



Burt Klos MD PhD
Netherlands

- Gold Coast 2024
- Validation of refixation of ALL /
Segond avulsion



2023 High Incidence of ALL/ Segond avulsion in HR Ultrasound Imaging

Burt Klos

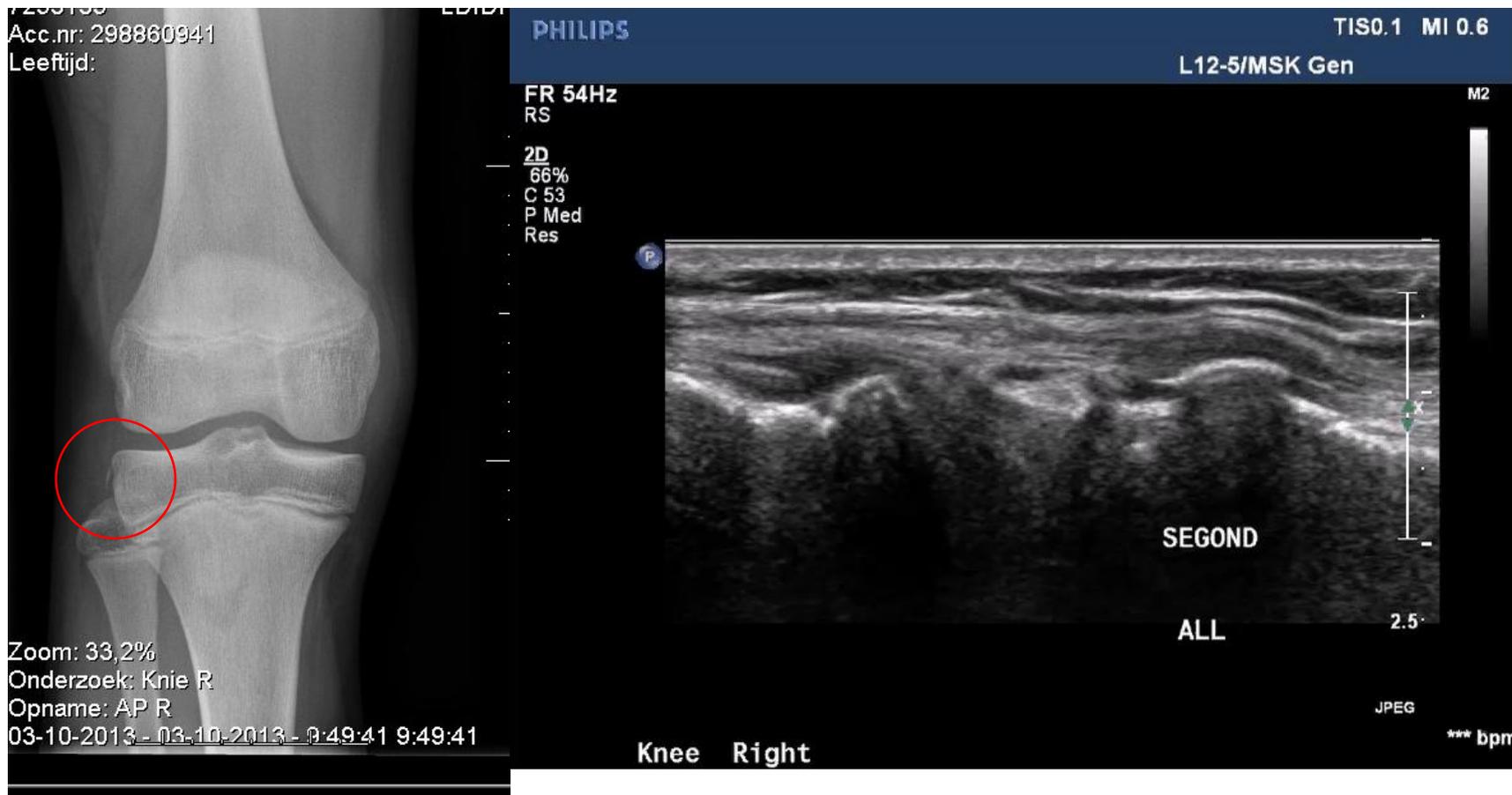
The Netherlands



Misunderstanding :

- Segond avulsion is only a minor small fragment (on X ray)
- Segond fracture is not attached to strong ligament complex (just small ALL)
- Segond fracture is rare (hard to find)
- Segond fracture itself needs no treatment .
- Segond fracture cannot be fixed (with a implant)

Segond fractuur



Rotation



TEST 90° - ROTATION ACQUISITION

ACL
Surgeries

P T F
1 2 C

Ant 0 4
Post 4

Ext 13
13

Ant 2
Post 0 2

Medial (mm)

PRE-OP. LAXITIES

- DRAWER
- ROTATION 90°**
- LACHMAN
- ROTATION 30°
- VAR.-VALG. STABILITY
- PIVOT-SHIFT
- PRE-OP. SUMMARY

5 POSITIONS (MIN 10 - MAX 500)
FLEXION: 82° ROTATION: 10° EXT

Perform the rotation test at 90°.
BLUE pedal to stop the acquisition.

PRAXIM

Kittl /Weiler /Williams /Amis

- Am J of Sport Medicine 2016
- Restraints to AL instability
- ITB superficial 56 % resistance IR
- ITB deep 30 % resistance IR
- ALL 4 %
- ACL 10 %



Preoperative marker of Segond avulsion / ultrasound



Intra operative lift off lateral meniscus

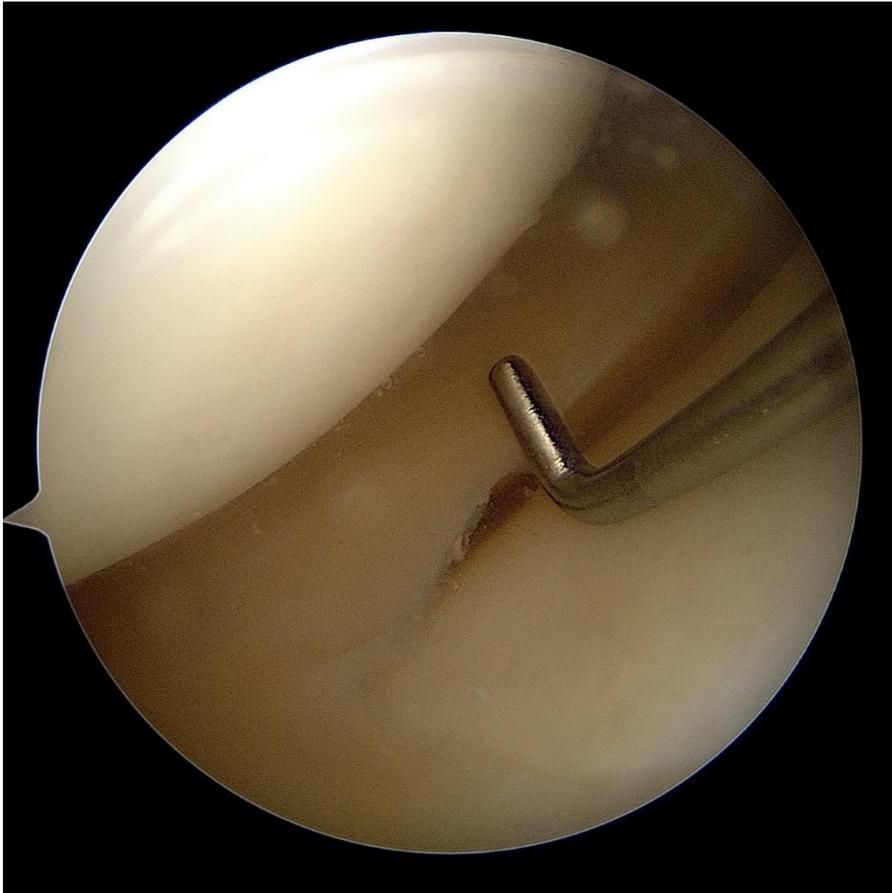
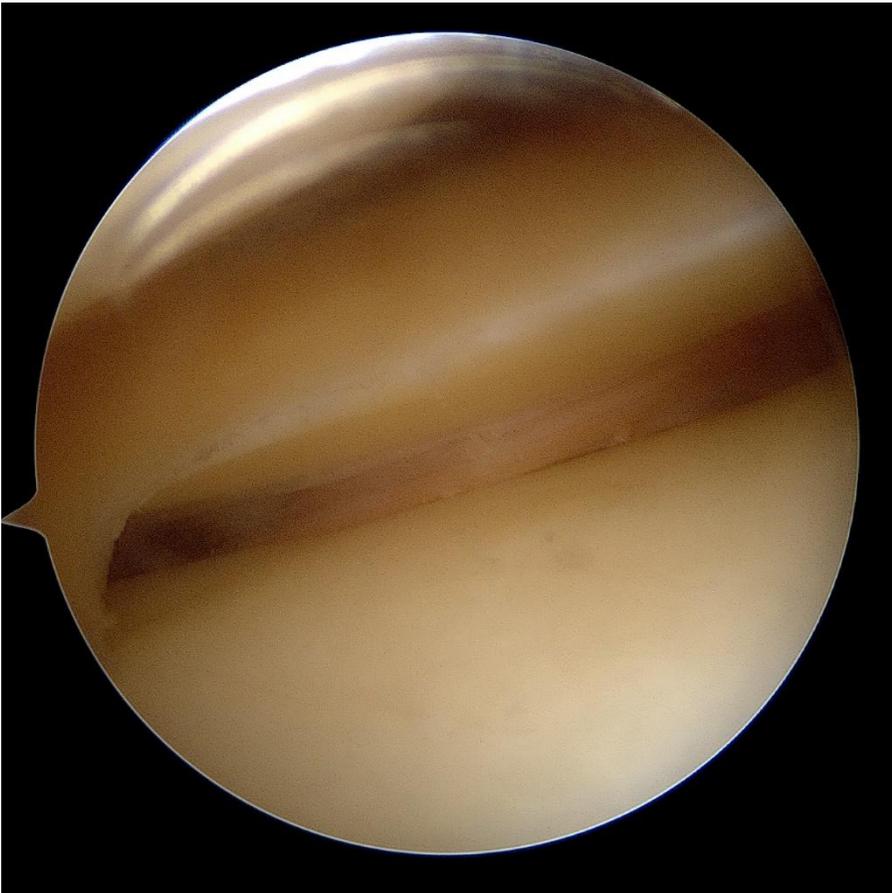


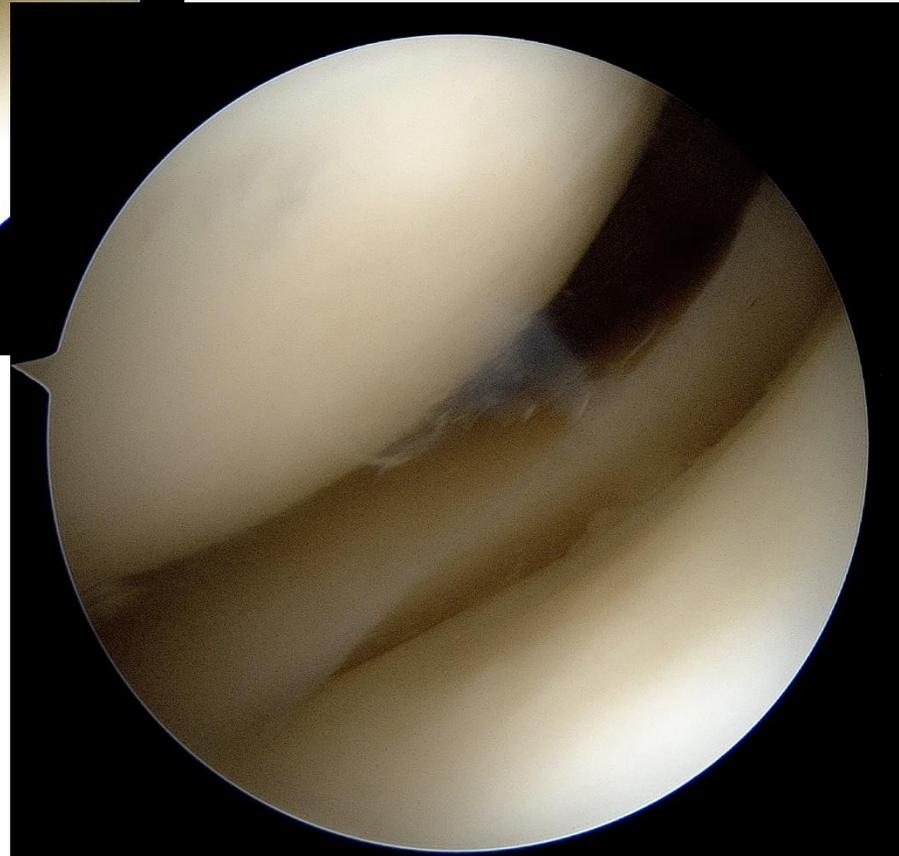
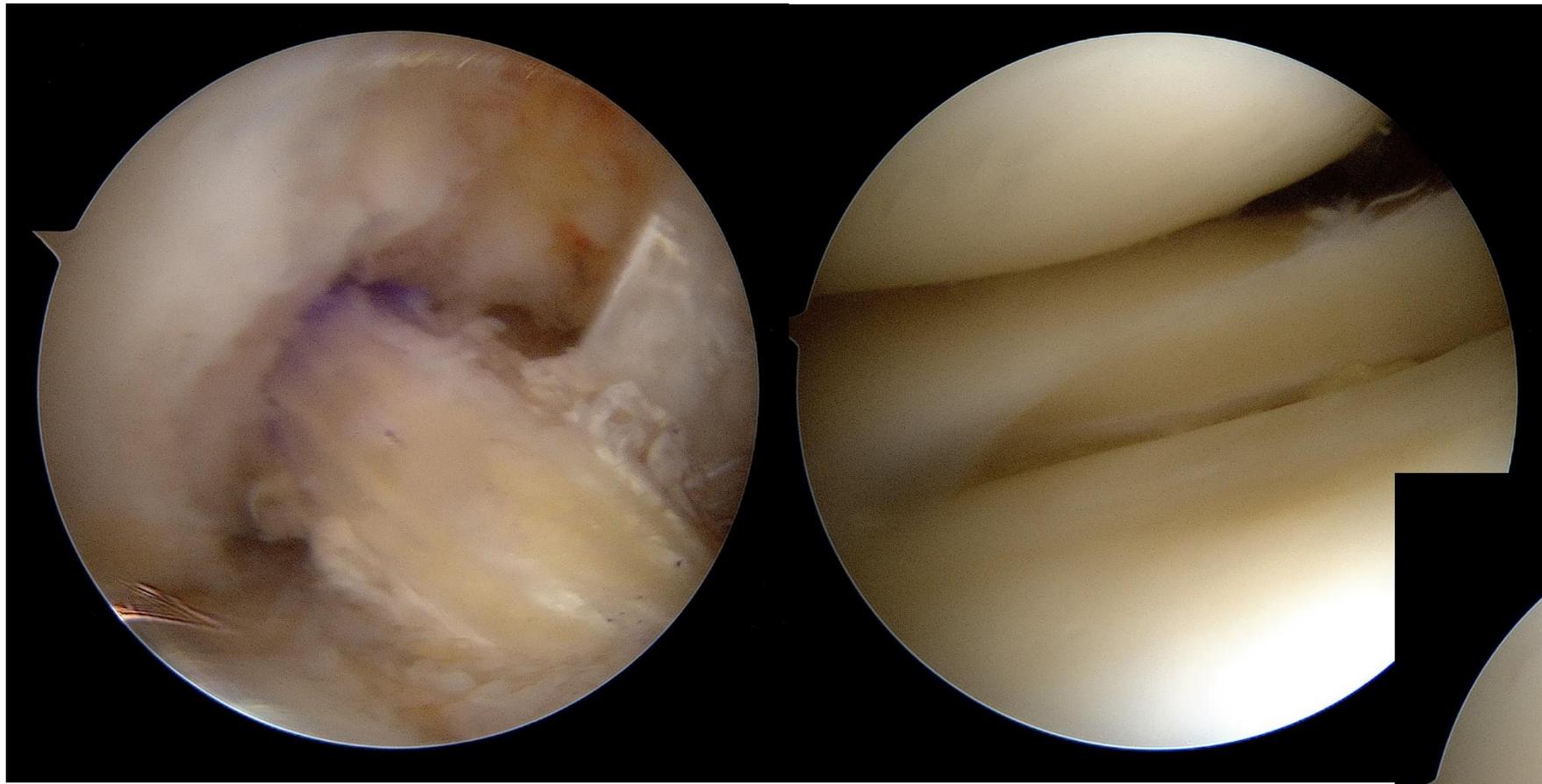
Case Report : Refixing ALL / second #

Checking the pivot on the table is pulling the staple off / prove of importance in stability ?



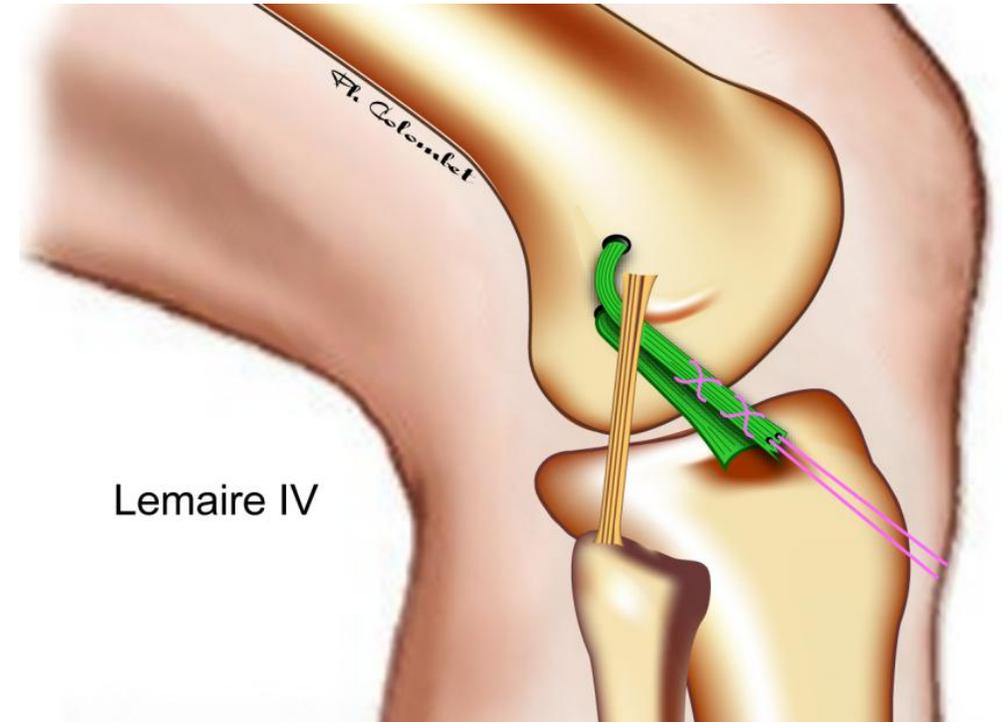
Arthroscopic evaluation





Intraoperative guidance ACL + ALL

Refixing Segond or reconstruction AL/ tenodesis?



Pull up / in technique ALL refixation



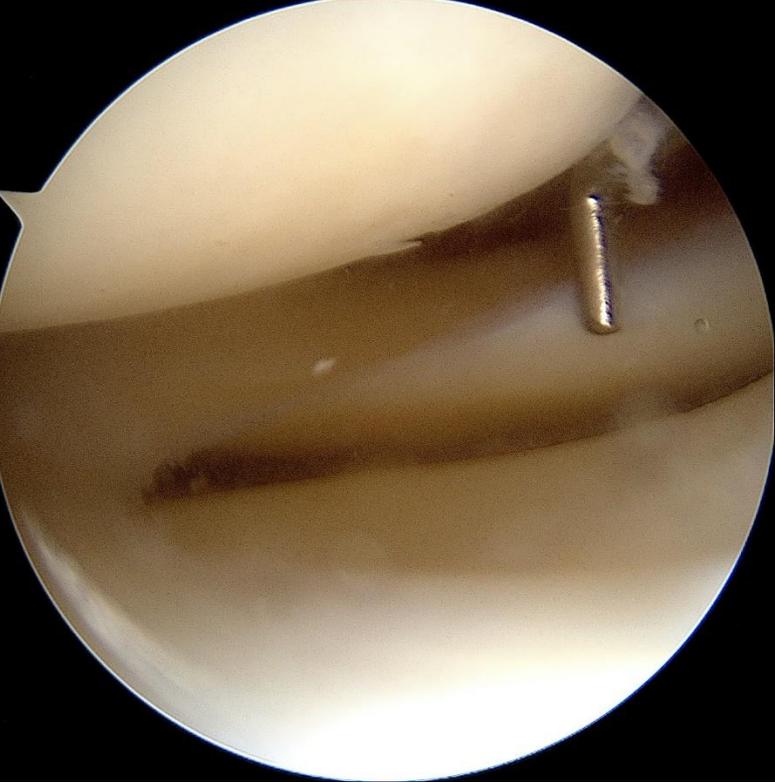
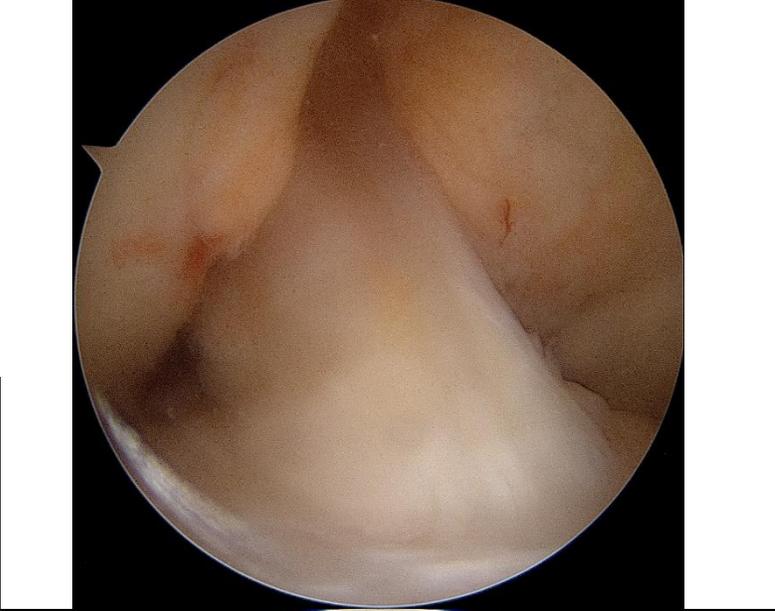
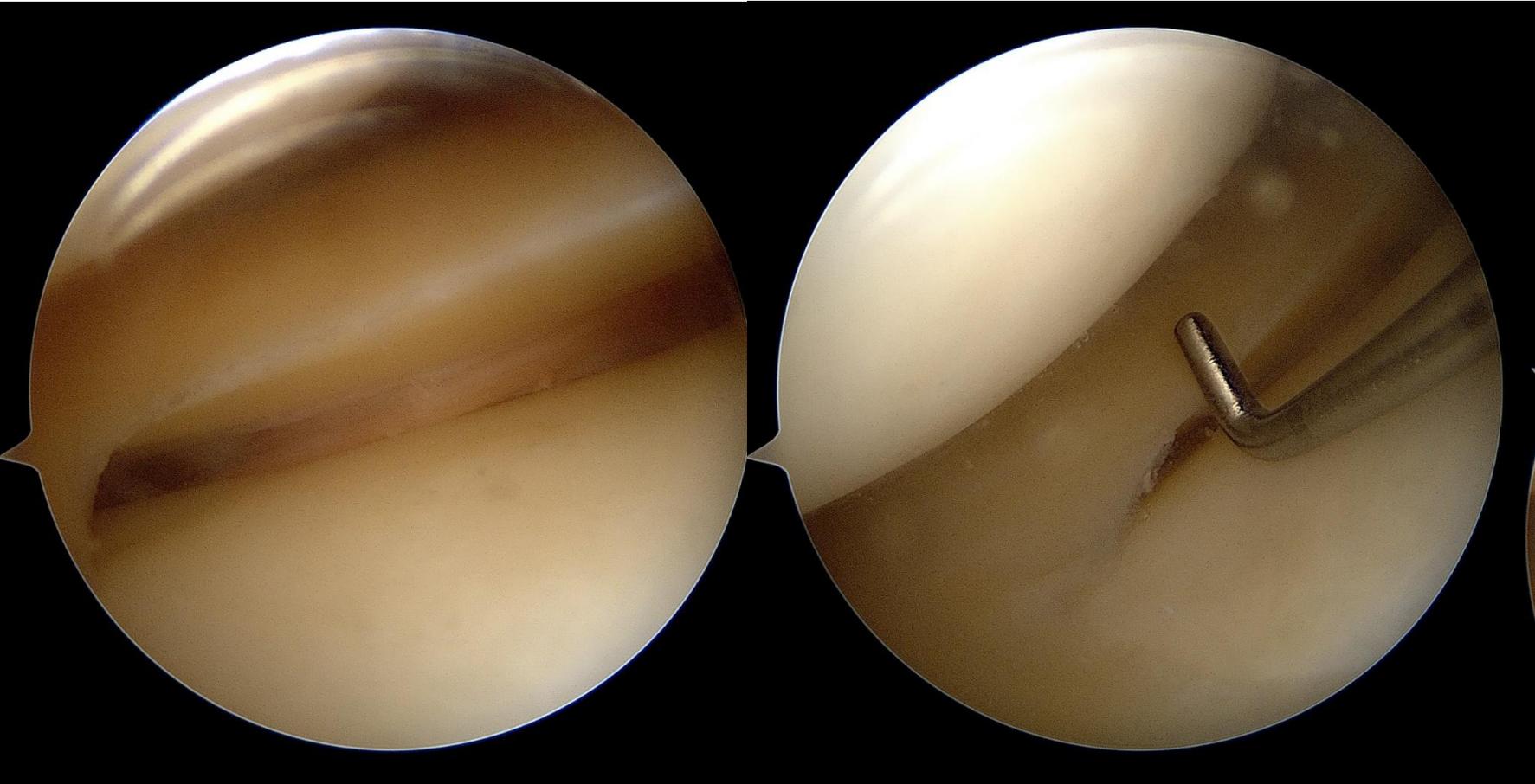
Conclusion

- ALL complex lesions and Segond avulsion are not rare (30-50 %)
- Improving diagnosis and treatment
 - Improved Imaging Ultrasound (vs MRI)
 - Segond avulsion is attached to ITB / ALL complex (strong structure)

Refixation N =16

- Staple 9
- Pull tightrope anterior cortical fixation 7
- Mean age 25
- Type of sport 11/ 16 soccer
- Time in between injury and surgery Mean 50 days
- Second look arthroscopy (implant removal) 7

June 2018 > july 2019



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- Improving diagnosis and treatment
 - Improved Imaging Ultrasound (vs MRI)
 - Segond avulsion is attached to ITB / ALL complex (strong structure)
 - Surgical treatment or neglect /reconstruction ?
 - Fixation method >>
 - Tension rope versus staple ..

