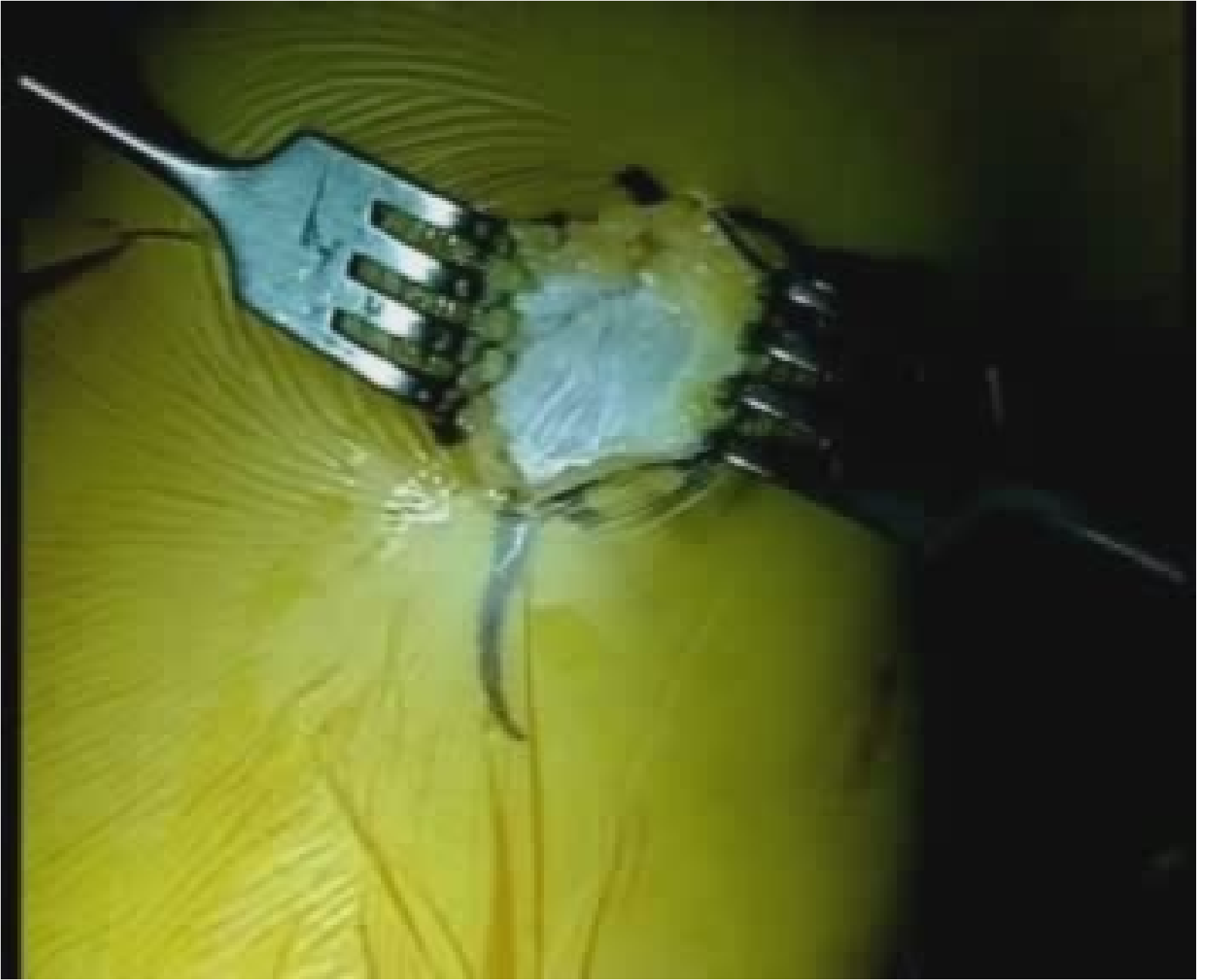
PATELLA

- Fixation
Tunnel ou ancre, 1 or 2
- Position des tunnels



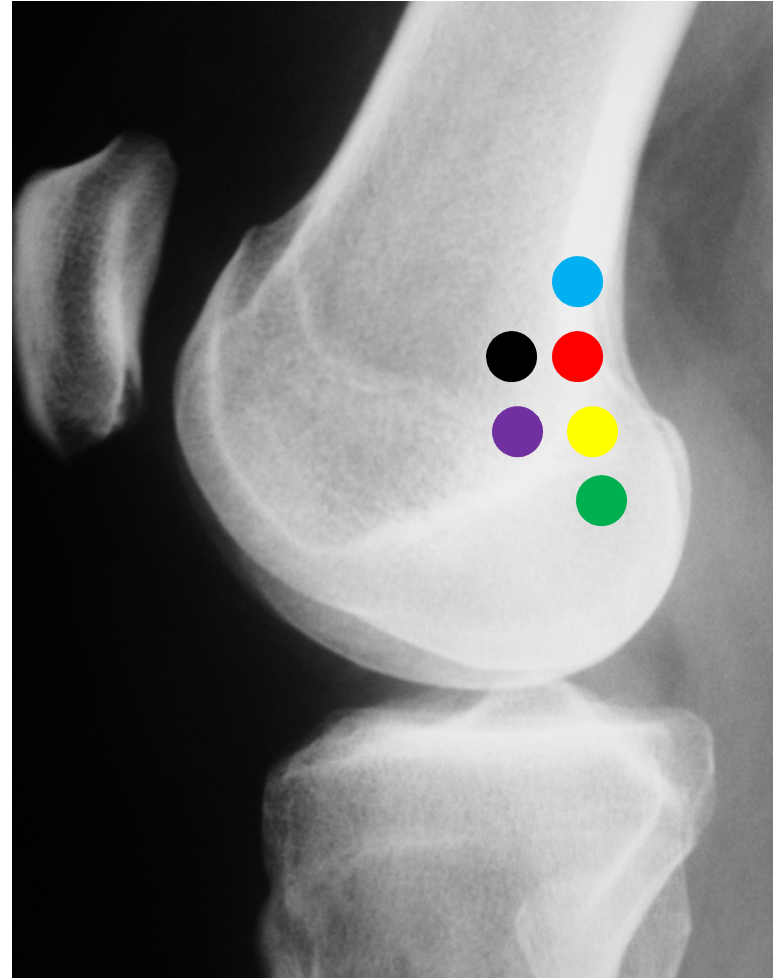
PATELLA

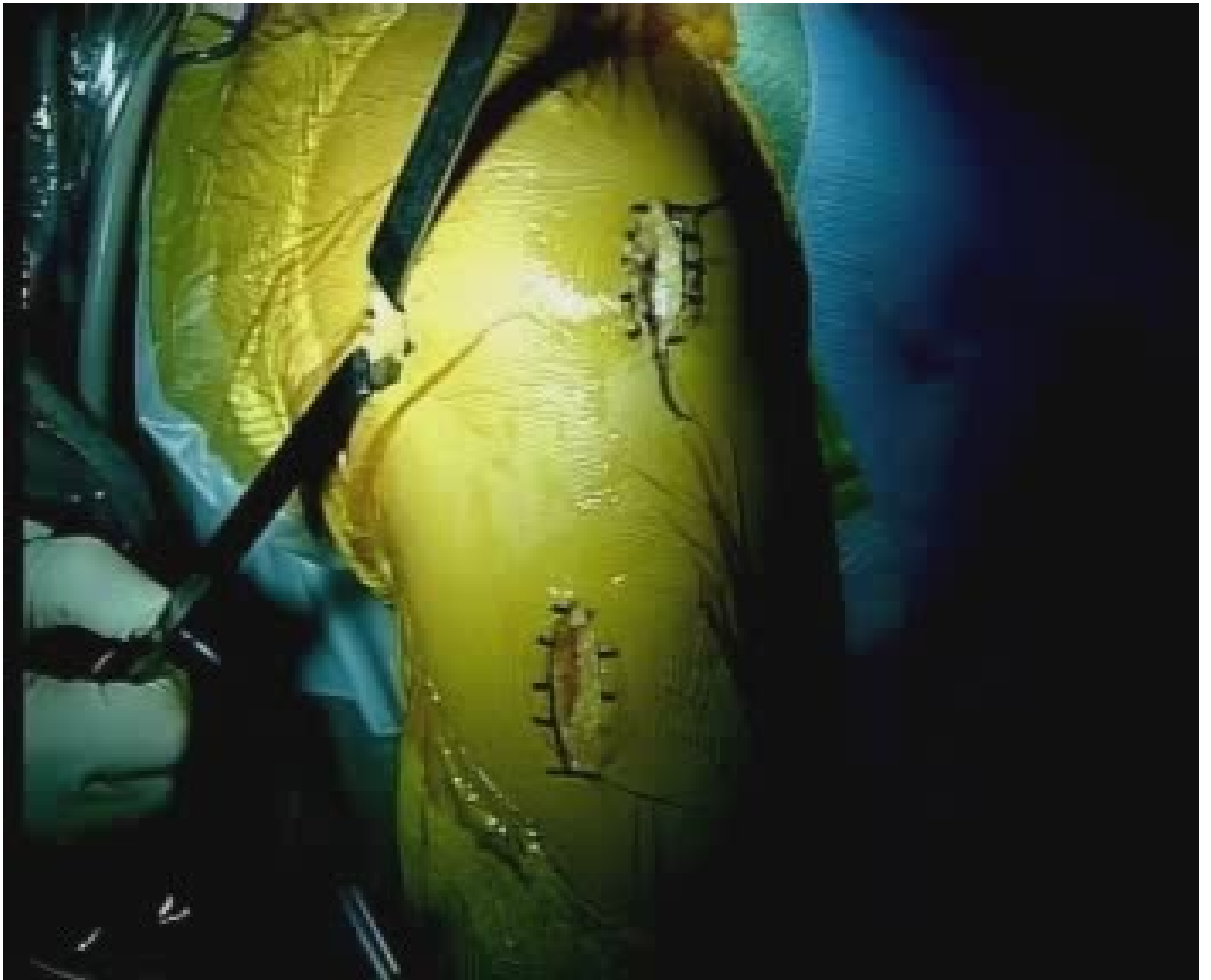




FEMUR

Position du tunnel
femorale







Tension de la



In vivo positioning analysis of Medial patellofemoral ligament reconstruction.

Servien et al., *Am J Sport Med*, 2010 , Jan (1) : 134-9

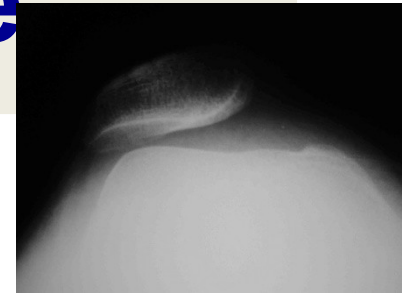
Gestes associés



Femoral tunnel enlargement after medial patellofemoral ligament reconstruction: prevalence, risk factors, and clinical effect.

Am J Sports Med. 2014 Feb;42(2):297-301.

Facteurs d'instabilité



1. Trochlear dysplasia
2. Patella alta
3. Tibial tubercle-trochlear groove distance (TT-GT) > 20mm

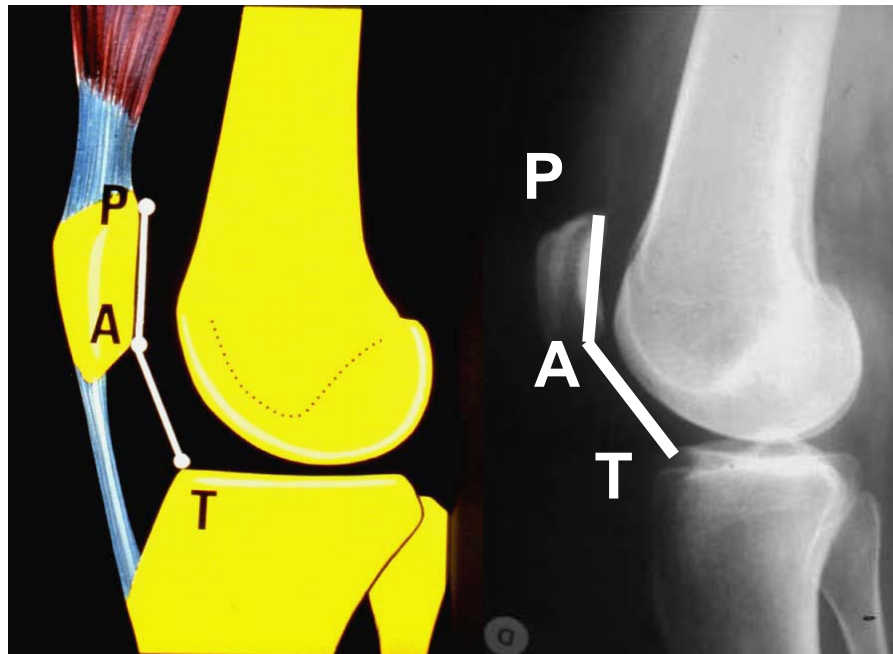
Tibial Tubercle Transfer (TTT)
Distal and/or Medial

Dejour H, Walch G, Nove-Josserand L, et al.: Factors of patellar instability: an anatomic radiographic study. Knee Surg Sports Traumatol Arthrosc. 2: 19-26, 1994

Indication Distalisation TTA

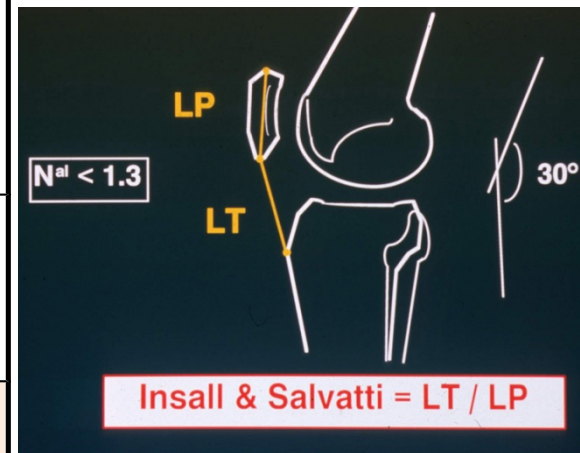
Patella alta

Caton-Deschamps index (AT/AP) >



Goal : Caton-Deschamps index = **0.8 - 1**

Distal TTT	Pre op n = 135	Post op n = 135
Caton-Deschamps	1.1 (0.8-1.6)	0.90 (0.6-1.3)
Insall-Salvati	1.3 (0.8 – 1.8)	1.2 (0.9 – 1.8)

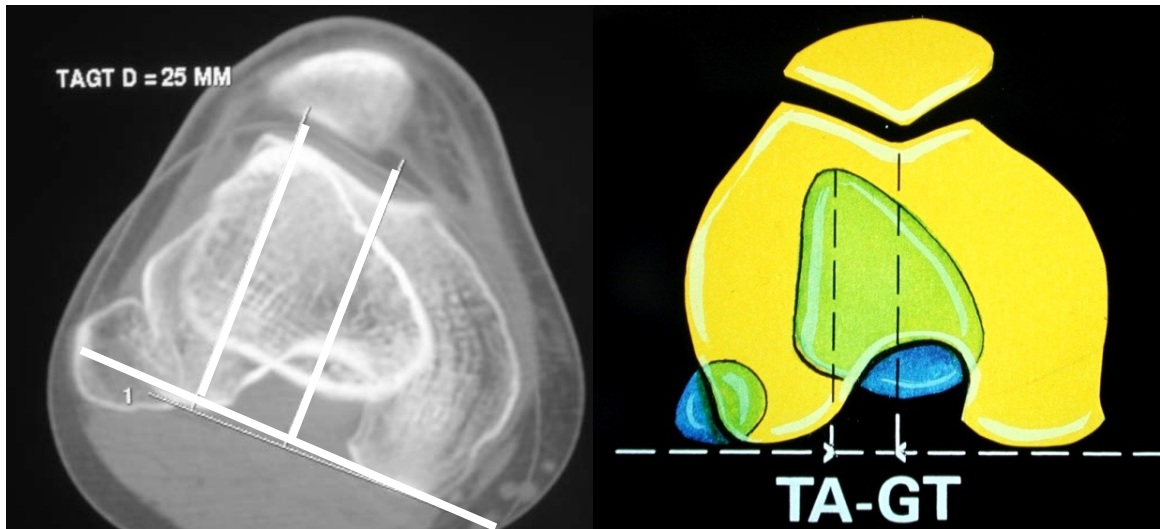


L' index d'Insall-Salvati n'est **pas affecté**
par un distal TTT

E. Servien, T Ait Si Selmi, Ph Neyret :
Subjective evaluation of surgical treatment for patellar instability
Rev Chir Orthop, 2004, 90, 137-142

Indication Medialisation TTA

TA-GT (CT-Scan) > 20 mm



Trochlear groove coronal view (Bernageau et Goutallier)

But = **10-12 mm**

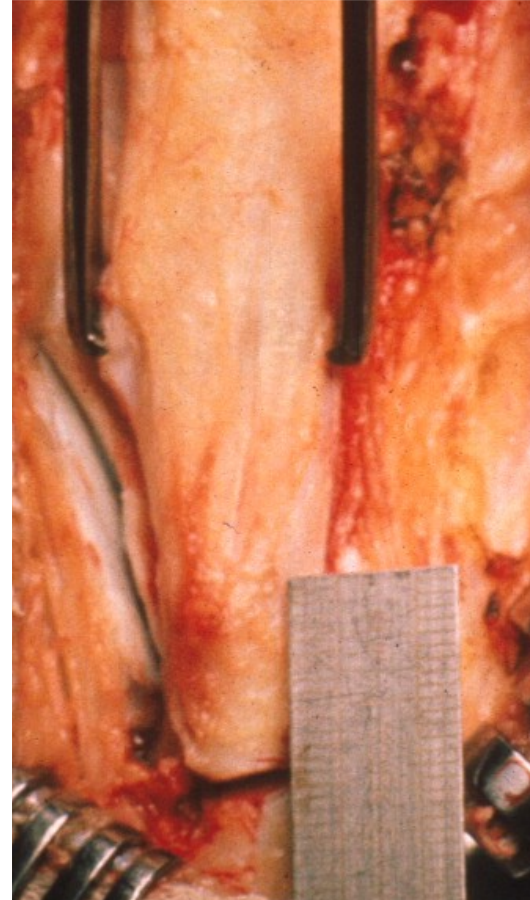
Indication osteotomie « mixte »

Patella alta
+
TA-GT excessive



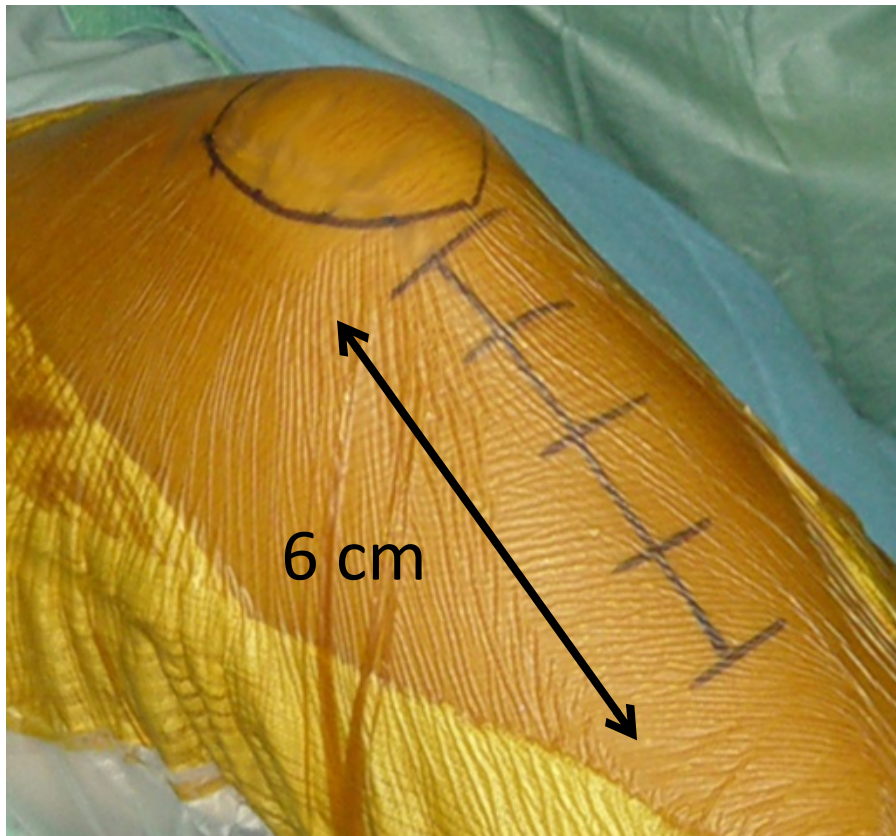
Combinaison

Distalisation + Medialisation



Technique chirurgicale Distalisation

Voie antéromédiale



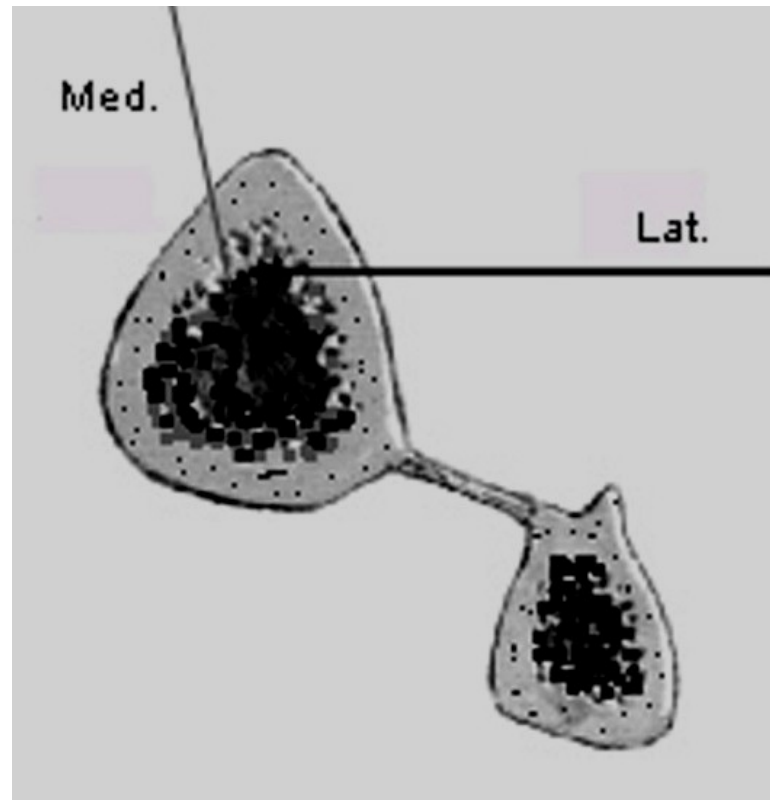
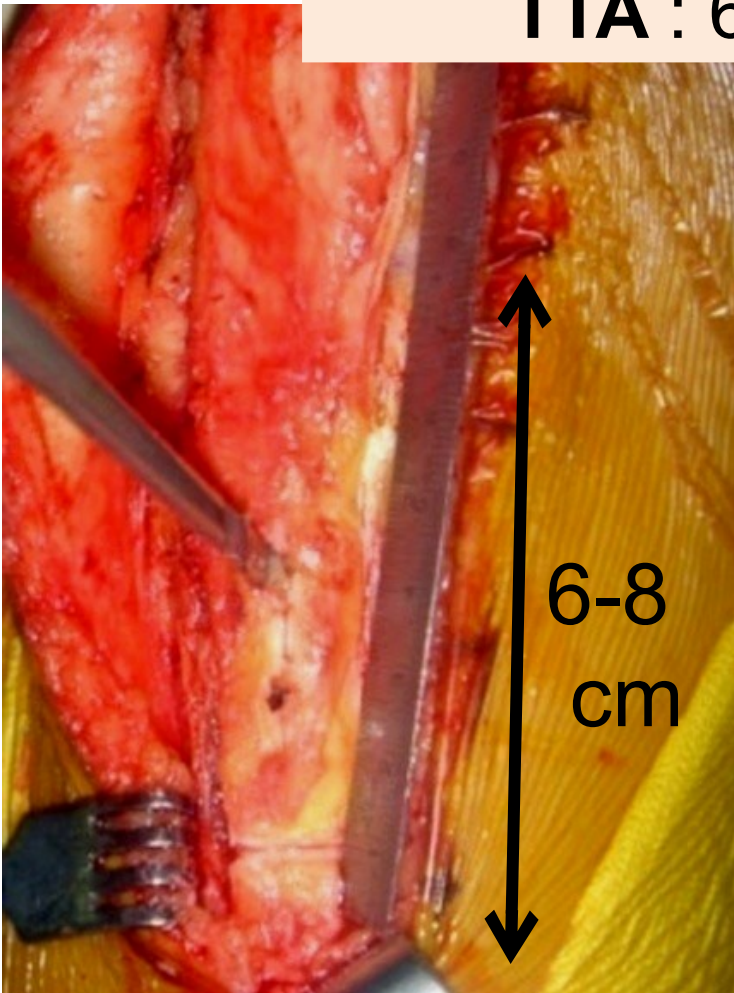
Technique chirurgicale Distalisation

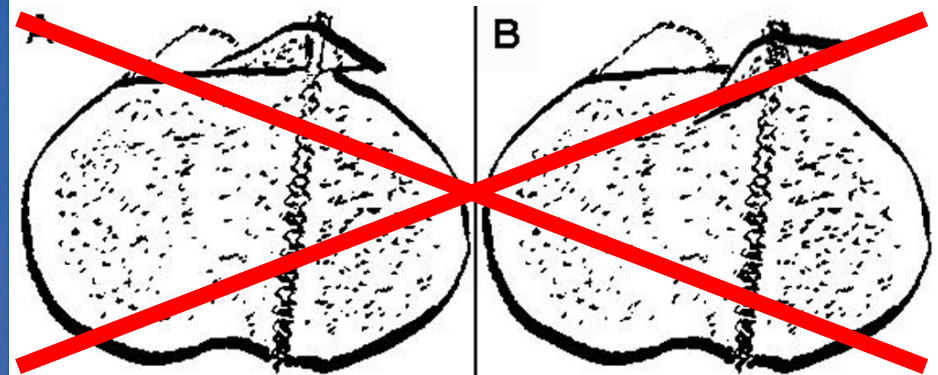
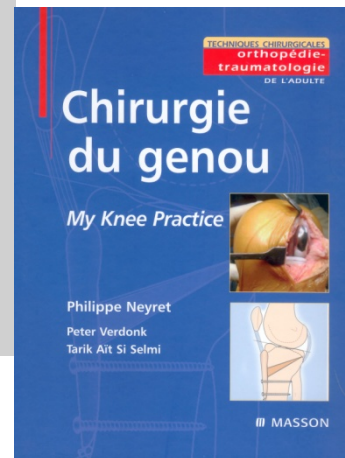
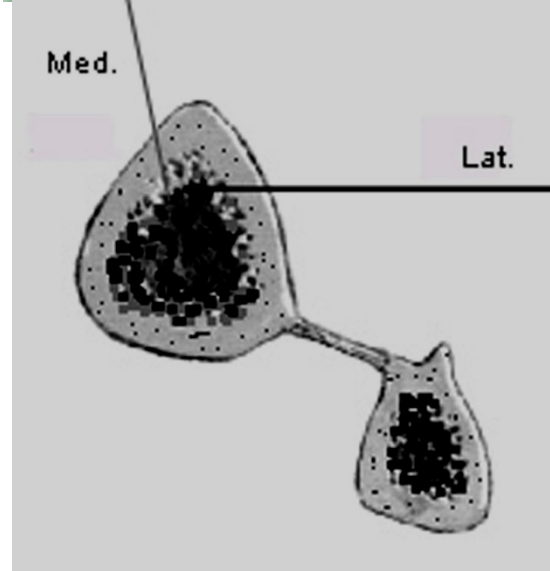
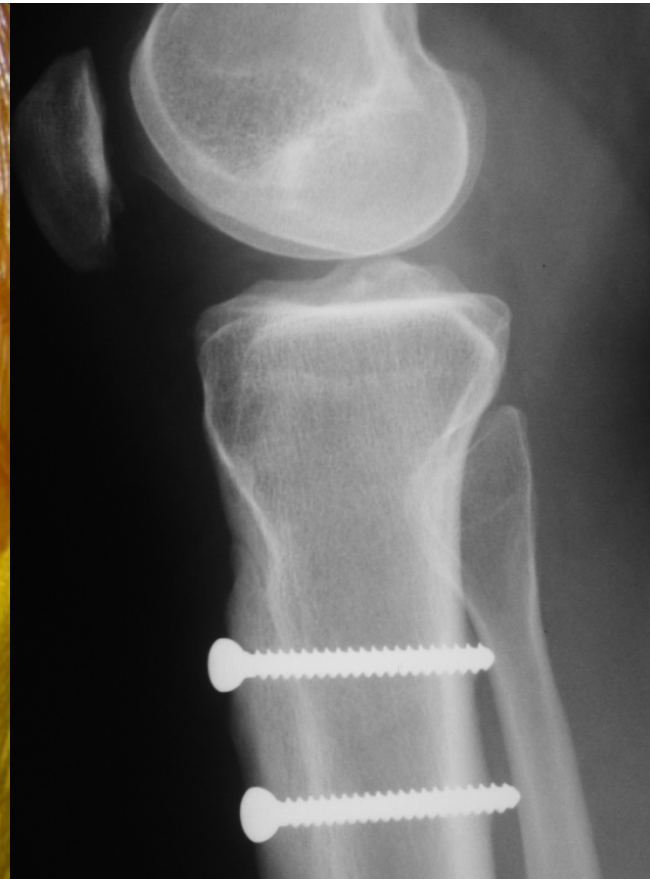
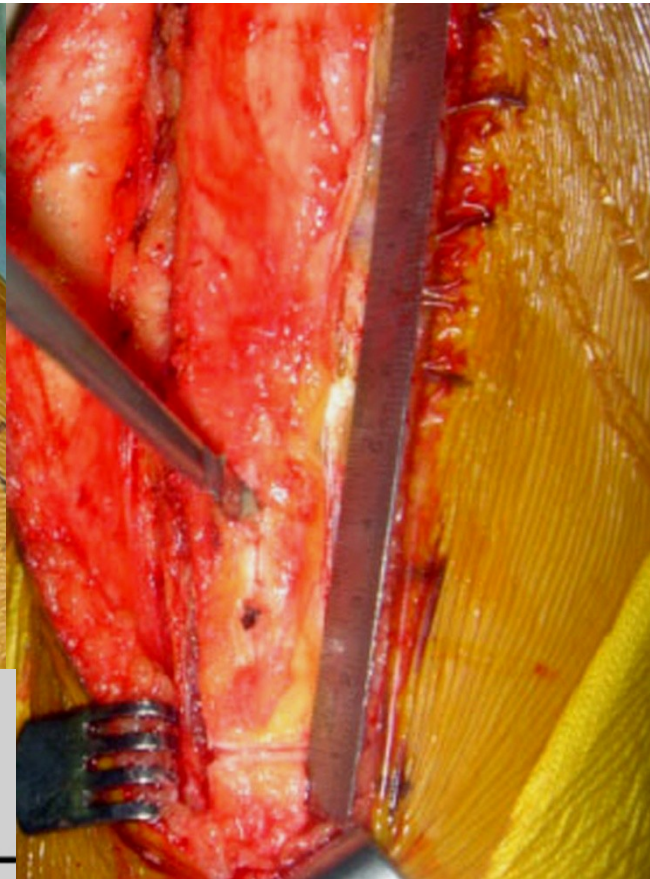
Préparation de la fixation
mèche à **4.5mm**



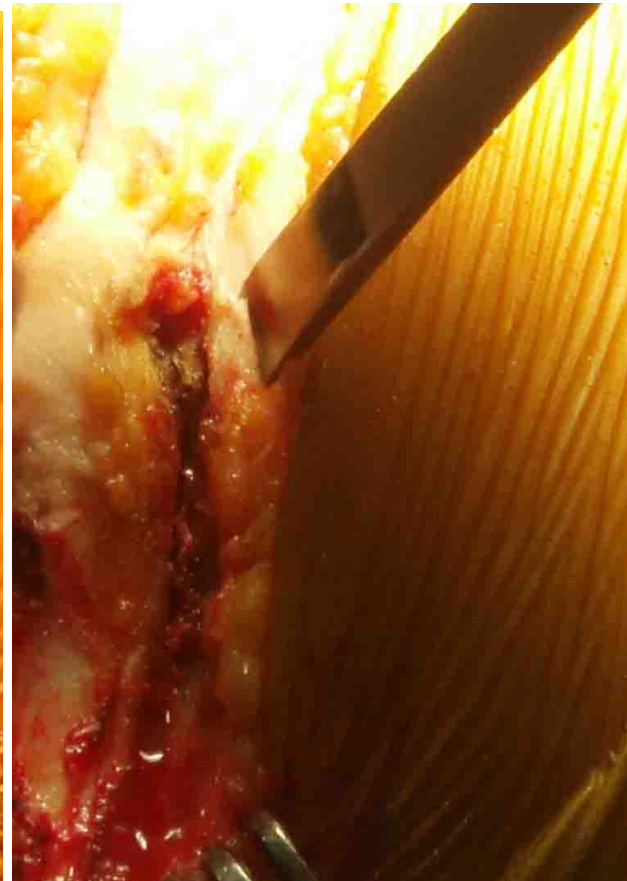
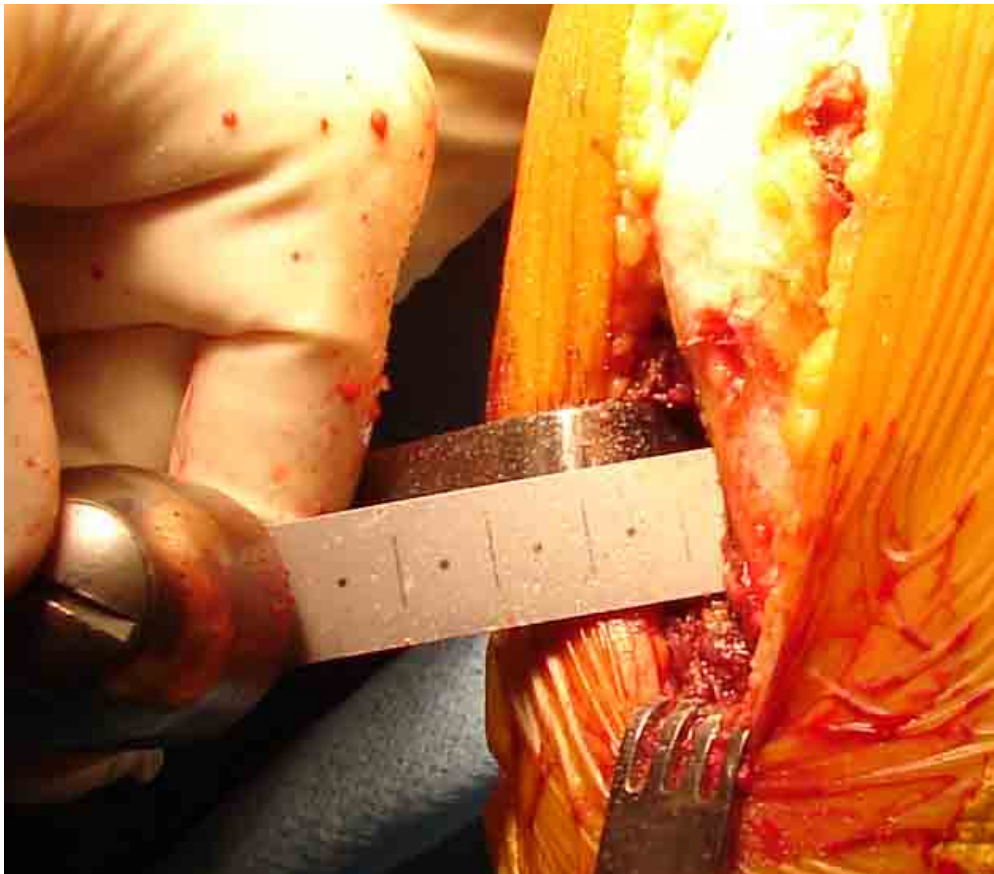
Technique chirurgicale Distalisation

TTA : 6-8cm de long





Technique chirurgicale Distalisation



Technique chirurgicale Distalisation



Technique chirurgicale Distalisation

4.5mm screws
Perpendiculaires au tibia



**Technique chirurgicale
Médialisation
Ostéotomie d'Elmslie-Trillat**



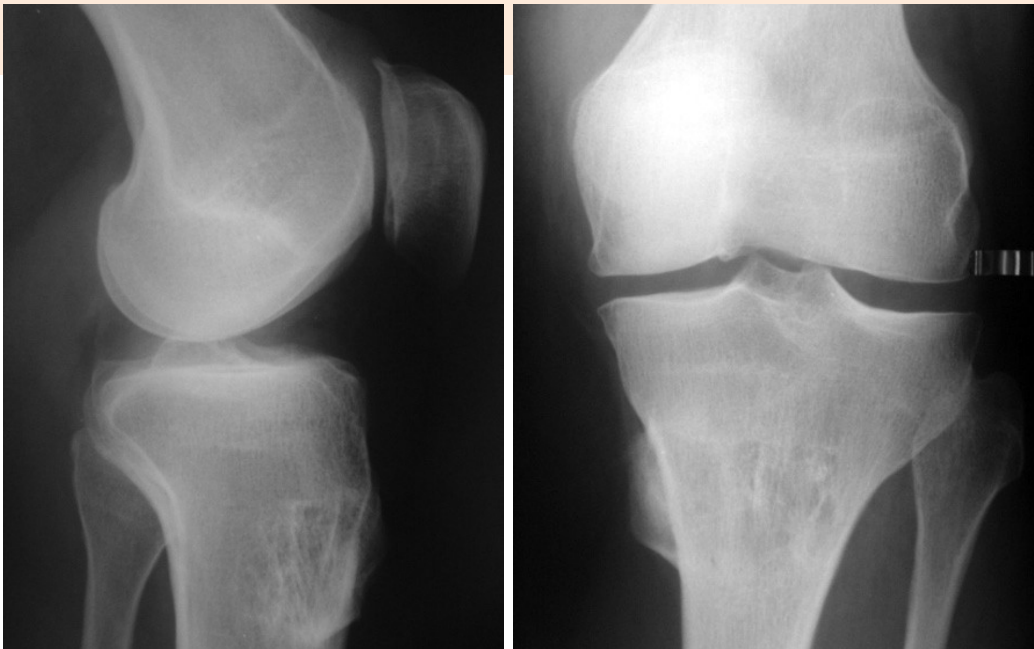
Osteotomie pédiculée

Une vis corticale 4.5mm , légèrement ascendante

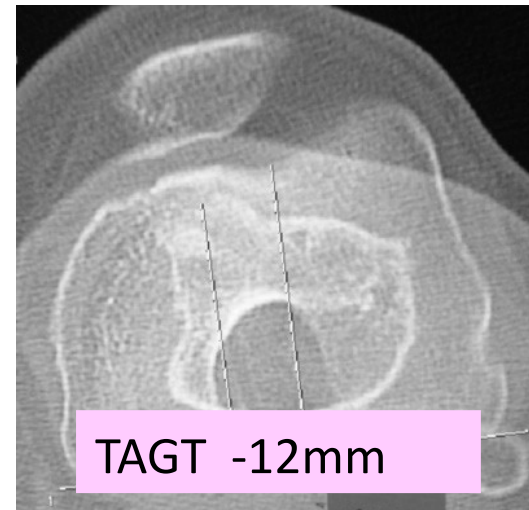
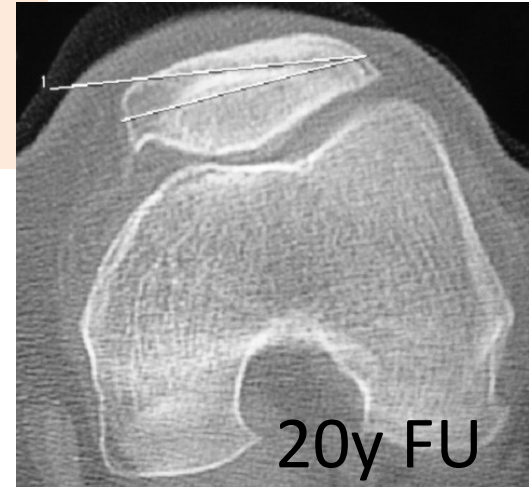


Complications

1. « OVERMEDIALIZATION »



Overmedialization:
risque d'arthrose FP médiale



COMPLICATIONS

2. Fracture du tibia



3. Pseudarthrose de TTA



4. Patella infera

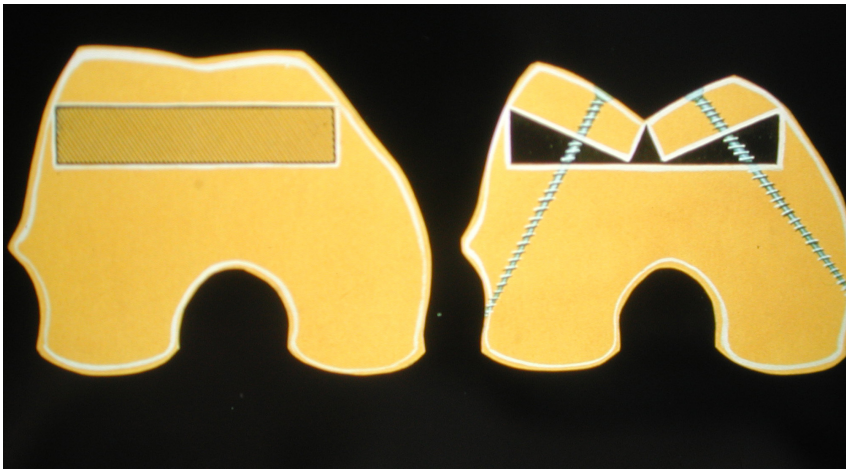
5. Sepsis...



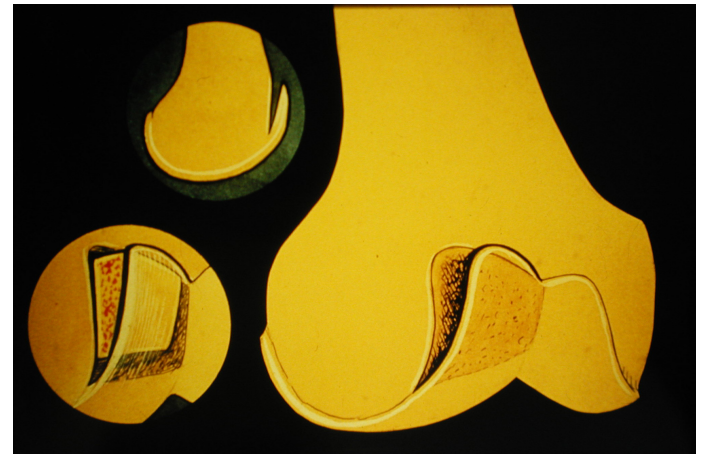
trochleoplastie



Creusement

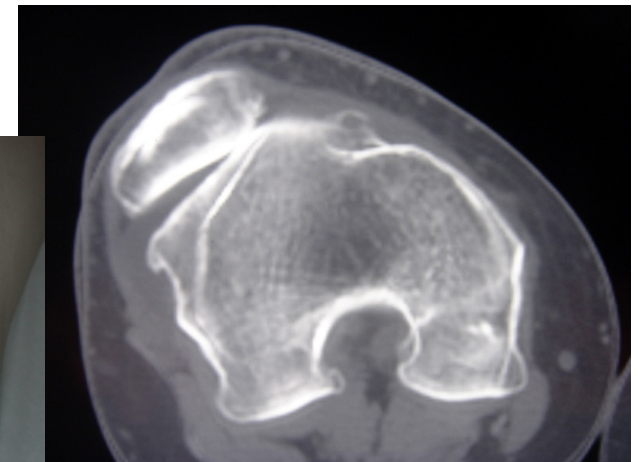
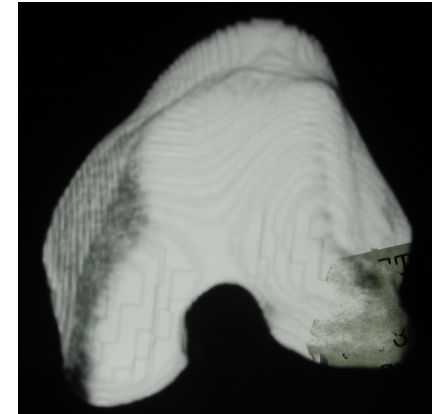


Albee



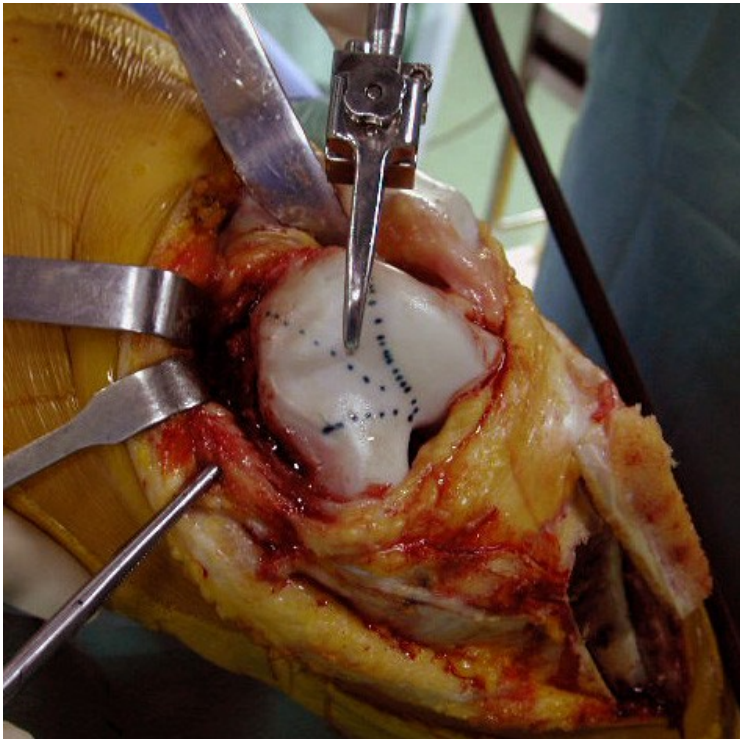
Indication?

- Cas par cas
- Course anormale de la rotule
- Dysplasie de trochlée (stage D)
- Luxation habituelle
- Subluxation en flexion
à 30°
- Echec ?

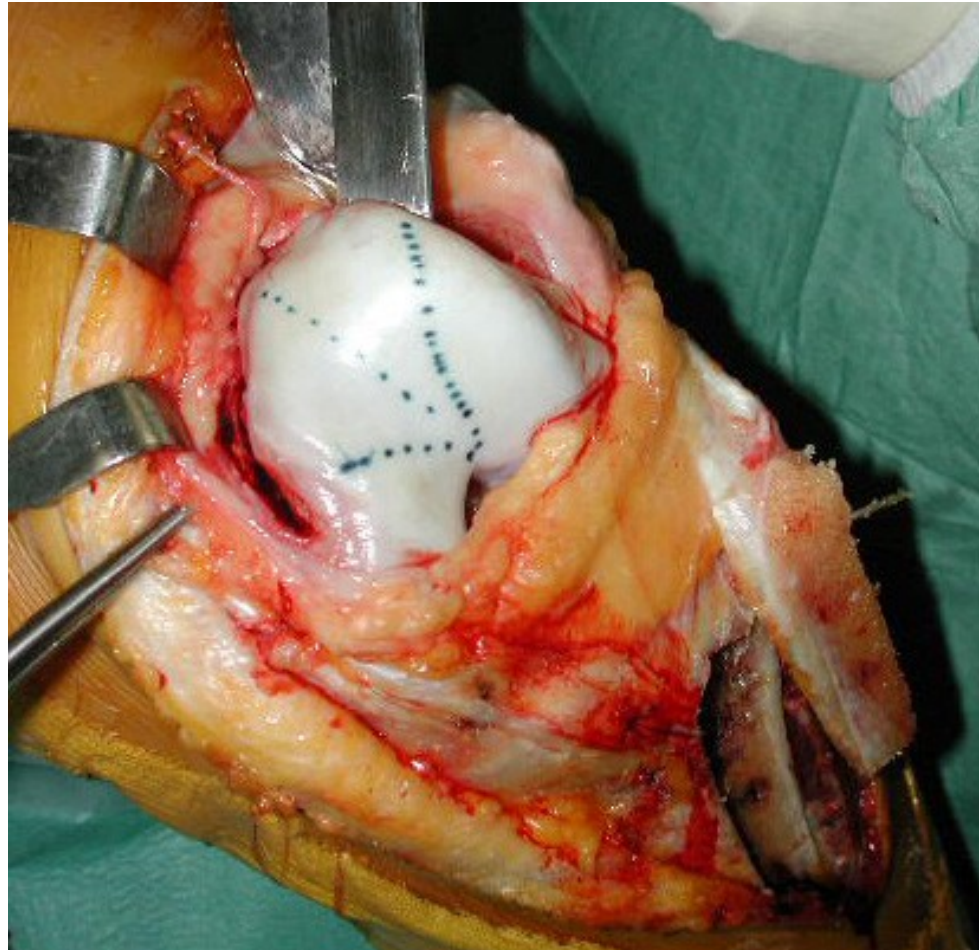


Technique chirurgicale

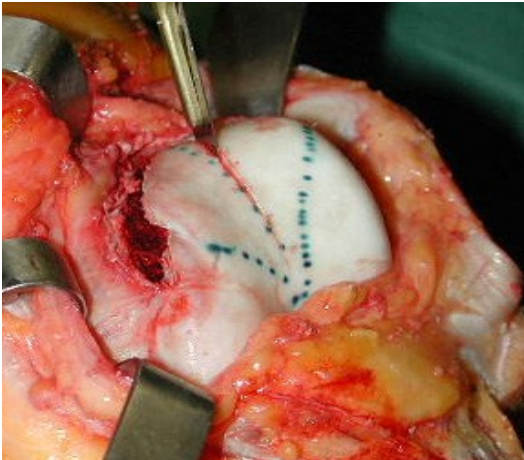
Ancillaire spécial pour préserver le cartilage



Préparation



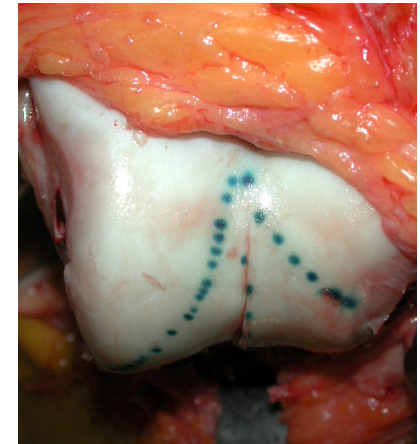
Technique chirurgicale



Section du cartilage
en milieu de
trochlée



Fixation par des bandelettes de suture, vis
ou 2 agrafes enfouies



Conclusion 1

Pathoanatomical factors not constant



Henri Dejour « menu à la carte »



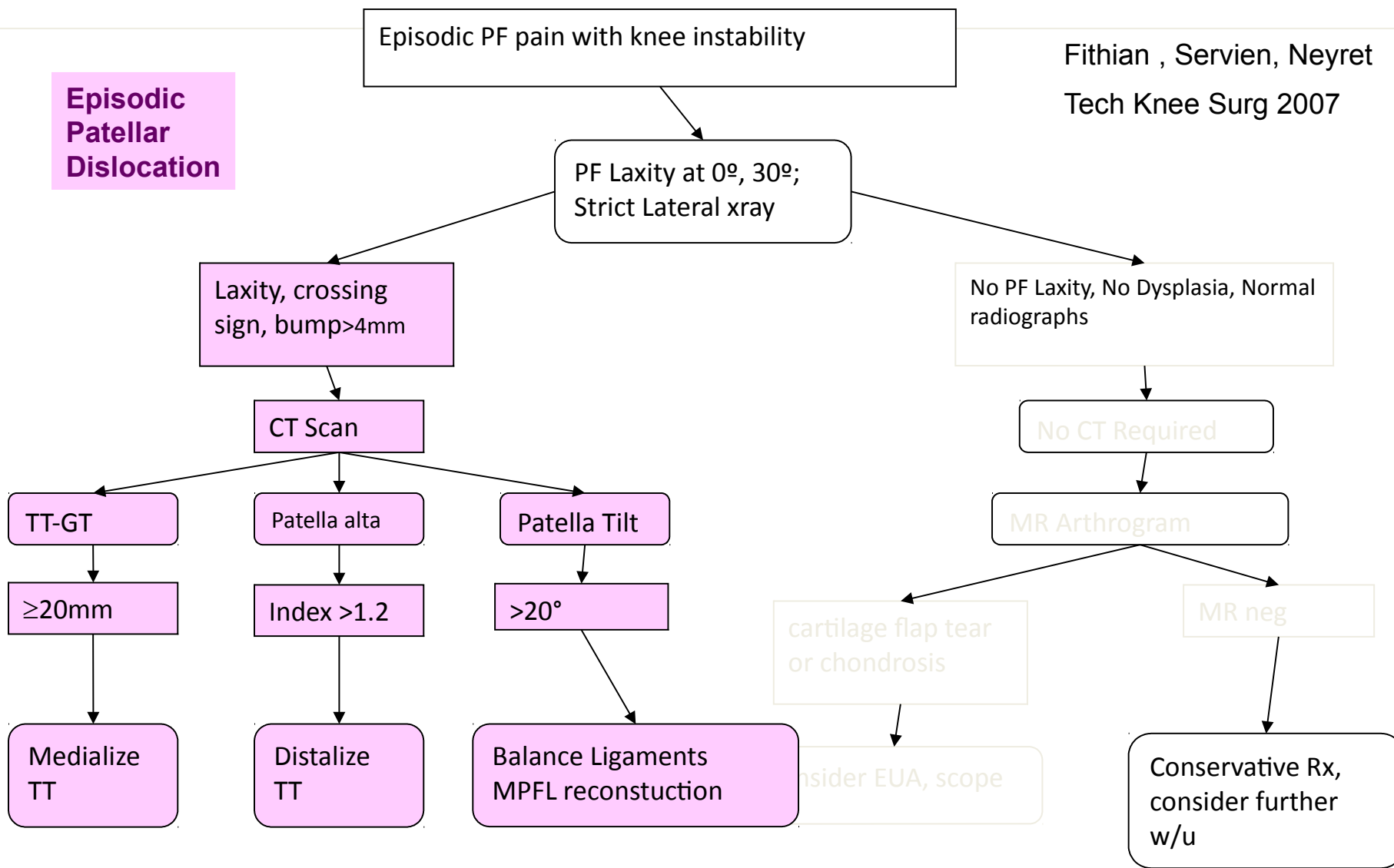
**Transfer of ATT
for patella alta**



Surgical Treatment

Fithian, Servien, Neyret
Tech Knee Surg 2007

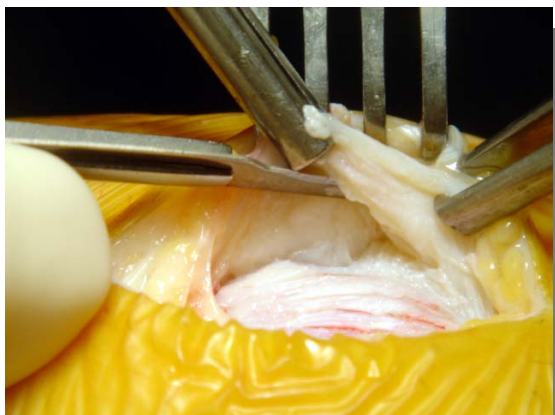
Episodic Patellar Dislocation



In Vivo Positioning Analysis of Medial Patellofemoral Ligament Reconstruction

Elvire Servien,^{*†} MD, PhD, Brett Fritsch,[‡] MD, Sébastien Lustig,[†] MD, Guillaume Demey,[†] Romain Debarge,[†] MD, Carole Lapra,[§] MD, and Philippe Neyret,[†] MD

Investigation performed at Department of Orthopaedic Surgery, Centre Albert Trillat, Groupement hospitalier nord-Lyon Université, Lyon, France



In vivo positioning analysis of Medial patellofemoral ligament reconstruction.

Servien et al., *Am J Sport Med*, 2010, Jan (1) : 134-9

***Patellar tilt is a consequence, not a factor :
MPFL rupture***

Patellar Instability: The Lyon Experience

Donald C. Fithian, MD
Southern California Permanente
Medical Group
San Diego, California, U.S.A.

Philippe Neyret, MD and Elvire Servien, MD
Hopital de la Croix-Rousse
Centre Livet
Lyon, France

INTERNATIONAL PERSPECTIVES

Patellar instability: the Lyon experience

Donald C. Fithian^a, Philippe Neyret^b and Elvire Servien^b

Knee Surg Sports Traumatol Arthrosc
DOI 10.1007/s00167-010-1329-4

KNEE

Patellar shape can be a predisposing factor in patellar instability

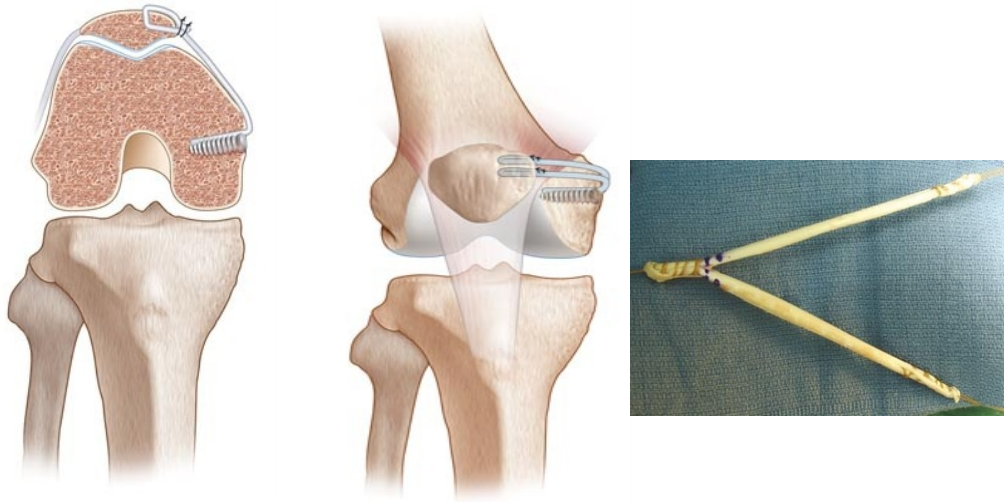
Alfredo Schiavone Panni · Simone Cerciello ·
Nicola Maffulli · Mariachiara Di Cesare ·
Elvire Servien · Philippe Neyret

REVIEW ARTICLE

Tibial Tuberosity Transfer for Episodic Patellar Dislocation

Elvire Servien, MD, Peter C. Verdonk, MD, PhD,*† and Philippe Neyret, MD**

Conclusion



MPFL + ? (cas par cas = menu à la carte!)