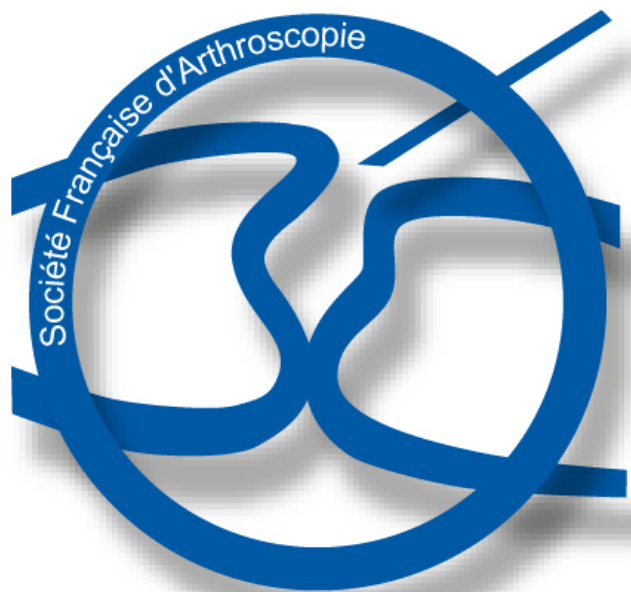


LCA & Plastie latérale: Technique

Master Course SFA
York 2015



Ph. Colombet



Problematic

ACL Reconstruction surgeon's quest for the holy grail is:

**How to reduce
functional failure risk ?**



Problematic

The answers should be:

- Anatomic graft positioning
- Better control the laxity (especially rotational laxity)
- Adapted graft diameter to the patient (to support constraints)
- Consider patient specificity (e.g. hyper lax, sports @ risk...)
- Appropriated graft fixation
- Consider the associated lesions
(secondary restraint lesion, MCL, LCL, ALL, menisci ...)
- Improve the healing response
- Prevent new traumatism
- Etc...





Problematic



Many different options are proposed:

- Anatomic multi bundle reconstruction
- “A la carte surgery” reconstruction techniques
- Improvement of the healing response
(Growth factors, Stem cells, Gene therapy etc.)
- Appropriated rehab protocol (personalized)
- New trauma prevention program

**Additional lateral plasty to reconstruct the ALL
should be one of these options?**



BACKGROUND

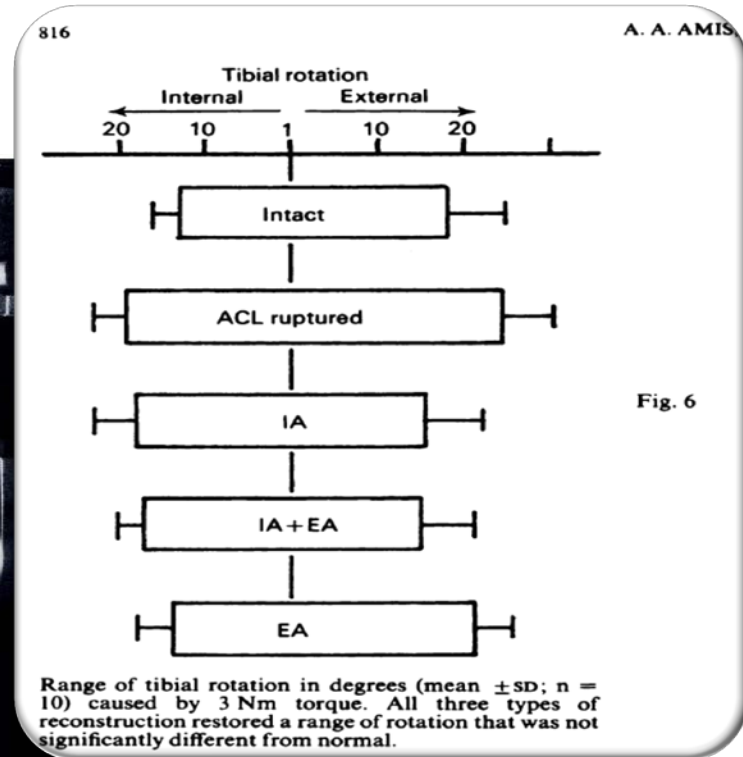
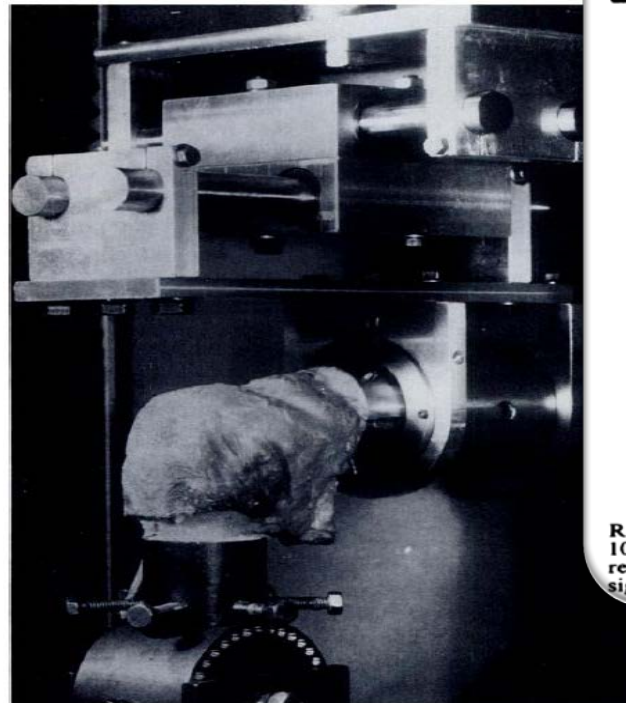
The lateral plasty is an old technique

- Biomechanics
 - In 1993 JBJS (Br) A. Amis B. Scammell

Cadaver study 3 reconstructions IA-IA+EA-EA

“All three types of reconstruction restored a range of rotation that was not significantly different from normal”

For isolated ACL deficiency, there is no significant biomechanical advantage from adding an EA reconstruction to an IA reconstruction.



BACKGROUND

- Clinical Studies

- **RCO 2003** Y. Acquitter C. Hulet

- RCT study 100 cases (50 KJ vs 50 Mac Intosh)
 - F.U 5 years
 - Dif KT1000. 1.3 ± 2.9 / 1.4 ± 1.9 mm NS
 - IKDC lig. Evaluation 26A 18B / 18A 20B NS

No superiority for the combined reconstruction at 5 y F.U





but **LATERAL PLASTY** is back



The previous techniques:

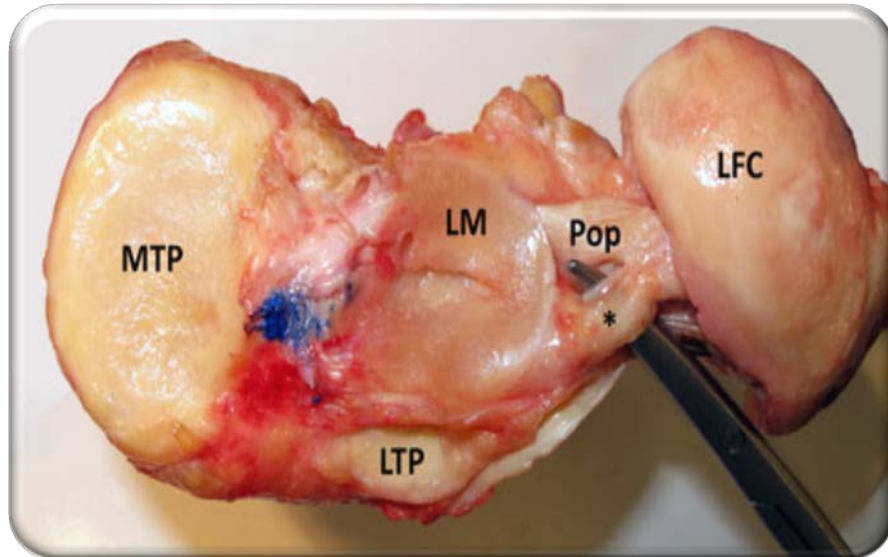
- Were opened surgery
- With possibility of lateral structures damage and morbidity
(Caplan fibers, ilio tibial band, ALL damage etc.)
- Non consensus structure with placement difficulties

New techniques are coming:

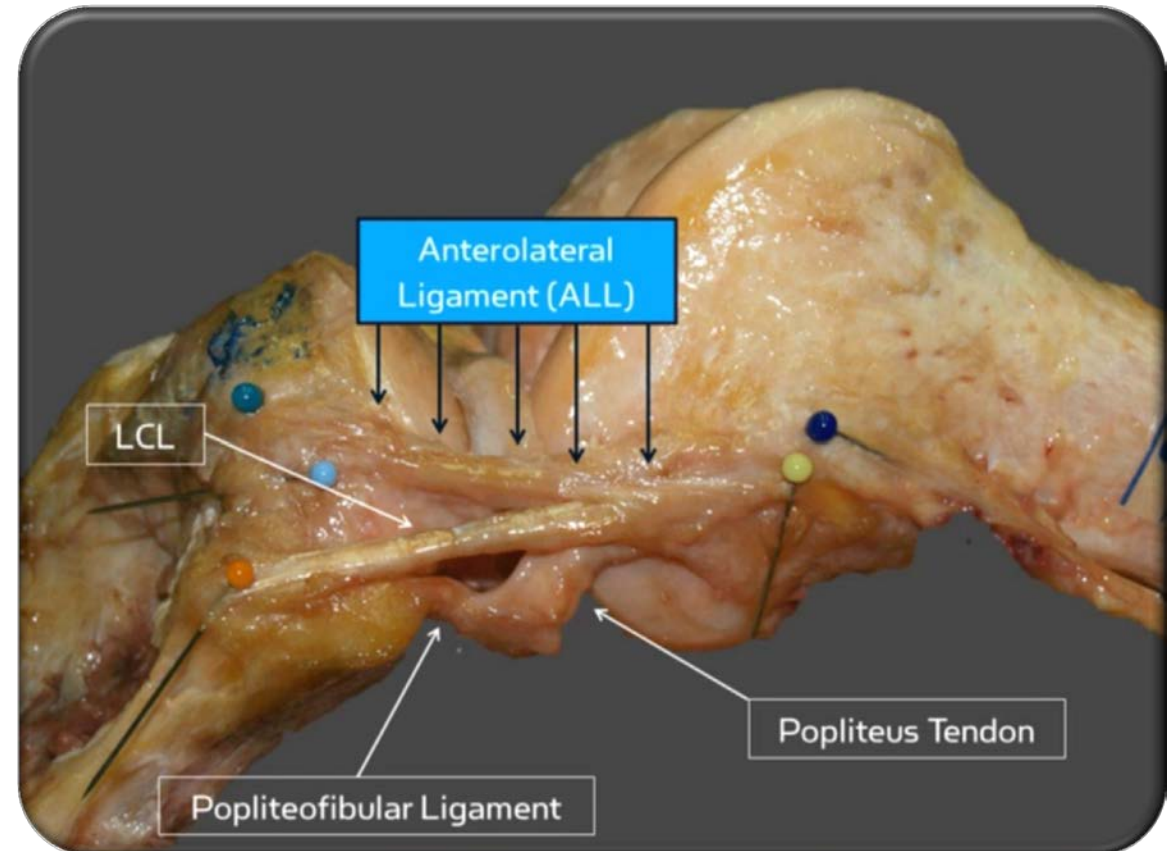
- New interest for the ALL and its anatomy
- Better knowledge for tunnel placement (navigation)
- Mini invasive technique (no lateral structure damage)
- Better indications



Back to anatomy



- Antero Lateral Structures



JP Vincent et al J. Anat. (2012)

S Cales et al J. Anat. (2013)

Tunnels placement

Computer assisted surgery:

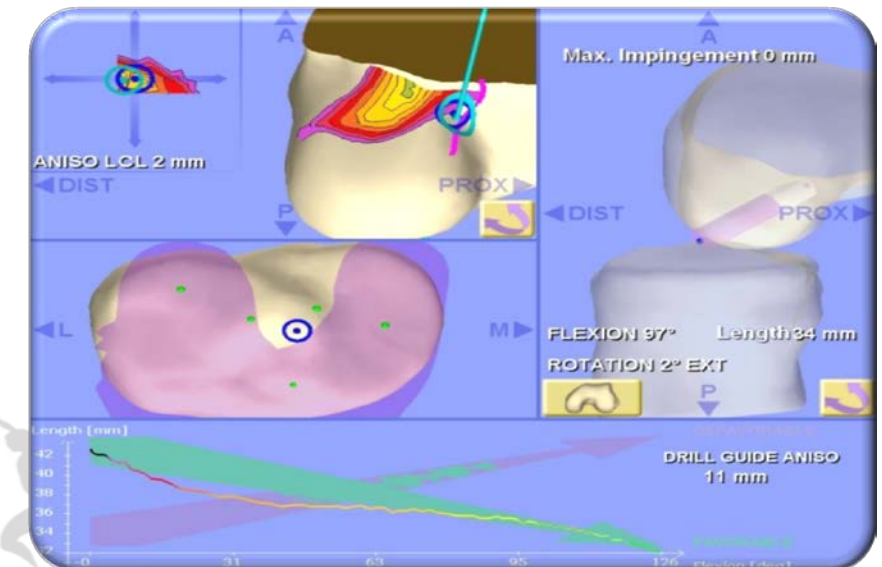
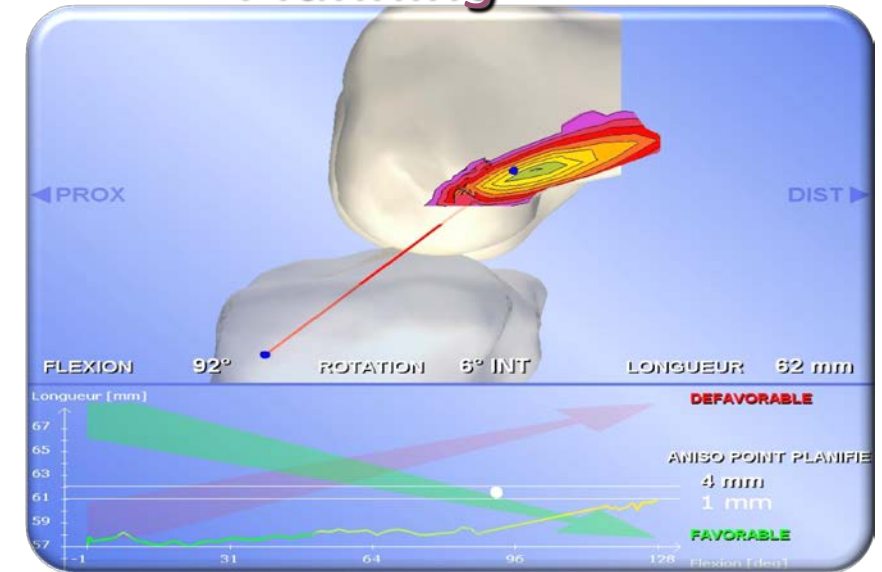
- Provided new data

Optimal Graft positioning

Bone morphing



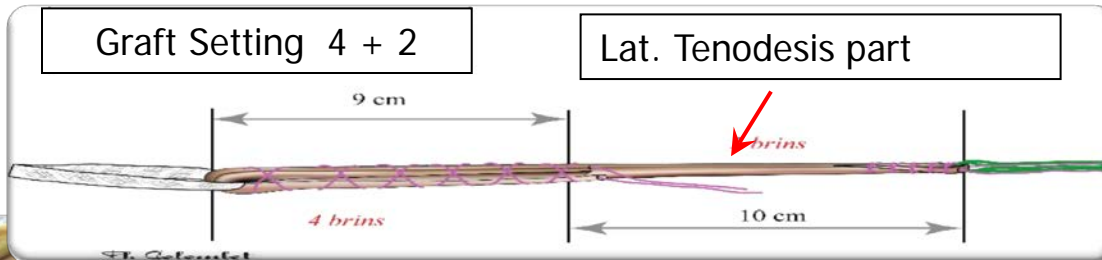
Planning



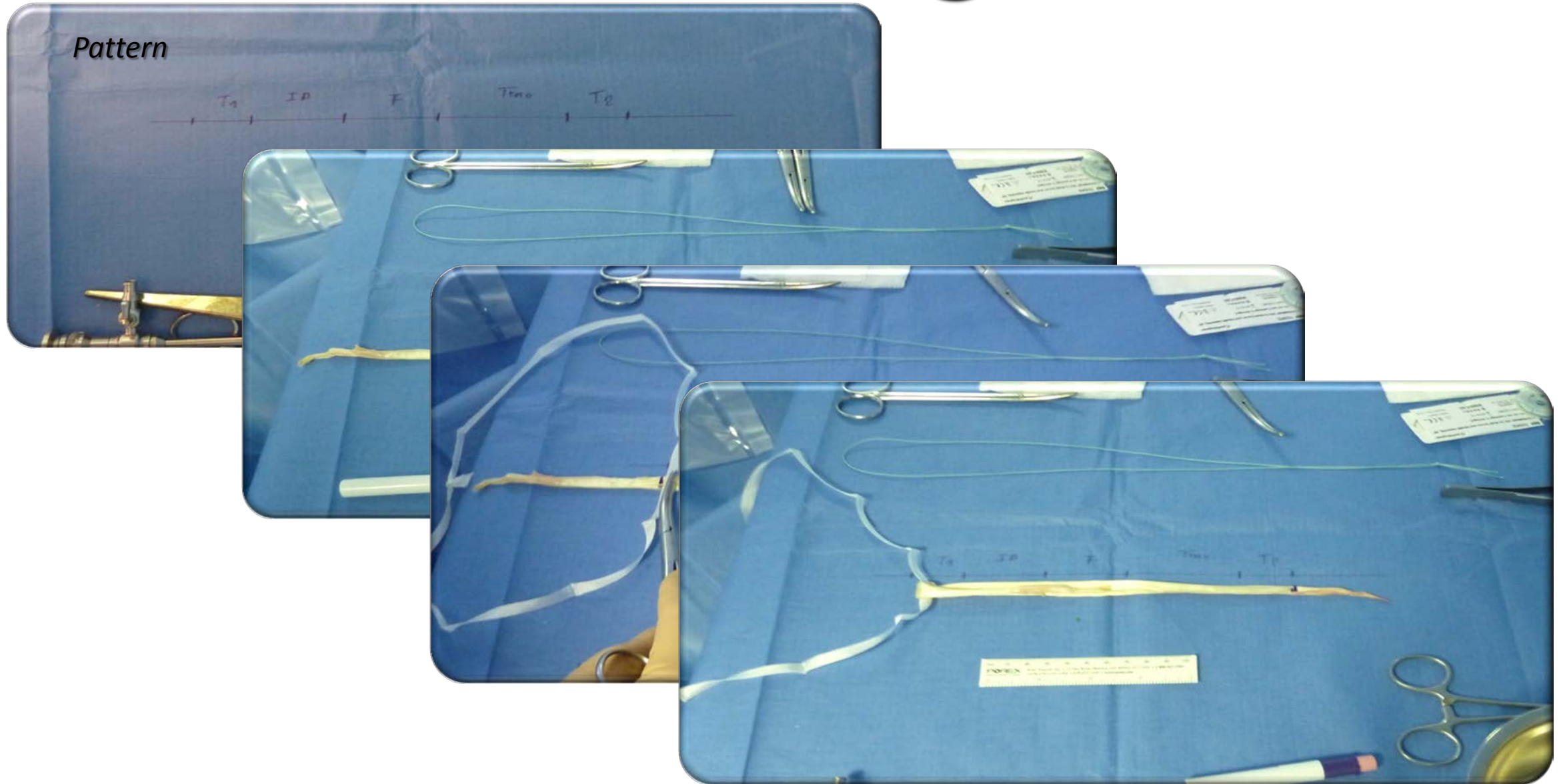
Mini invasive technique

The same graft should be used for both reconstruction:
ACL & ALL

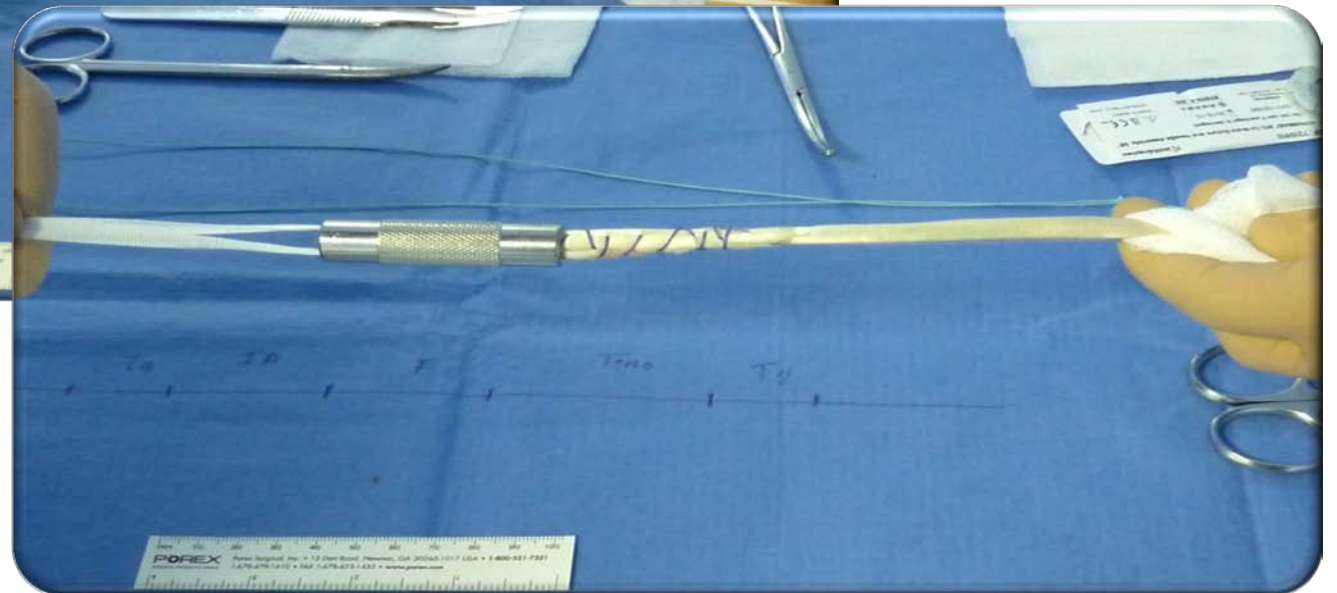
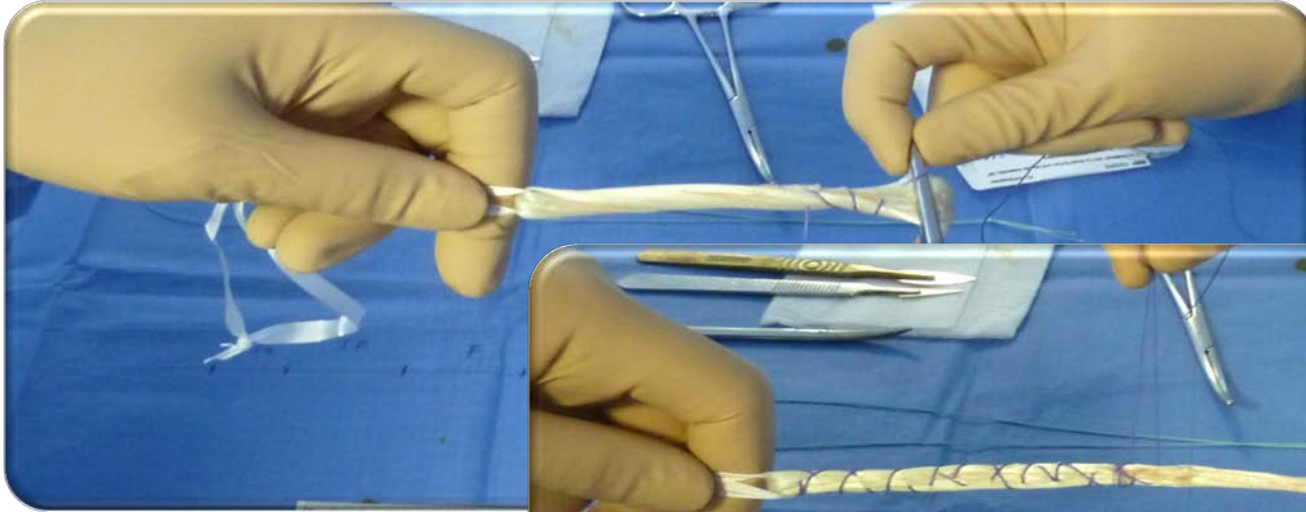
- Hamstring graft Setting " 4 + 2 "



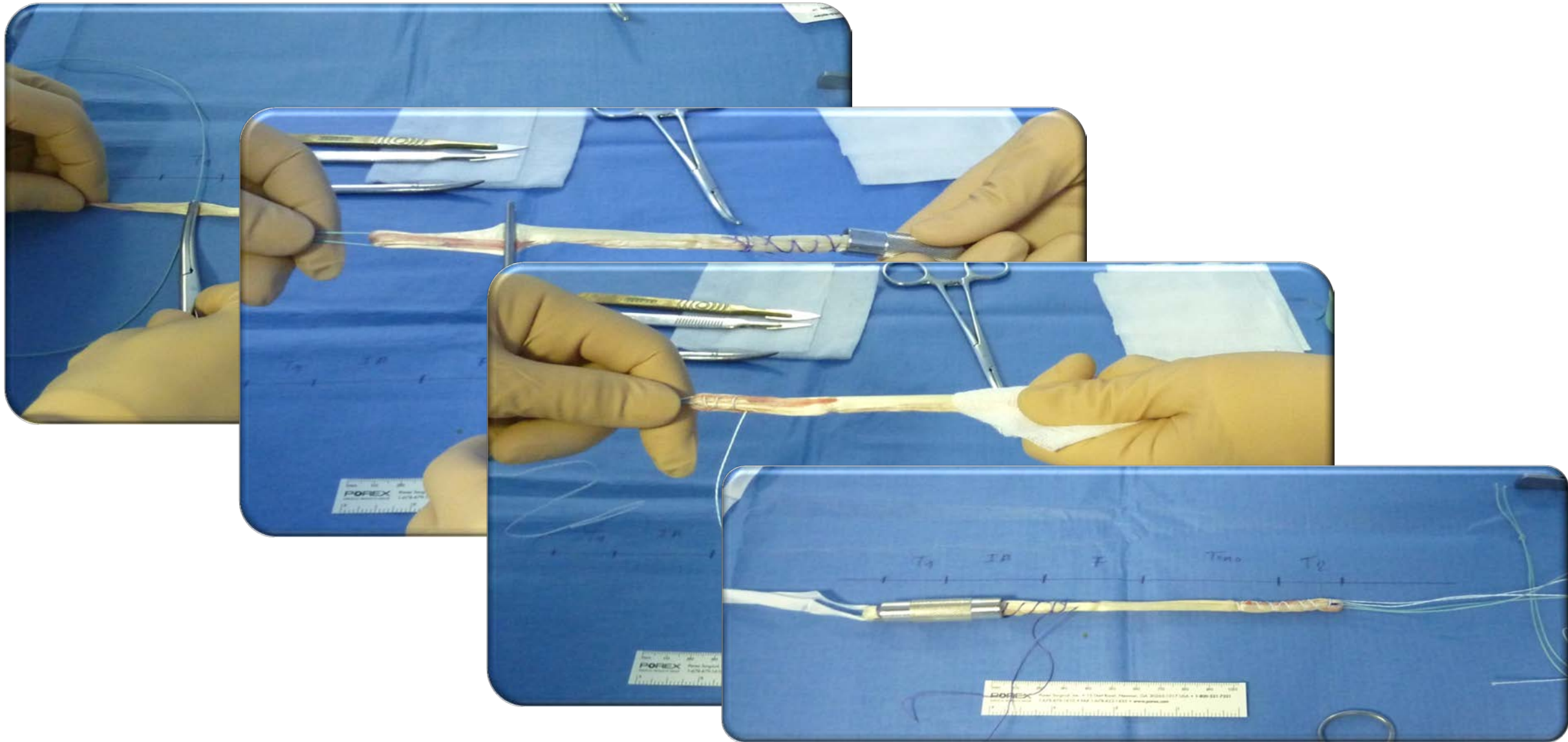
Graft Setting



Graft Setting



Graft Setting



Tunnels preparation

Conventional drilling

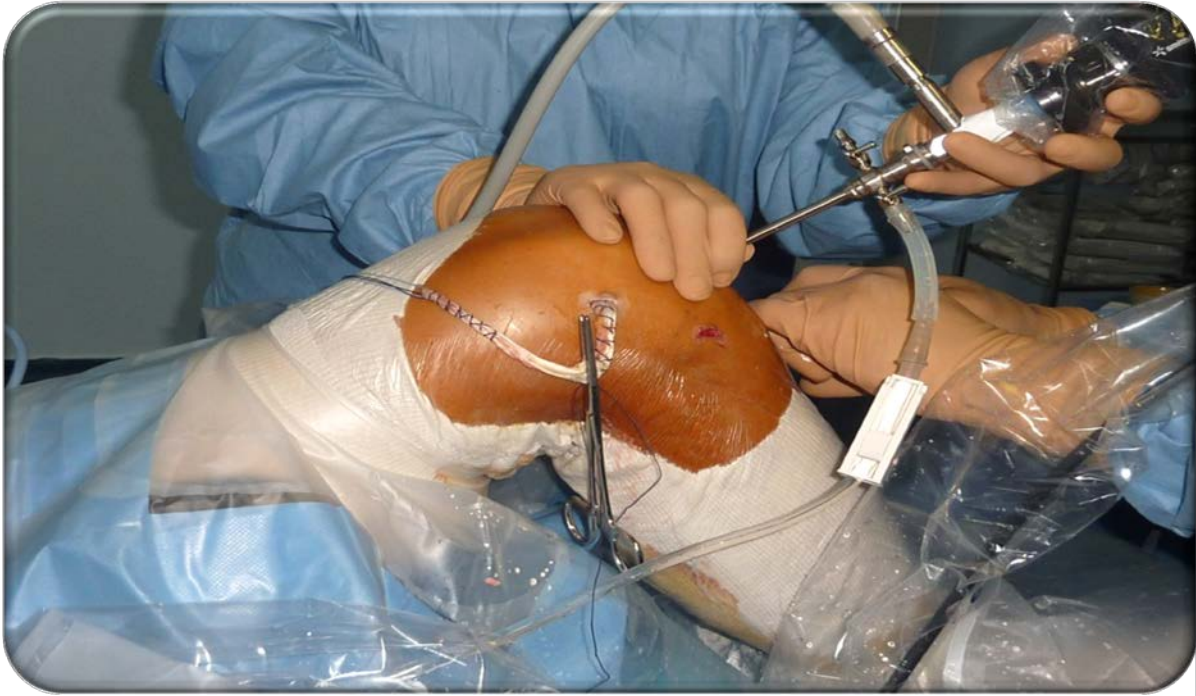


- Femoral aimer Outside-in

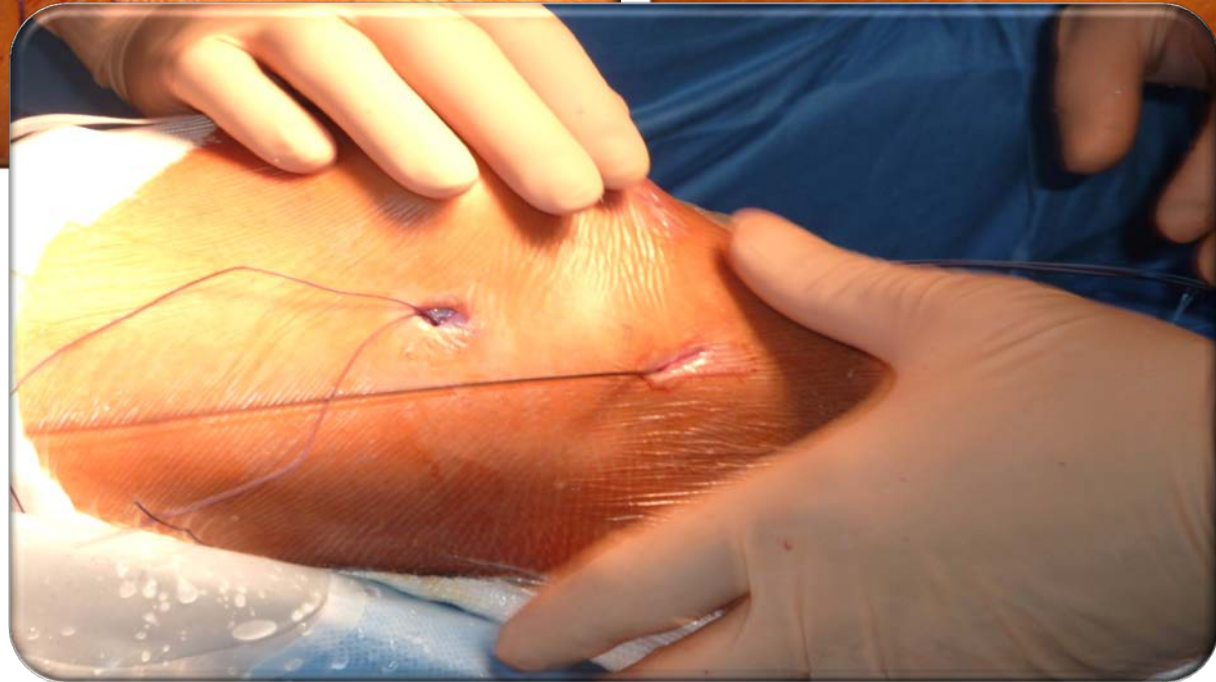
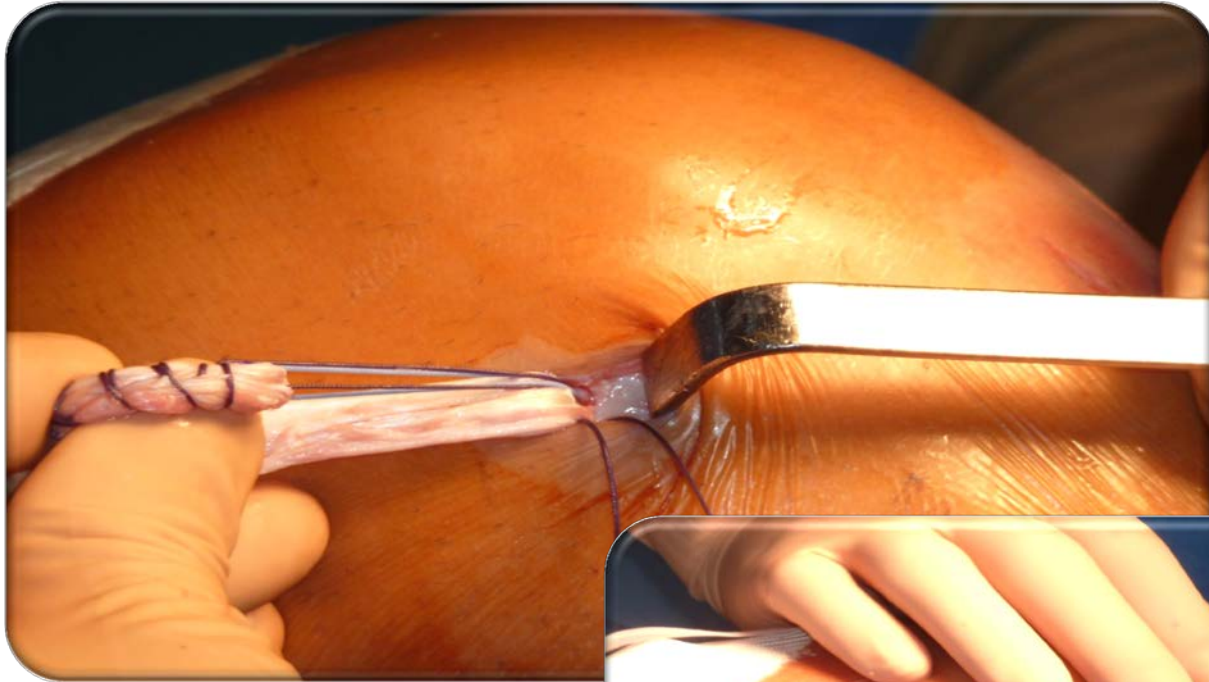
- Tibial aimer



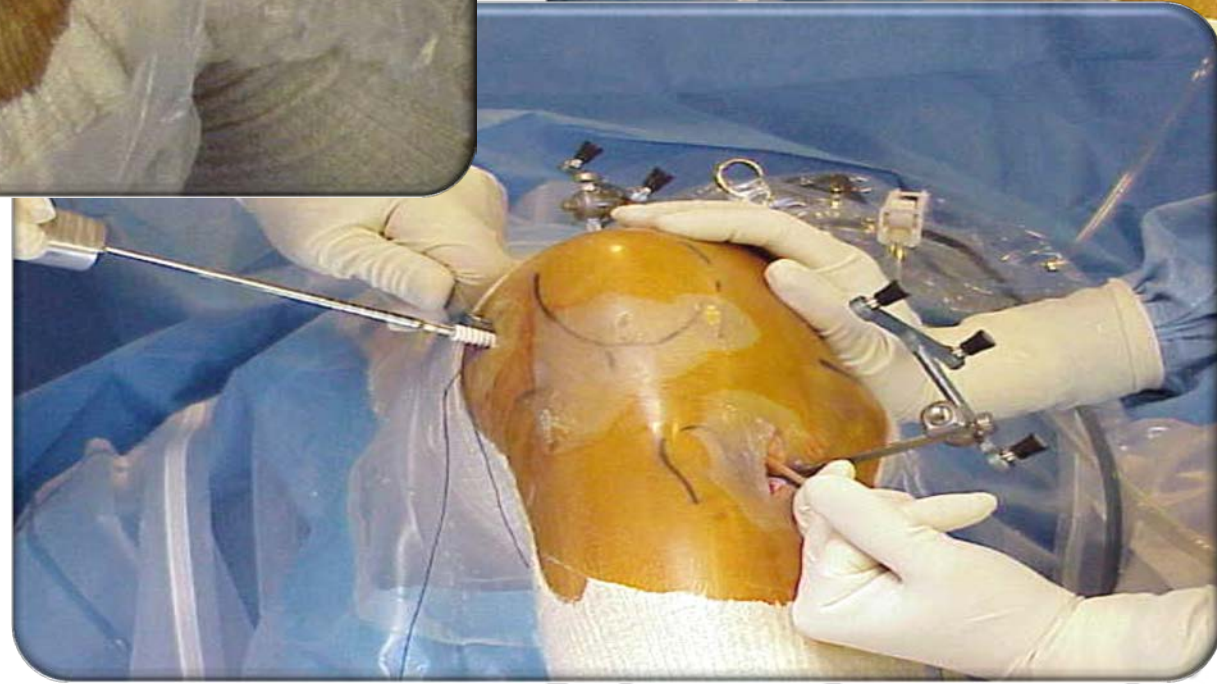
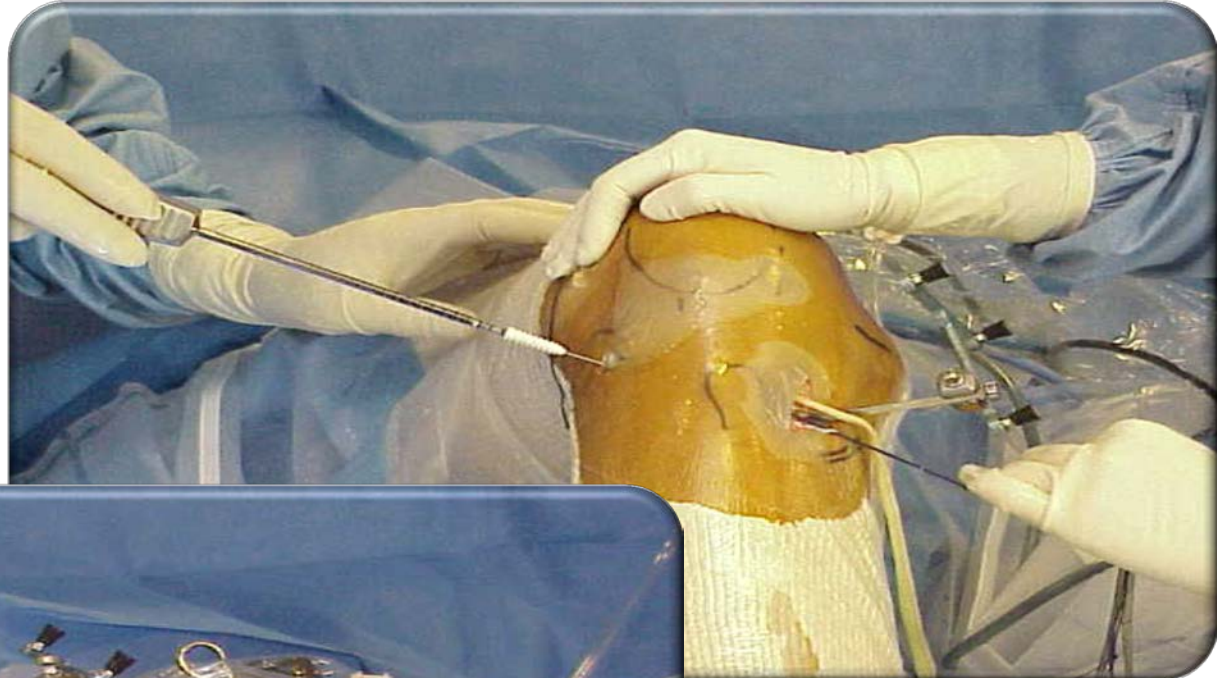
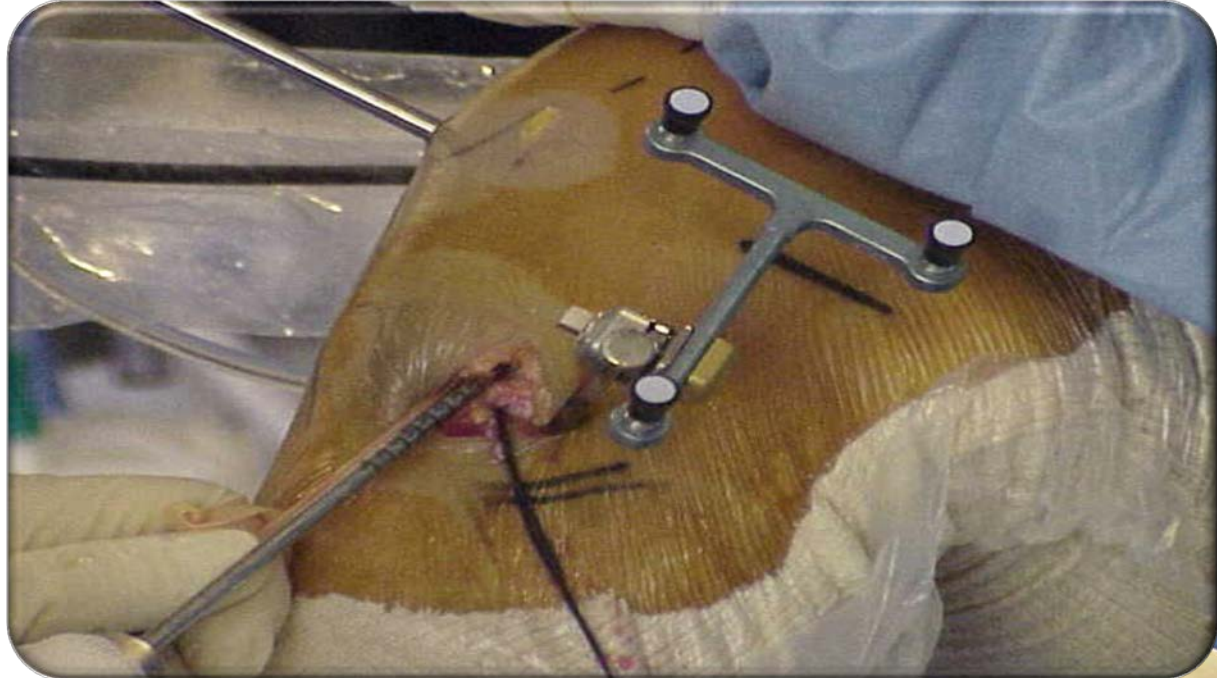
Graft passage



Graft passage



Graft Fixation





Post-opératoire regime



Rehab. Protocol:

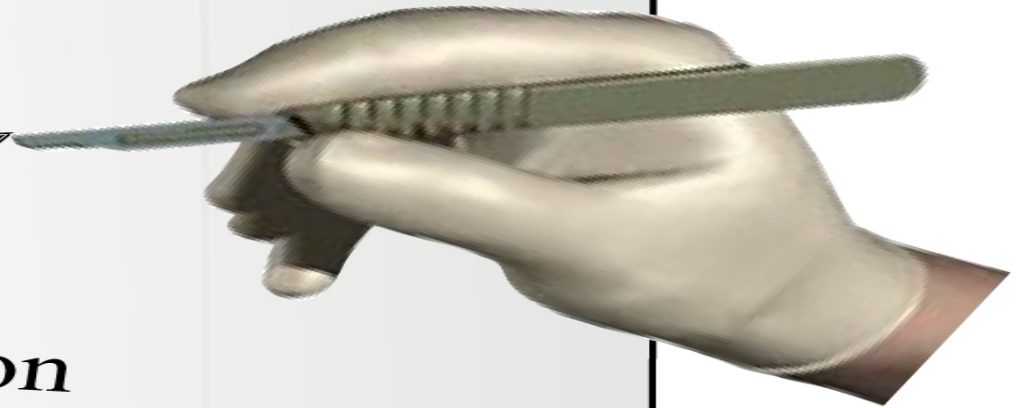
- Immediate mobilization
- Partial weight bearing for 3 weeks
- 45th Day cycling and swimming
- 3rd month jogging and proprioception
- 6th month pivot activities
- 8th month return to the grass and pivot-contact



" Indications "

À la Carte Surgery

- Single bundle
- Graft augmentation
- Partial reconstruction
- Double bundle
- **ACL + Lateral Plasty**



Attempt to Indication

- **ACL + Lat. Plasty**
 - Revision without any evident Surgical error
 - Hyper lax Patients
 - Complex and old lesions
 - High level pivot contact sports
 - High energy sports



Conclusion

- We are unable to solve all the different cases with an **universal stereotyped surgery**
- We must adapt our technics to different cases that is the « **à la carte** » **surgery concept**
- The **lateral plasty** still have indications
- **Its technic is relooked** with mini invasive approach and better knowledge



Thank you for attention!

