

# THE BATTLE

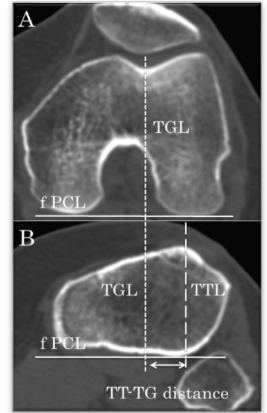
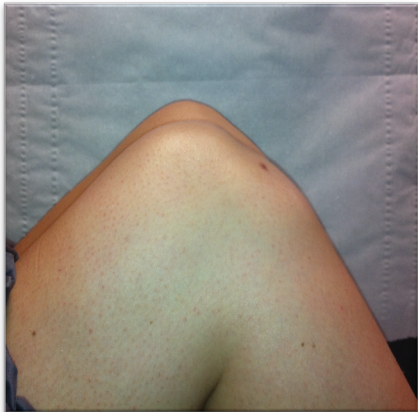



**BRÛLEURS DE LOUPS**  
GRENOBLE HOCKEY

#BDL NATION



# MINI BATTLE: DO WE HAVE TO CORRECT EVERYTHING OR MAKE IT SIMPLE?



Johannes Barth and David Dejour  
Grenoble-Lyon, France





# DISCLOSURE

1. Royalties from Move Up
2. Consulting income from Arthrex, Move-Up and SBM
3. No Research and education support
4. Past-president of SFA



CENTRE  
OSTÉO-ARTICULAIRE  
DES CÉDRES



## LA PATHOLOGIE FEMORO-PATELLAIRE

6<sup>èmes</sup> JOURNEES LYONNAISES

LYON 1987



organisées par

H. DEJOUR  
G. WALCH

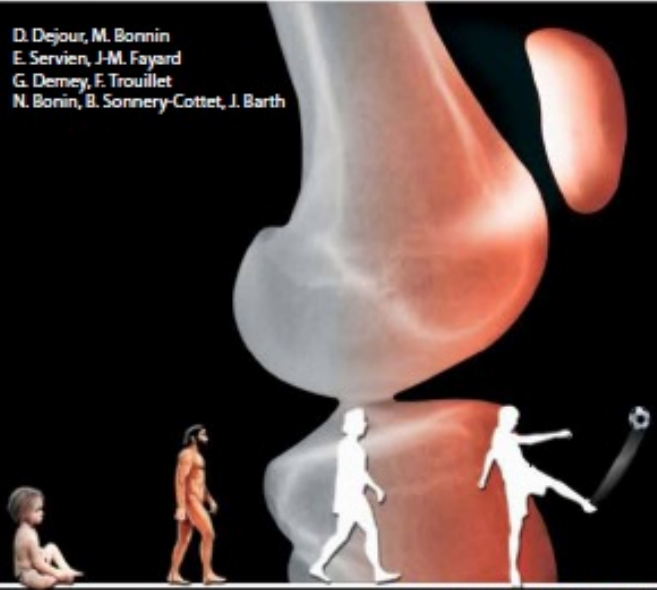


15<sup>èmes</sup> Journées Lyonnaises de Chirurgie du Genou



## La Patella

D. Dejour, M. Bonnin  
E. Servien, J-M. Fayard  
G. Demey, F. Trouillet  
N. Bonin, B. Somnery-Cottet, J. Barth



25 ans après...25 years later

2012

ALRM Since 1969

Past presidents : Albert Trillat, Henri Dejour, Flama Chambat, Philippe Nayret.



6-7-8  
DEC  
2012

LILLE  
GRAND  
PALAIS



INVITEE D'HONNEUR LA POLOGNE GUEST NATION: POLAND

SIMULTANEOUS TRANSLATION FRENCH /ENGLISH



SYMPOSIA

INSTABILITÉ ROTULIENNE OBJECTIVE PATELLAR INSTABILITY  
V. Chassaing (Paris), D. Dejour (Lyon)

RUPTURE DE COIFFE APRÈS 70 ANS ROTATOR CUFF TEAR AFTER 70 YEARS  
P.-H. Flurin (Bordeaux-Mérignac)  
P. Hardy (Paris)

Président du Congrès

Special Acknowledgment



SFA Honorary member 2021

PROGRAMME SCIENTIFIQUE SCIENTIFIC PROGRAMME



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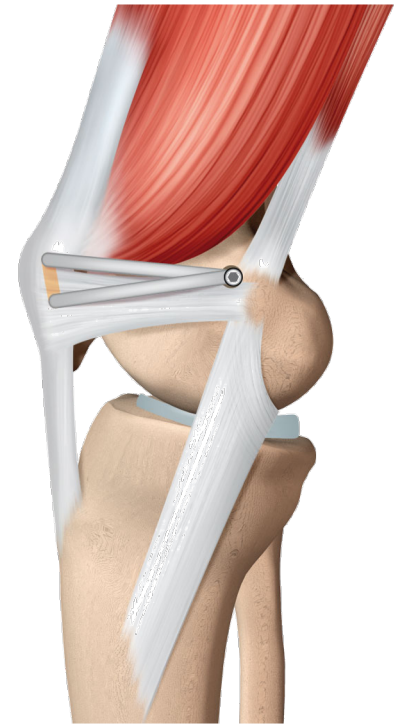
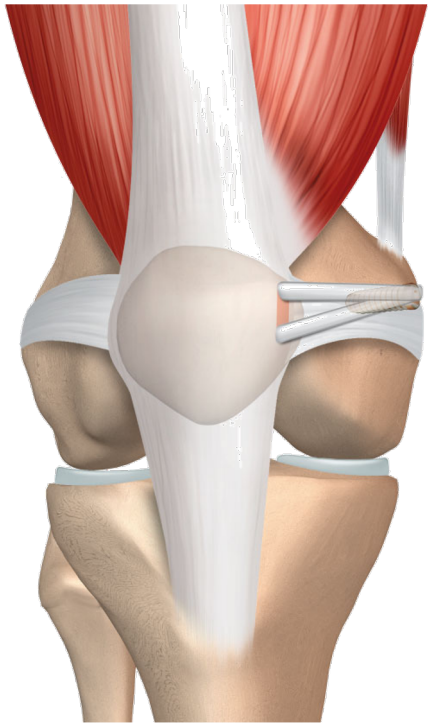


# One thing I agree with Dr. Wascher

**MPFL** is always indicated  
for all cases

Sometimes isolated

**Additional procedure**  
is easily oriented by  
the “à la carte” menu



# Recurrence rate of instability with MPFL

## 13.8% (0-38)<sup>1</sup>

- How much/severe were the concurrent morphologic risk factors?
- MPFL = Common procedure and generally preferred approach « easier », but where is the cursor?<sup>2</sup>

ISOLATED MPFL

A LA CARTE MENU

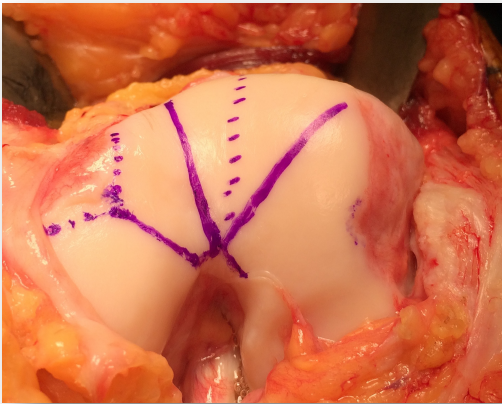
1. Recurrent patellofemoral instability rates after MPFL reconstruction techniques are in the range of instability rates after other soft tissue realignment techniques [O. Wilkens et al. Knee Surgery, Sports Traumatology, Arthroscopy 2019](#)
2. Patellofemoral Instability Consensus Statement From the AOSSM/PFF Patellofemoral Instability Workshop [W. Post et D. Fithian Orthop. J Sports Med 2018](#)



# Make it Simple OK, but multifactorial problem

Control (n= 190) / Dislocation (n= 147)

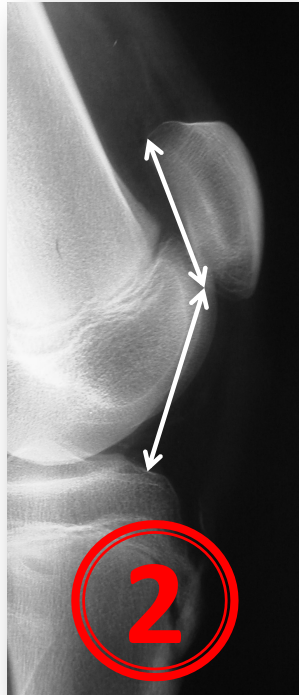
*Statistical differences 3 factors (H. Dejour – G. Walch)*



Trochlear dysplasia

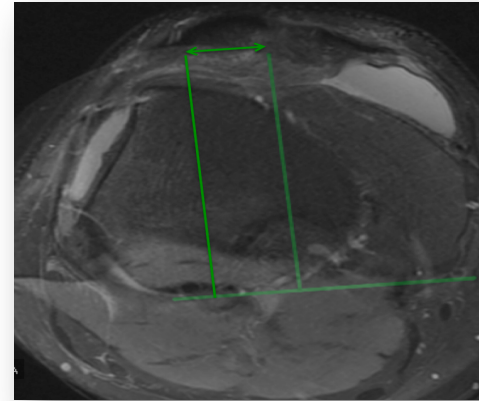
1

*French J. Orthop. 1990*  
*Knee Surg. Trauma 1994*

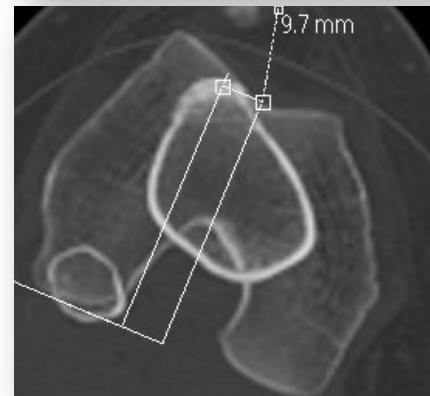


2

Patella Alta > 1.2



TT- TG > 13 mm MRI



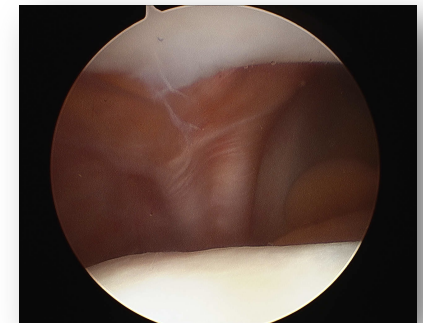
3

TT- TG > 20 mm CT

# Complication rate with MPFL

# 26.1% <sup>1</sup>

- patella **fracture**
- Failures (4%)
- Clinical **instability** on post-operative examination (32%)
- **Stiffness** Loss of knee flexion (13%)
- Wound complications
- **Pain** (21%)



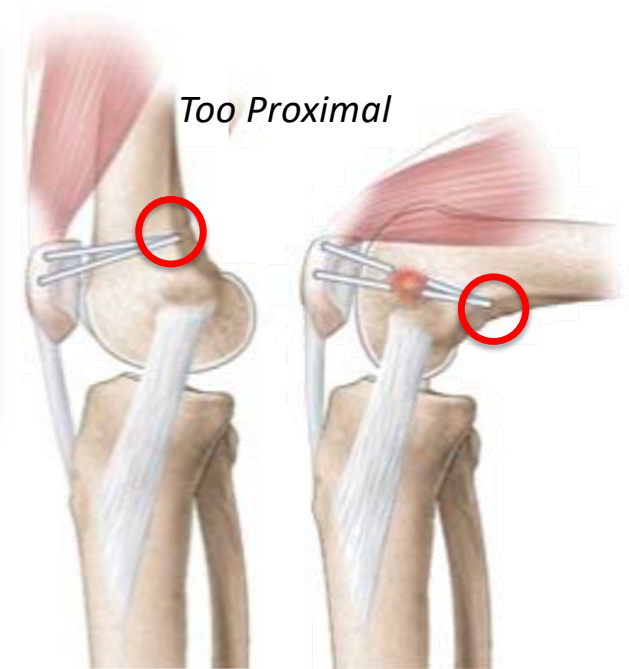
1. A Systematic Review of Complications and Failures Associated with Medial Patellofemoral Ligament Reconstruction for Recurrent Patellar Dislocation [J.N. Shah et al. Am J. Sports Med., 2012](#)



# Risk factors for residual instability with isolated MPFL

- Femoral tunnel malposition (O.R. 8.2)<sup>1,2</sup>
- Patella **alta** (O.R. 5.5)<sup>1</sup>
- Positive J sign (O.R. 11.9)<sup>1,2</sup>

**PROBLEM OF INDICATION**

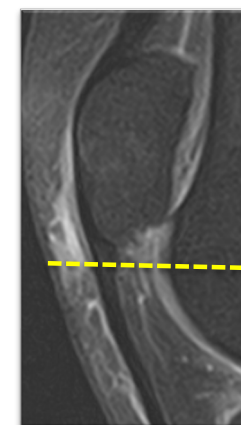
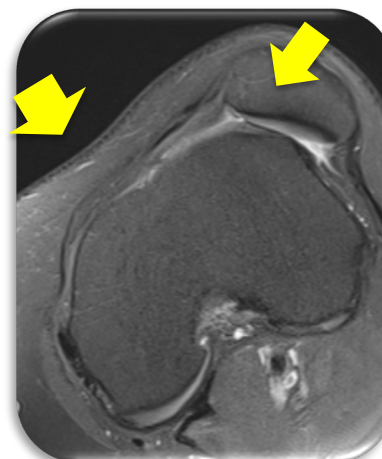
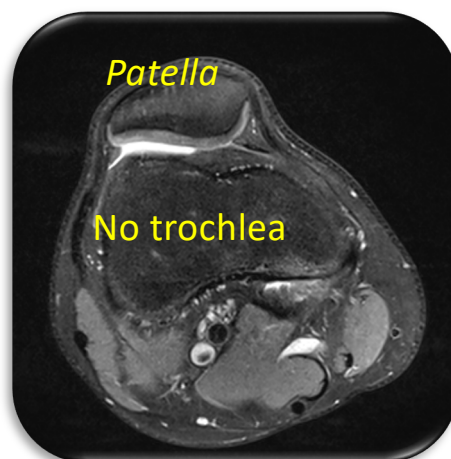
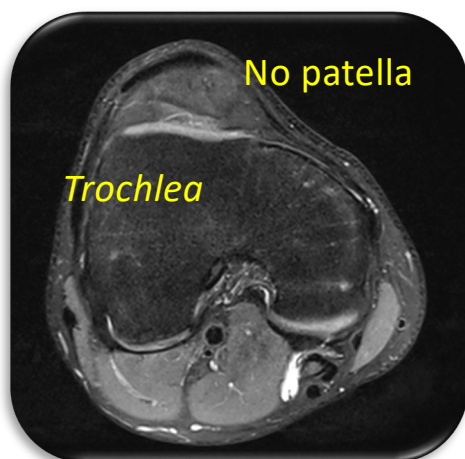
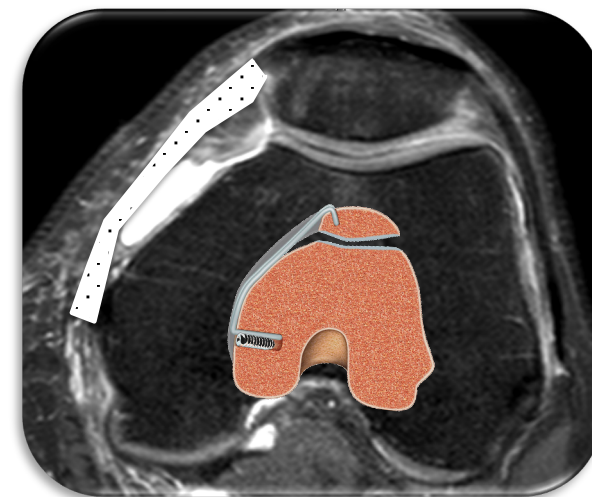


1. Clinical Outcomes and Predictive Factors for Failure With Isolated MPFL Reconstruction for Recurrent Patellar Instability **E. Sappey-Marinier et al. Am J. Sports Med., 2019**
2. The presence of a preoperative high-grade J-sign and femoral tunnel malposition are associated with residual graft laxity after MPFL reconstruction **Z. Zhang et al. Knee Surgery, Sports Traumatology, Arthroscopy 2020**

# MPFL works only if the patella is facing the trochlea

Otherwise, MPFL will not act in proper mechanical conditions<sup>1</sup>

- Fatigue rupture
- Pain
- Tunnel widening
- Recurrence



1. Anisometry of Medial Patellofemoral Ligament Reconstruction in the Setting of Increased Tibial Tubercle Trochlear Groove Distance and Patella Alta [L. Redler et al. Arthroscopy 2017](#)

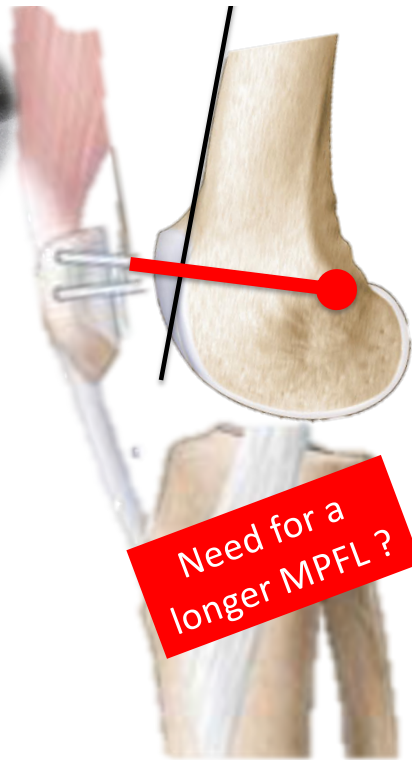


# Perfect placement of MPFL (femoral)

But *IF* the patella has *not the right position*  
→ Same effect has a wrong placement !!!



Normal Trochlea

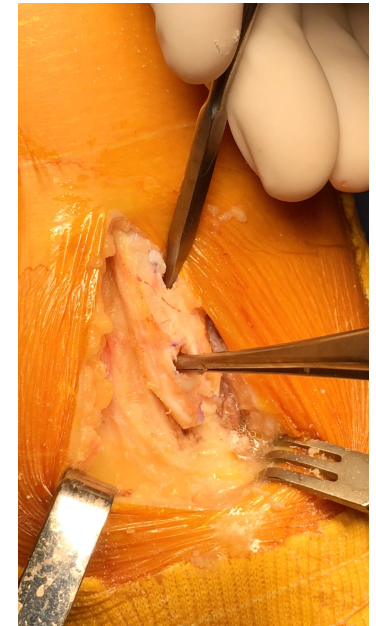
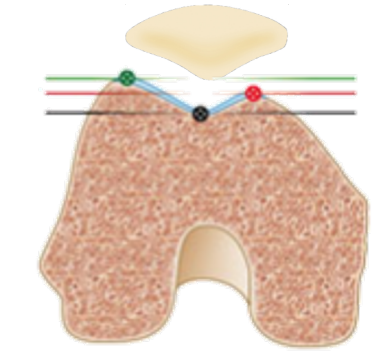
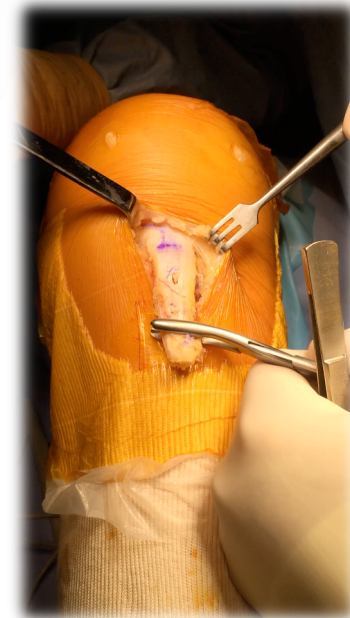
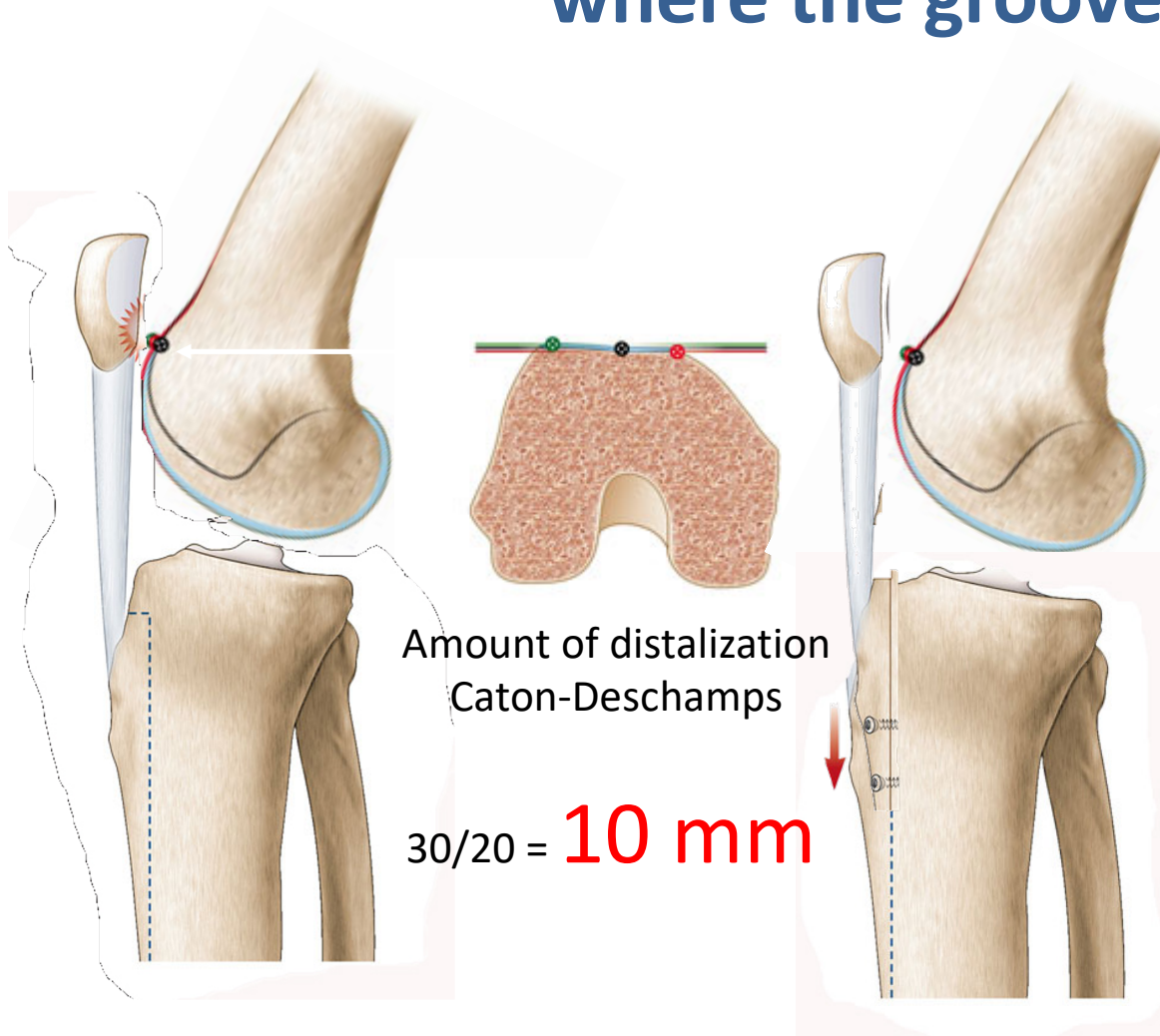


Dysplasia + Bump



Patella Alta

# Distalization will relocate the patella where the groove is deeper

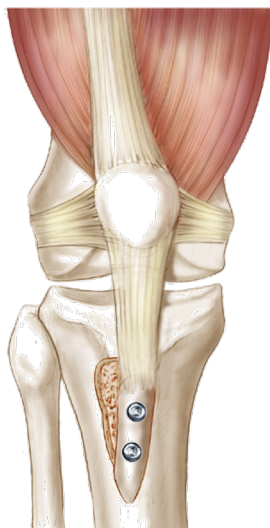


# TT Transfer is still indicated

## *Objective Patellar Dislocation*

### Medialization

If excessive  $TT-TG > 20 \text{ mm}$

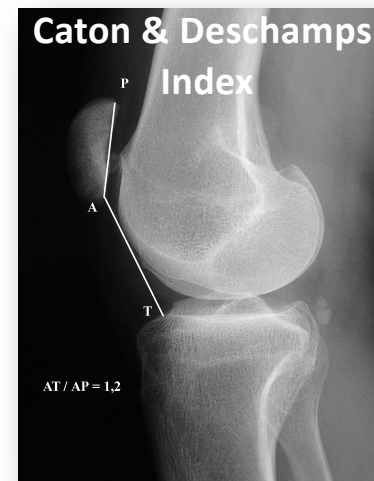
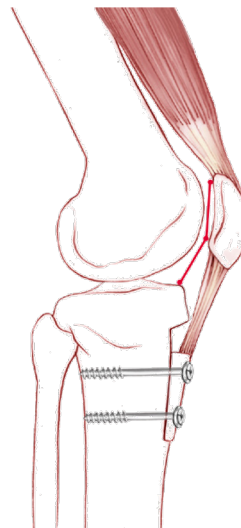


### Medialization

→  $10 \text{ mm} < TT-TG < 15 \text{ mm}$

### Distalization

If  $Patella \text{ Alta} > 1.2$



### Distalization

→ index C&D = 1





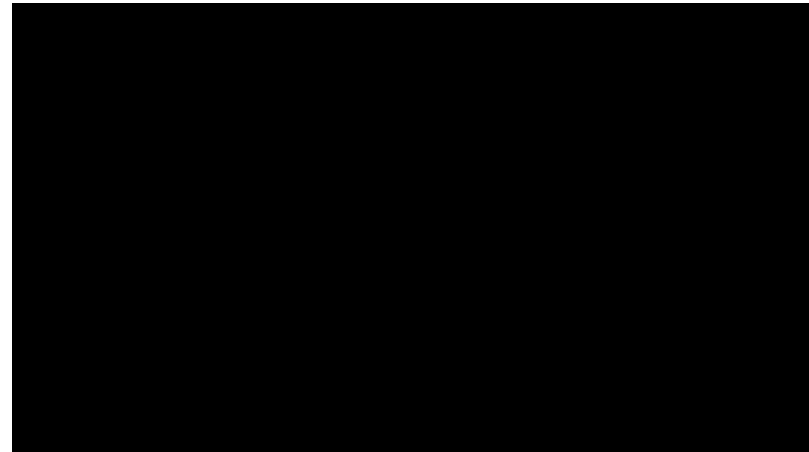
**Let's try to find a compromise!**

**When ISOLATED MPFL could be performed?**

1. Indication of lateral retinaculum release
2. Indication of Trochleoplasty
3. Indication of distalization

# 1. No more Lateral retinacular release!

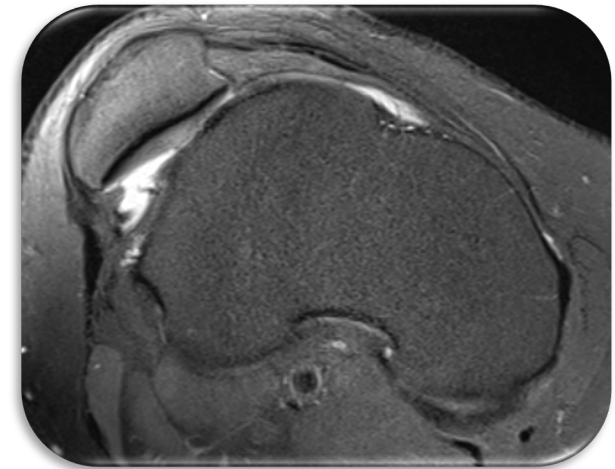
- There is **no indication** to a systematic lateral retinacular release in association with MPFL reconstruction in the treatment of RPD <sup>1</sup>
- **EXCEPTION: NEGATIVE TILT TEST**



1. Lateral retinacular release is not recommended in association to MPFL reconstruction in recurrent patellar dislocation [M. Malatray et al. Knee Surgery, Sports Traumatology, Arthroscopy 2019](#)

## 2. When is it possible to neglect the Trochlear Dysplasia

- There is **no indication** to a systematic trochleoplasty whatever stage as long as<sup>1</sup> :
- NEGATIVE J SIGN (Maltracking)
- Supratrochlear spur < 5mm
- No convex proximal trochlea



1. Patellofemoral Instability Consensus Statement From the AOSSM/PFF Patellofemoral Instability Workshop [W. Post et D. Fithian Orthop. J Sports Med 2018](#)



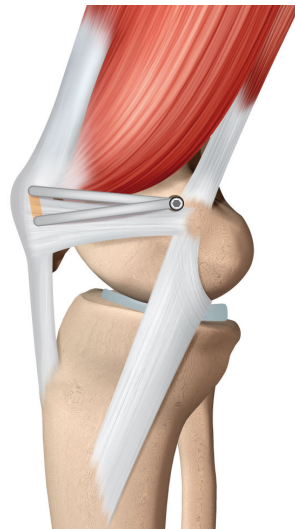
### 3. Distalization can be avoided in Patella Alta

X-ray Index > 1.2 + MRI Engagement

Positive engagement



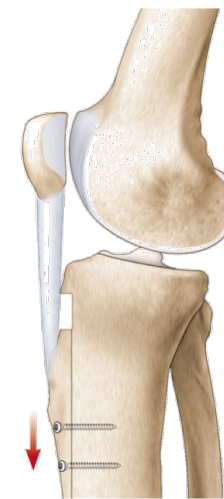
Isolated  
MPFL



Negative engagement



Distalization  
+  
MPFL



1. How Does Isolated Medial Patellofemoral Ligament Reconstruction Influence Patellar Height? [F Luceri et al. Am J. Sports Med., 2020](#)

# CONCLUSION

## Bony procedures

Correct anatomical Malalignment

- Axial Alignment : excessive TT-TG
- Sagittal engagement : Patella alta

## Soft tissue procedure (MPFL)

Restore the “torn anatomy”

# Take Home Message

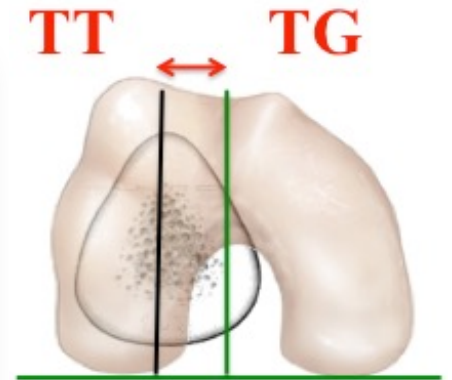
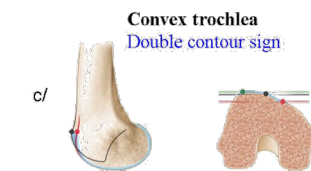
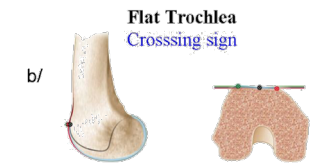
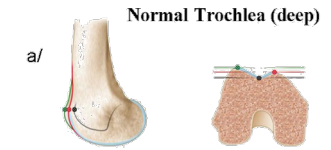
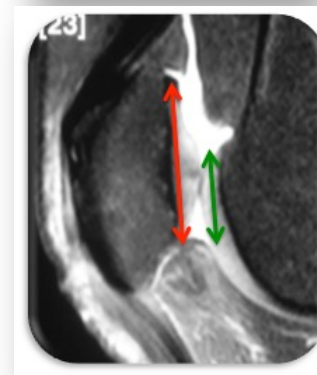
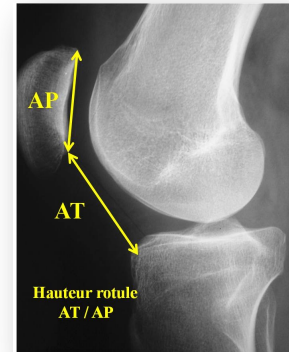
## Listing of Instability factors:

Is there a trochlear dysplasia : Type ?

Is there a Patella Alta : Index ?

What is the value of TT-TG ?

Is the patella engaged in extension?

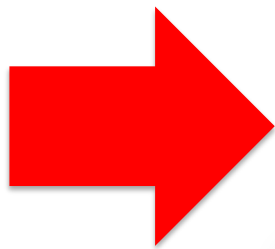




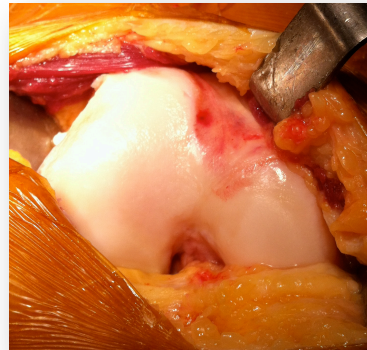
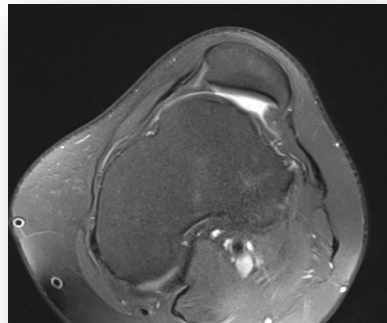
# Take Home Message

Common errors  
which lead to failure

- No good Imaging analysis
- No Identification of initial major anatomic factors
- High Grade Patellar Instability



Leads the **ignorant surgeon** to  
**OVER CORRECT** to get a “stability”....



# Final Take Home Message

Quantify & analyse the risk factors

Keep the liberty to decide which risks  
you accept

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