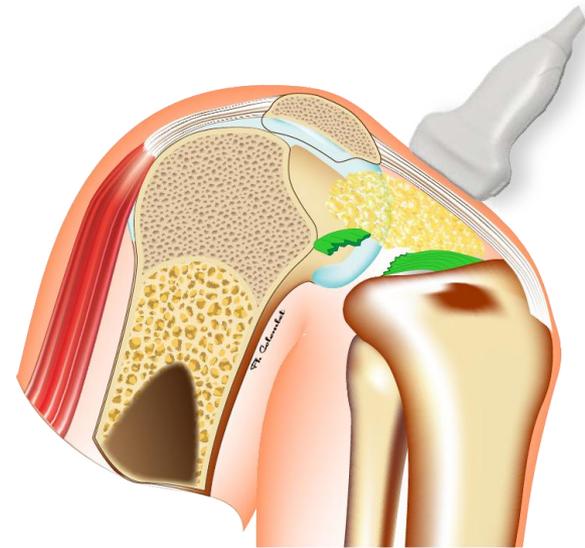


# Dynamic ultrasound imaging in ACL lesions

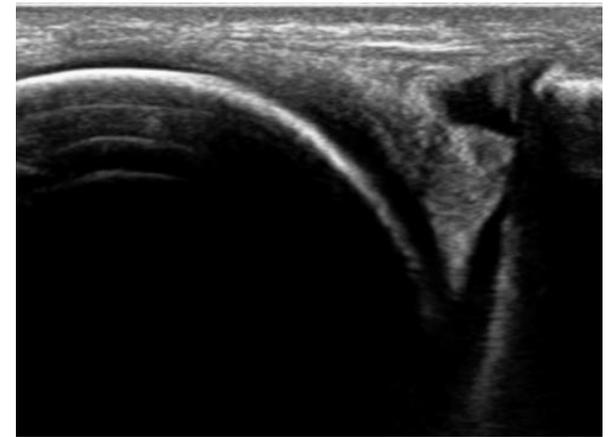
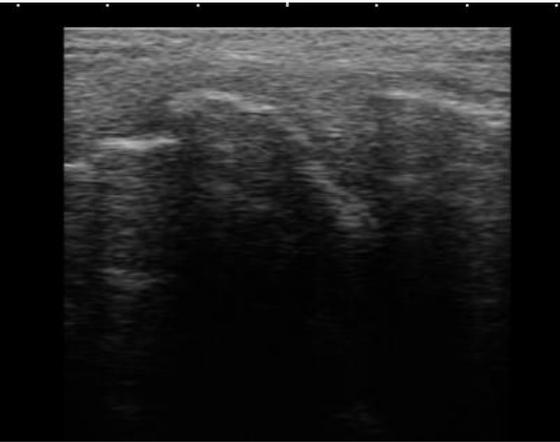
Burt Klos

The Netherlands

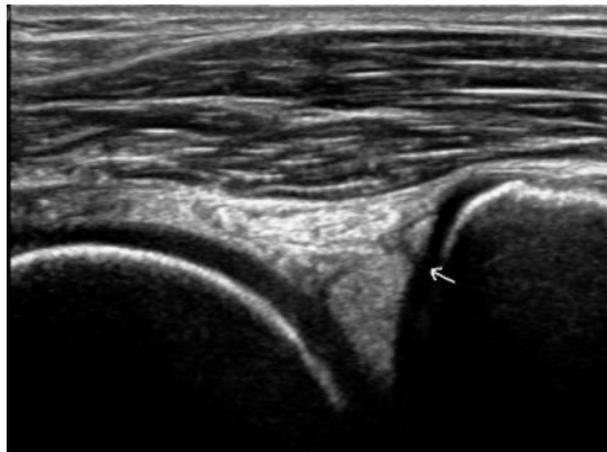


# Improvements image quality

2006-2008    2008-2010    2011-2014

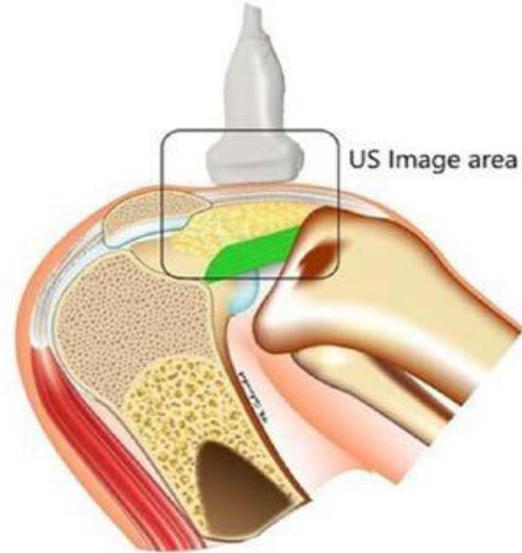


2015-  
2018

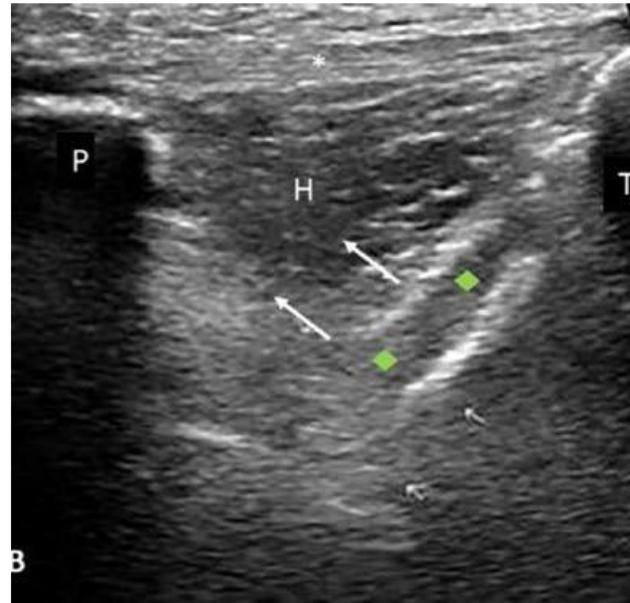
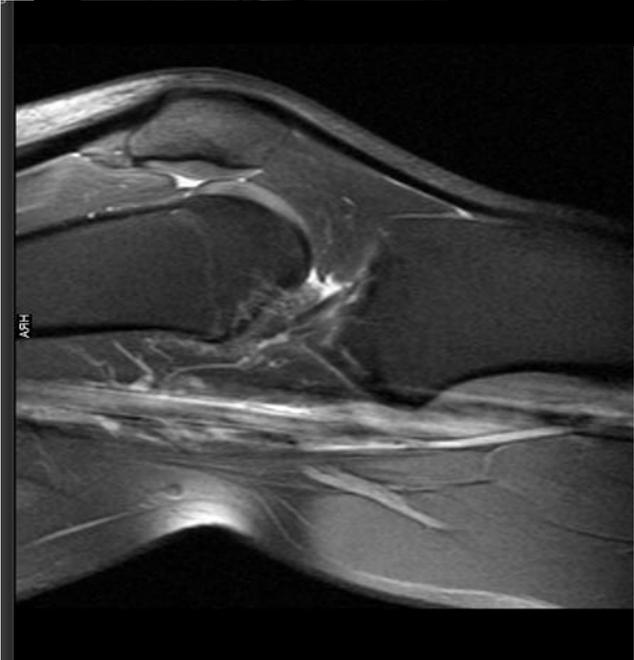




# MRI/MSU intact ACL ?

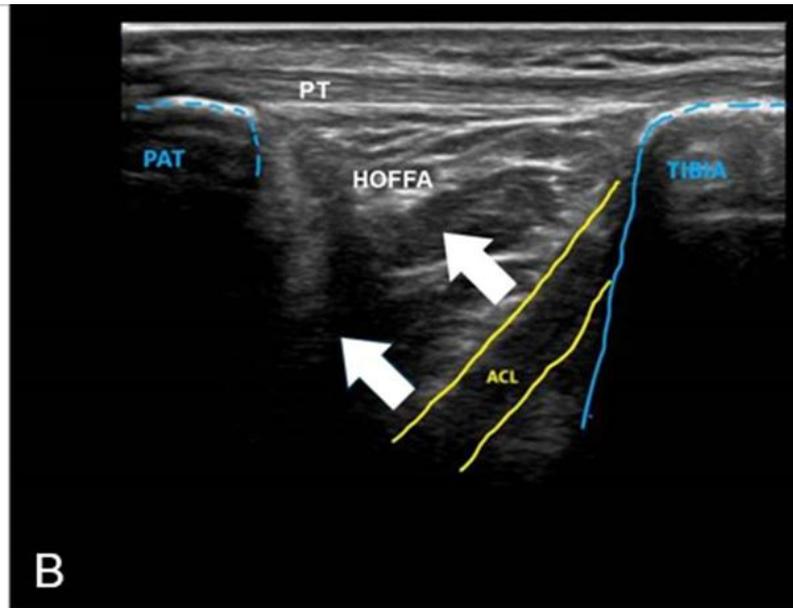
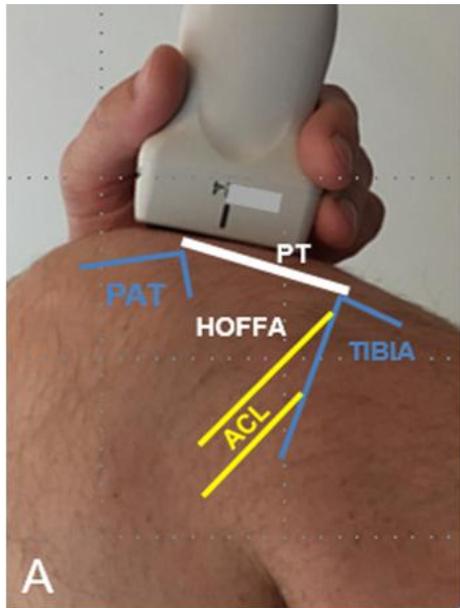


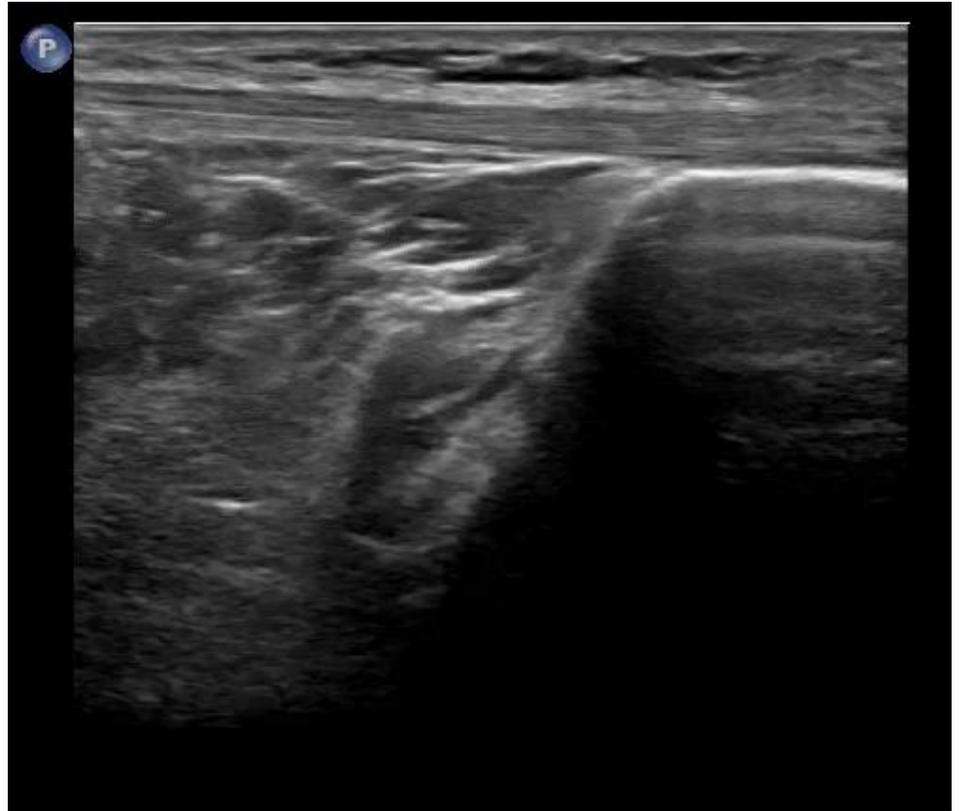
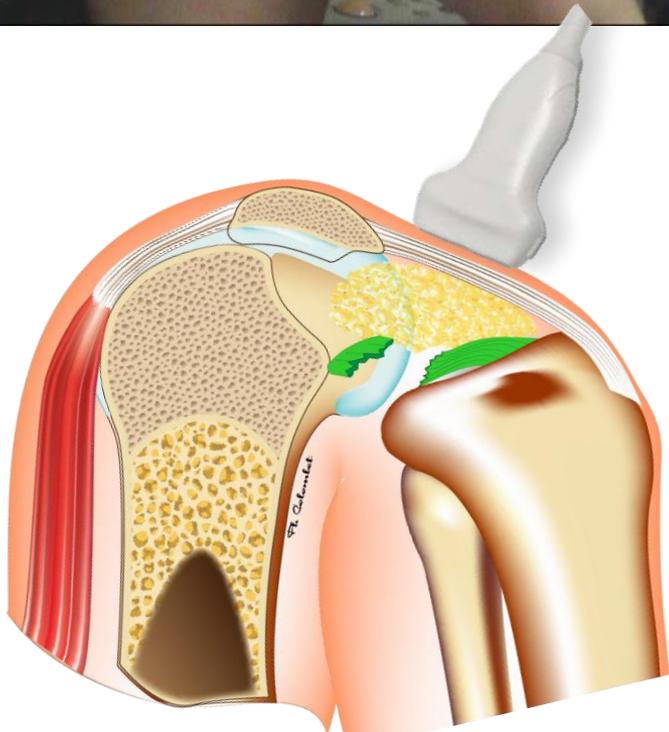
A



B

# Direct visual ACL





**BMJ Open  
Sport &  
Exercise  
Medicine**

**Diagnostic *accuracy of dynamic*  
ultrasound imaging in partial and  
complete anterior cruciate ligament  
tears: a retrospective study in  
247 patients**



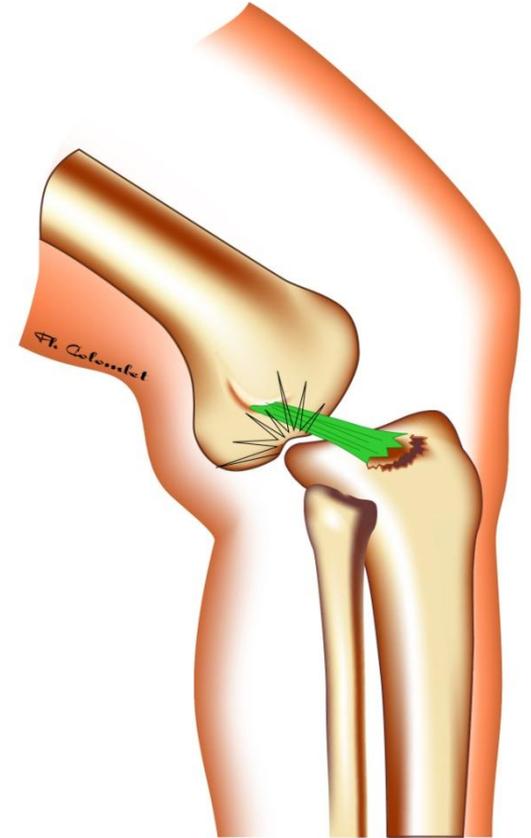
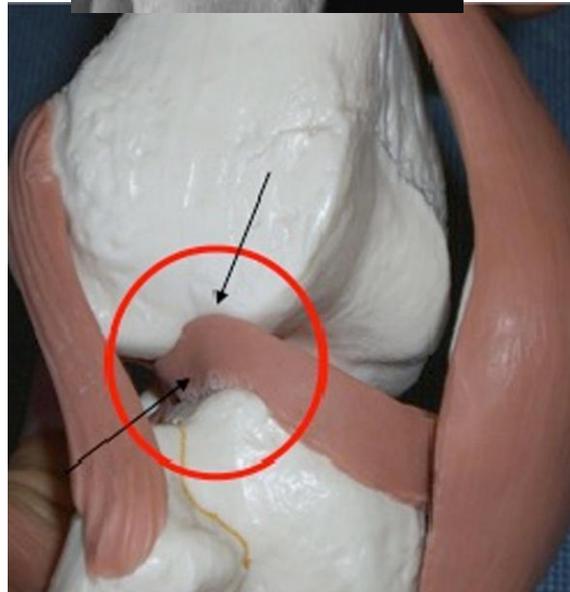
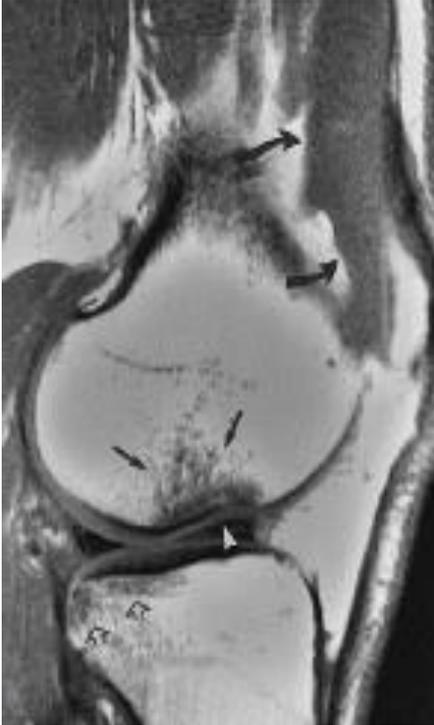
**ICONE**

December 2019

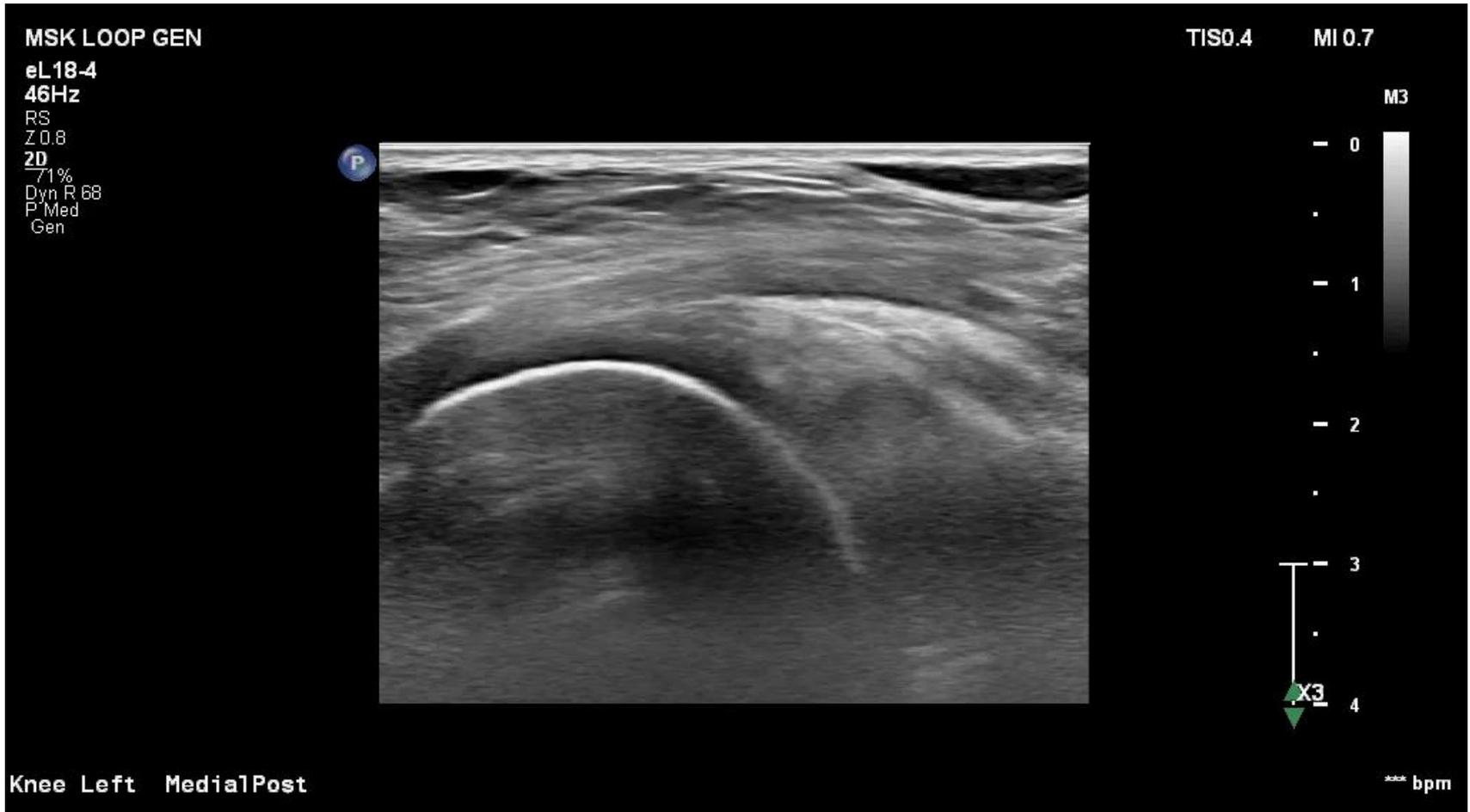
# 247 Ultrasound / Arthroscopy

- 95/ 108 Ultrasound confirmation /ACL lesion
- Sensitivity 88 %
- Specificity 92 %
- Partial ACL 60/108 (incl subtotal)
- Sensitivity 52 %
- Specificity 85 %
- MRI
- Sensitivity 87 % (partial 55%)
- Specificity 93 % (partial 75 %)

# Combined lesions.



# Combined ACL / MM

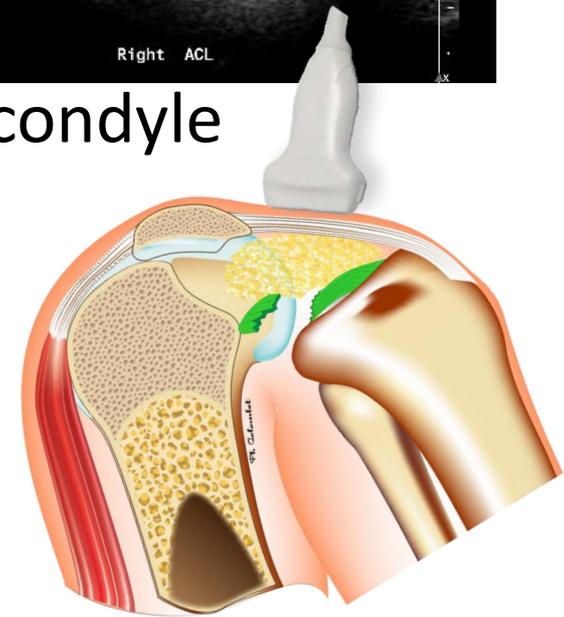
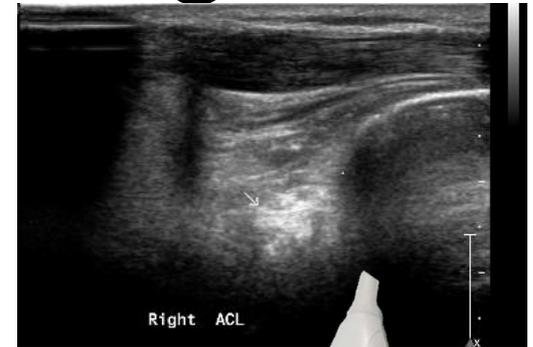


# Knee instability



# ACL # ultrasound findings

- Anterior findings
  - Cyclops / scar tissue
  - Impaction fracture lateral femoral condyle
- Hyperflexion stress
  - Dynamic resistance / elongation
- Posterior findings
  - Scar tissue PCL
  - Rotation / translation posterior med plateau



# Conclusion

- Preoperative MSU vs MRI dynamic possibilities
- ACL elongation
- Combined lesions MM / ACL



ICONONE