

Meniscal tears in adolescents with anterior cruciate ligament rupture: relation to medical insurance type

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Study performed at Orthopaedic Institute for Children and the David Geffen School of Medicine at UCLA, Los Angeles, CA



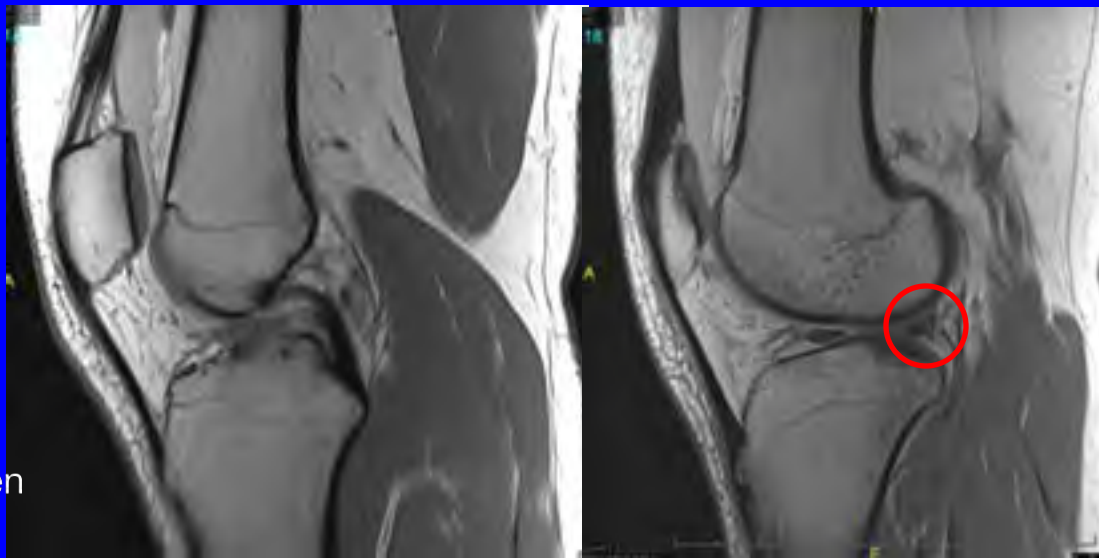
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We have no disclosures relevant to this presentation



Introduction

- **Medical Insurance: Government or Commercial funding**
 - California: 7.7 million MediCaid beneficiaries (2012)
 - Differing temporal access to care
- **ACL injury**
 - Delays in care → possible further intra-articular damage, poorer long-term outcome



Purpose

- *Determine meniscal tear rates in adolescents with ACL ruptures with government versus commercial funded insurance*
- *Determine if insurance type is related to presence of “irreparable” meniscal tears*

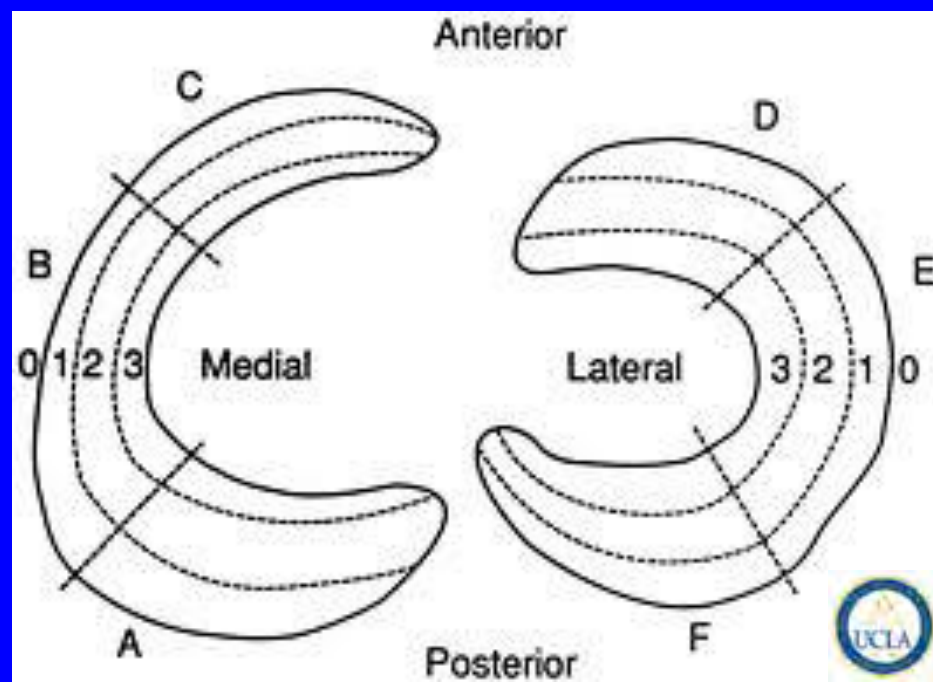
Materials and Methods

- 54 consecutive adolescent (14-18) patients with primary ACL rupture undergoing surgery
 - 32: government insured (“GI”)
 - Managed MediCal (CA version of Medicaid)
 - 22: commercial insured (“CI”)
 - HMO, PPO
- Time to surgery (29/54)
- Preoperative IKDC and Lysholm scores (29/54)

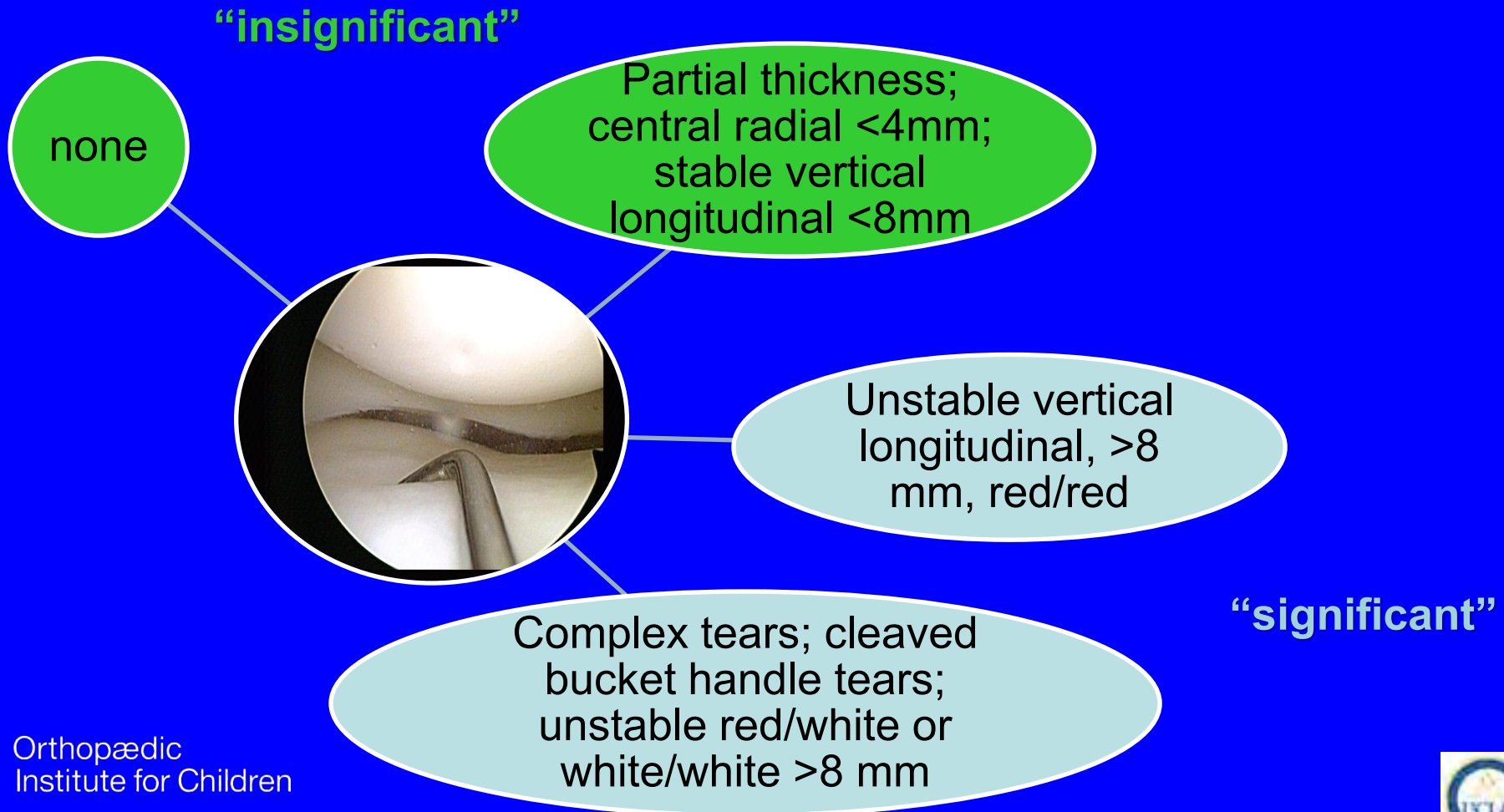


Materials and Methods

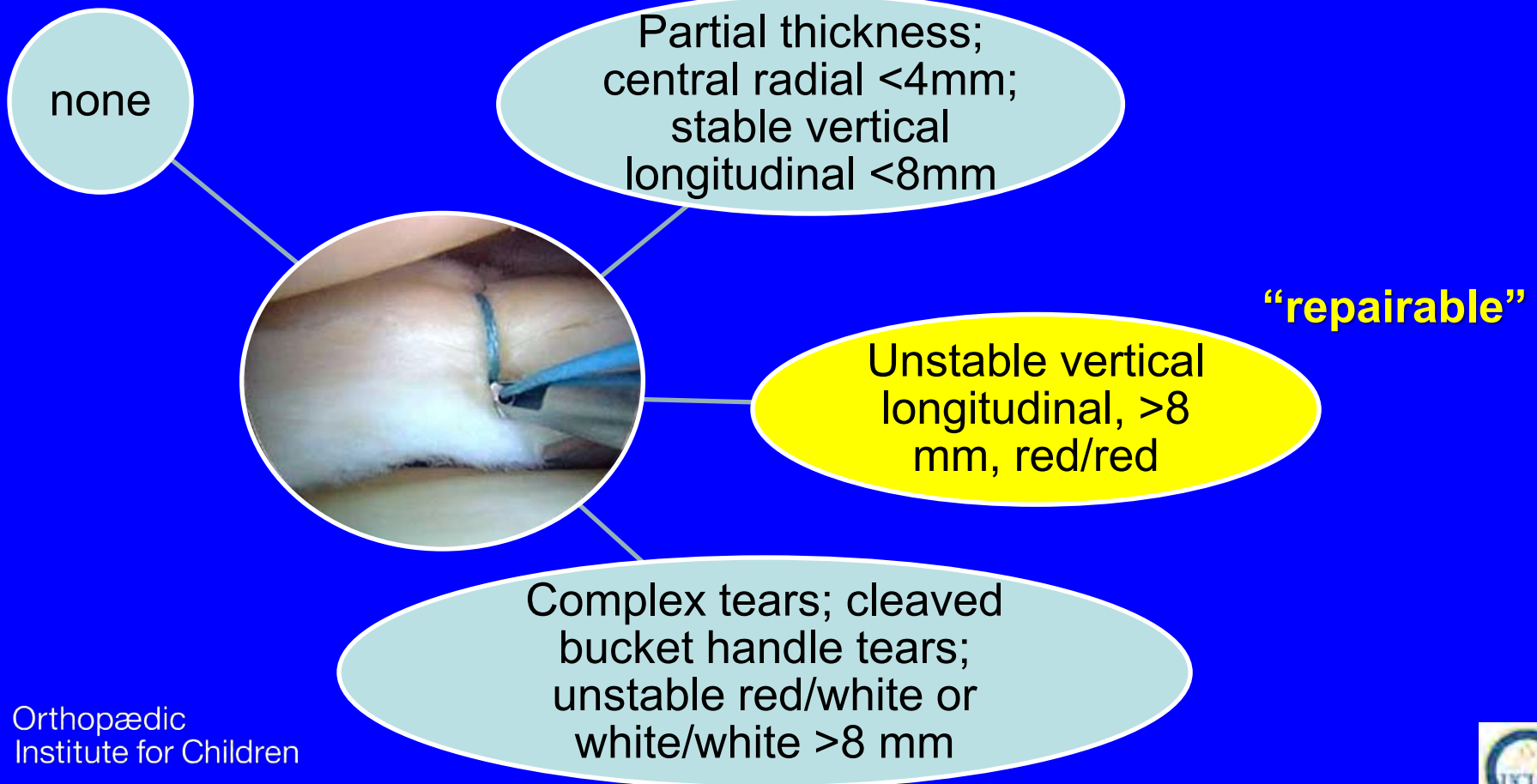
- Operative notes (all):
 - Meniscal status
 - Presence of tear
 - Tear location, size, pattern
 - ISAKOS meniscal tear classification



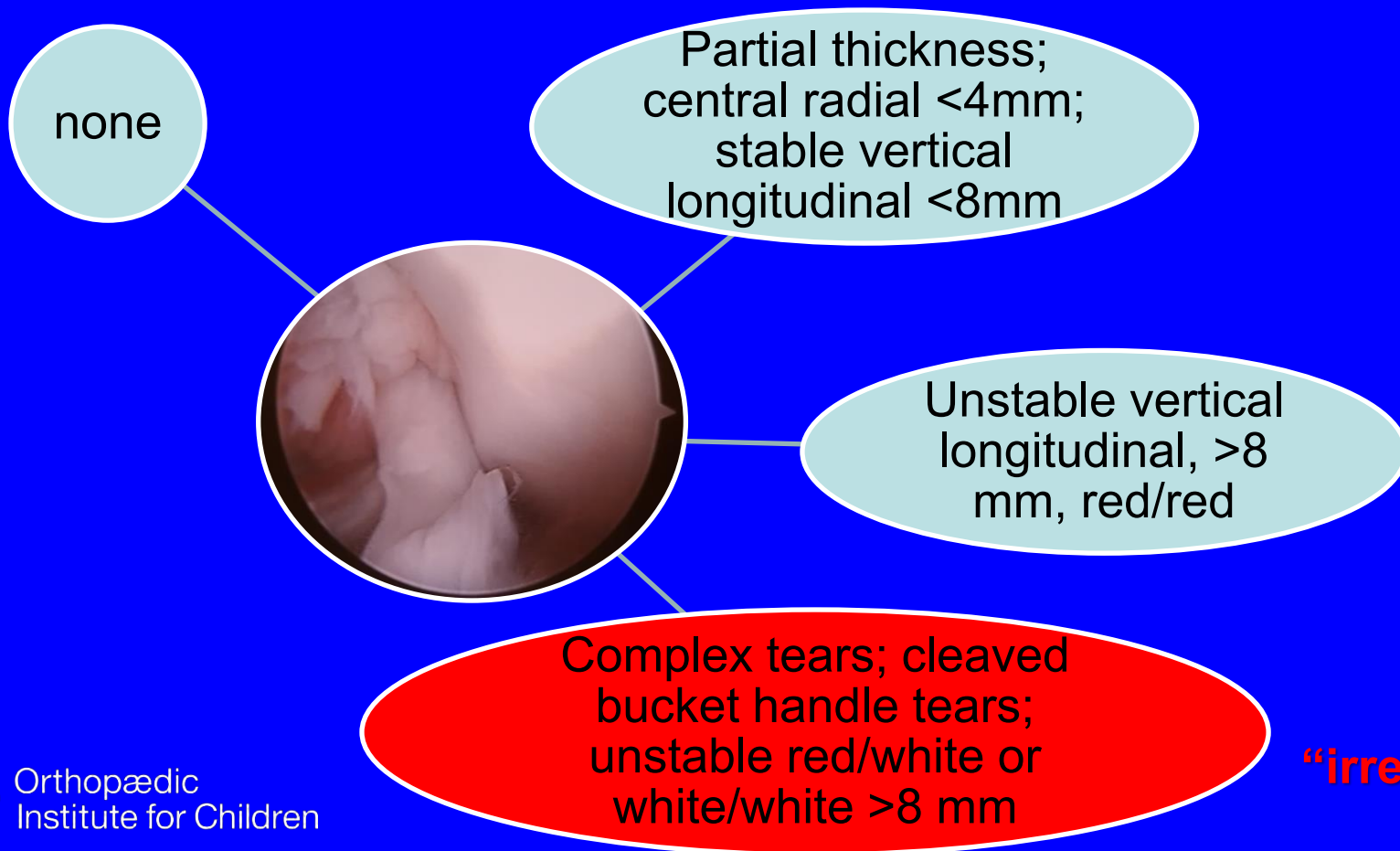
Materials and Methods



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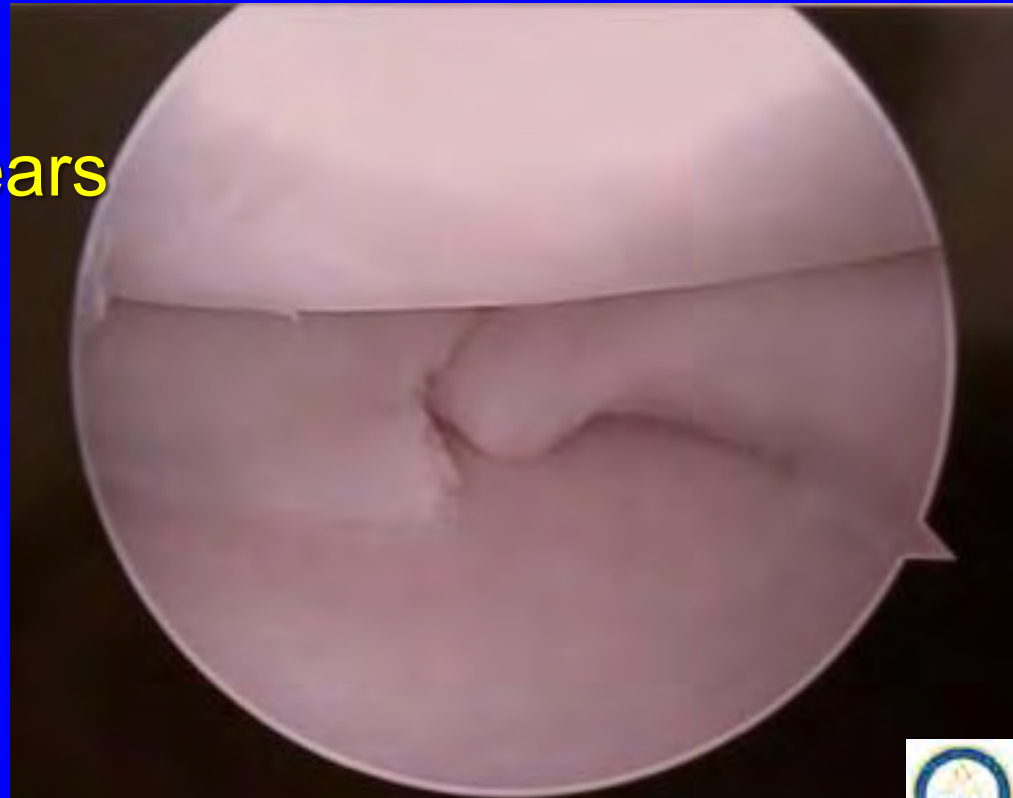
“irreparable”

Materials and Methods

- Primary outcome
 - Odds ratio analysis: insurance type → repairability
- Secondary outcomes
 - T-test: time to surgery, preop scores → repairability

Results

- 54 patients = 108 “menisci at risk”
- 44% tear rate
 - 31% “significant” tears
 - 37% lateral
 - 24% medial



Results

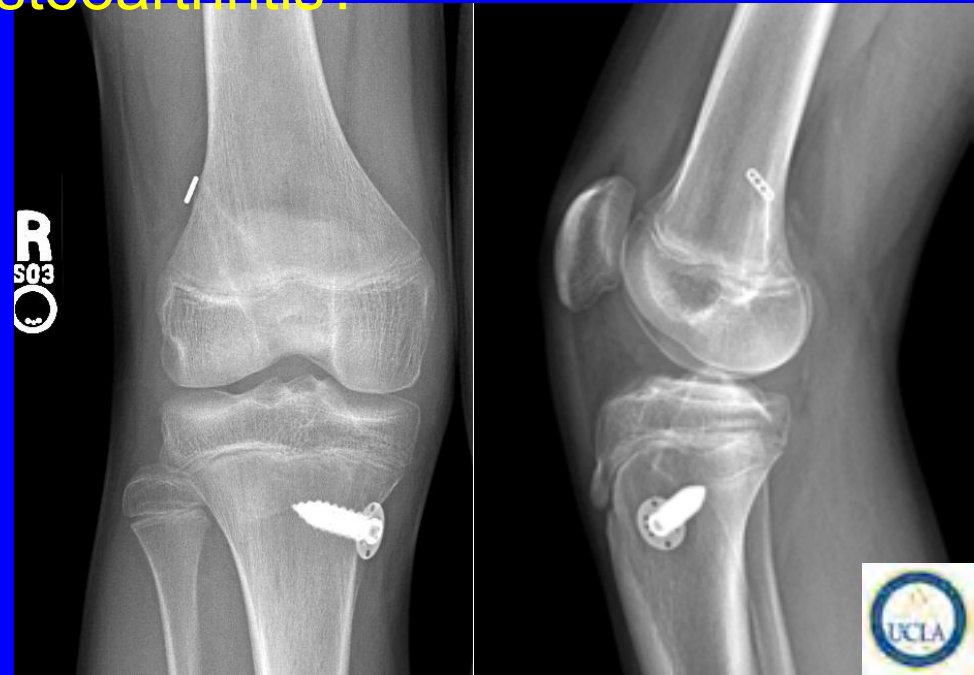
	GI	CI	P value
Preop IKDC	56	65	NS
Preop Lysholm	62	83	.005
Significant meniscal tear	36%	23%	NS
Significant lateral meniscal tear	50%	18%	.02
Significant medial meniscal tear	27%	22%	NS

Results

	GI	CI	Odds Ratio	95% CI	P value
Irreparable meniscal tears	25%	5%	5.35	1.14 - 25.06	.03
Time to surgery (days)	184	72			.0006
irreparable	234	81			.0007
irreparable lateral	188	84			.004

Discussion

- ACL rupture:
 - Time to surgery «» meniscal tear rate
 - Dumont et al: >150 days
 - Lawrence et al: >12 weeks
 - Future: increased risk osteoarthritis?



Discussion

- Insurance type «» access to care
 - Pediatric orthopaedic surgery
 - Iobst et al
 - Scripted phone call: 10 year old with “fracture not involving growth plate”
 - 83% vs 23%: appointment if CI vs GI
 - 6% if in 10 lowest reimbursing GI states (CA 47/50)
 - Pierce et al
 - Scripted phone call: 14 year old with ACL tear
 - 90% vs 14%: appointment w/in 2 weeks (CI vs GI)



Discussion

Study Strengths:

- Case control
- Uniform tear classification system
- Definitions of “repairability” pre-treatment

Study Weaknesses:

- Confounding variable: time to surgery
- No analysis of factors causing longer surgical wait times
- No post-surgical outcomes data



Conclusions

- Adolescent with ACL rupture, government insurance
 - Longer time between injury and surgery (3X)
 - Lower preoperative Lysholm scores
 - Higher rate irreparable meniscal tears (5X)

Conclusions

- Future studies:
 - What factors contribute to longer surgical wait times?
 - Are there differences in long-term functional outcomes?



Thank You



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