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# Do all Meniscal Ramp lesions require repair? A prospective study of Ramp lesions with concomitant ACL injury

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## DISCLOSURES

- The authors have no relevant financial or non-financial interests to disclose.
- The authors have no conflicts of interest to declare

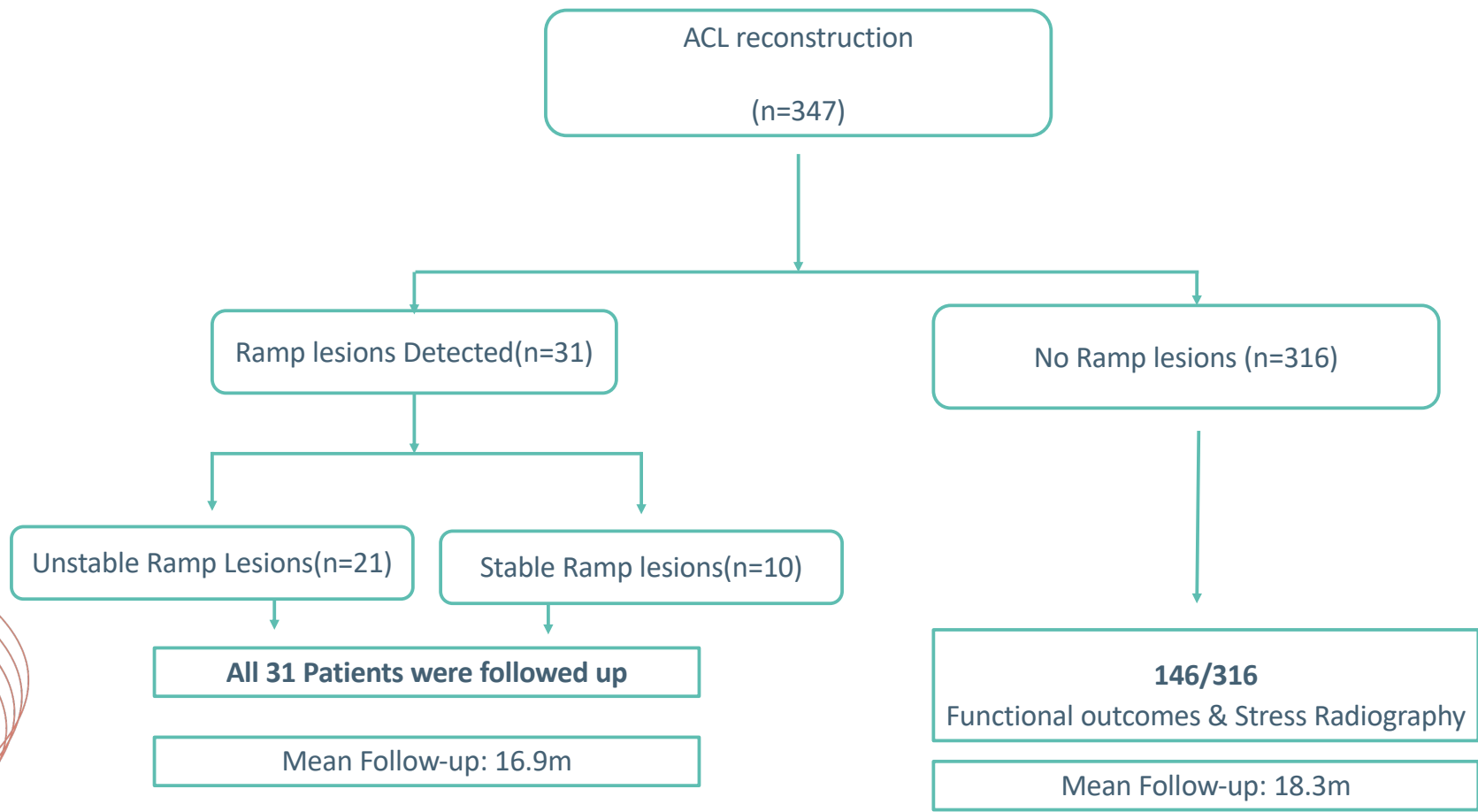


# IMPORTANCE

- No literature regarding prevalence of Ramp lesions in Indian population
- Few studies suggest Stable Ramp lesions can be left alone during ACLR
- However, most with a second look arthroscopy have suggested that rate of non healing is more in conservatively treated Ramp lesions and can cause increased anterior laxity

## Aim of the study

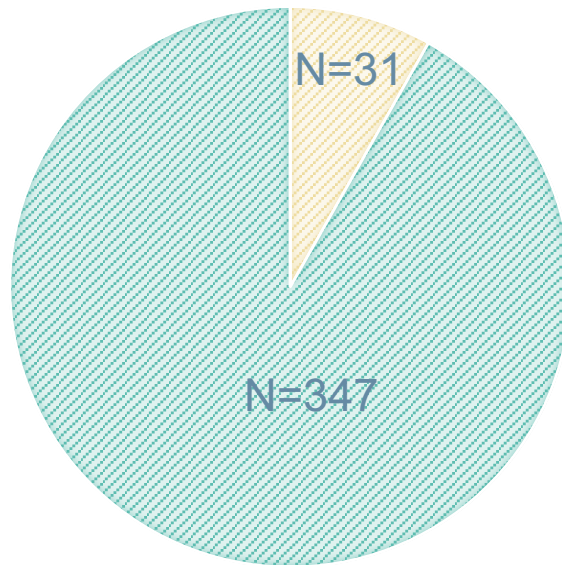
- Analyse the prevalence of ramp lesions in patients undergoing ACL Reconstruction(ACLR) in an Indian population.
- Analyse the sensitivity of MRI in detecting ramp lesions.
- Compare the functional outcomes & anterior laxity in patients with conservatively treated stable Ramp lesions & those without ramp lesions during ACLR.
- Assess outcomes of repair in Unstable ramp lesions



# Prevalence of meniscal Ramp Lesions

■ ACL Tears with Ramp ■ ACL tears without Ramp ■ ■ ■ ■

**Prevalence – 9 %**



## Prevalence of Ramp lesions

- Acute ACL tears (<6 weeks)  
**12.4%**
- Chronic ACL tears (>6 weeks):  
**6.4%**



## MRI sensitivity for RAMP lesions

- Only in **2/31** patients had MRIs with a confirmed Ramp lesions
- 14 patients – increased signal intensity/ bone bruise at PM tibia(Indirect sign).

**MRI Sensitivity for Ramp Lesions:51%**



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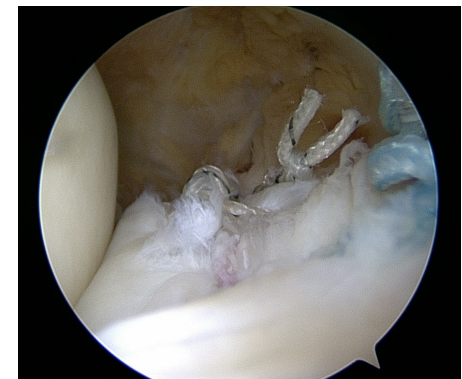
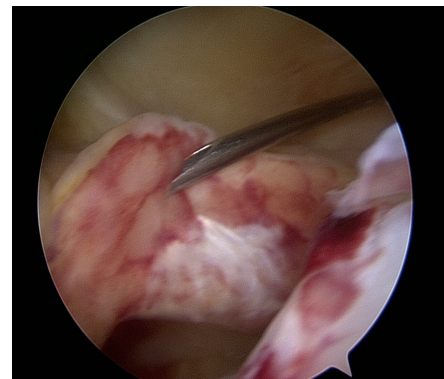
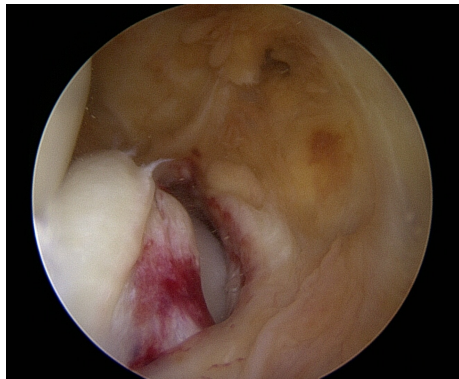
# REPAIR WAS DONE BASED ON STABILITY ON PROBING

## Stable tears:

No translation of the medial meniscus on probing

## Unstable tears:

Considerable medial meniscus translation during probing



Repair was done for unstable tears using Posteromedial portal using Lasso & No.2 Fibrewire



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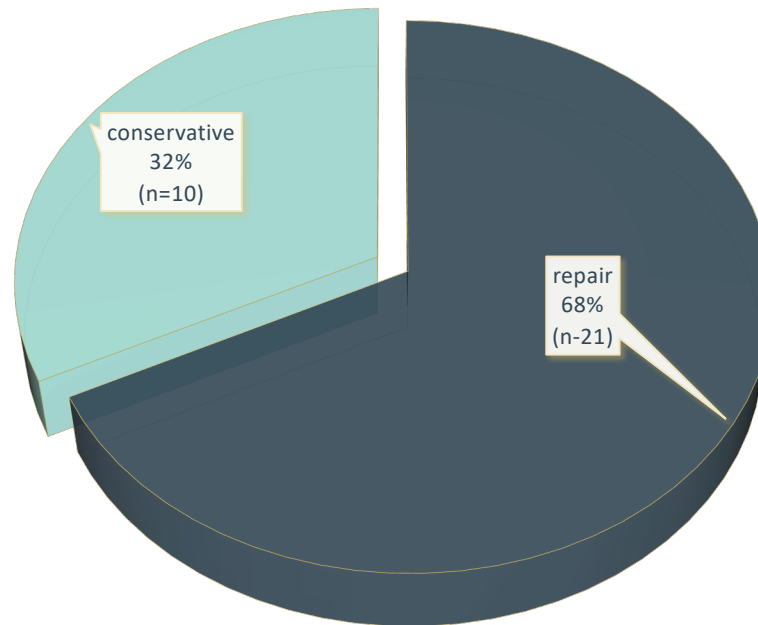


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# STABILITY OF RAMP LESIONS

## CONSERVATIVE VS REPAIR



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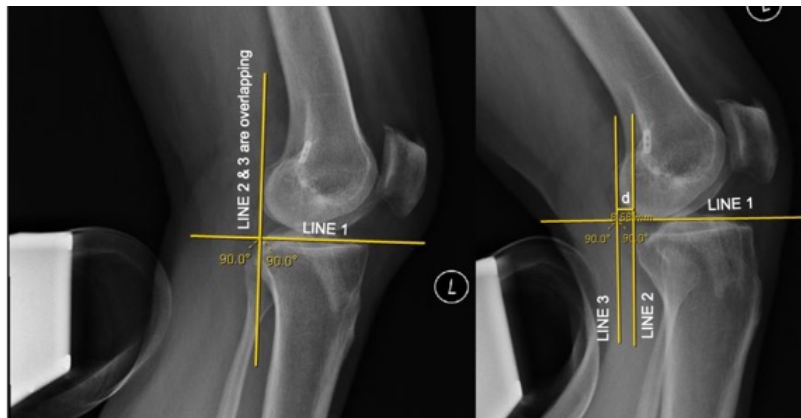


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# Functional Outcomes & Anterior Laxity

## ACL tears with Stable Ramp versus ACL tears with No Ramp Lesions

	STABLE RAMP Conservative	No Ramp lesions	P VALUE
TEGNER LYSHOLM	82+/-13.4	81.3+/-14.1	<b>&gt;0.05</b>
IKDC	79+/-5.6	74+/-6.3	
KOOS	79+/-7.4	84+/-3.2	



	STABLE RAMP Conservative	No Ramp lesions	P VALUE
Anterior Laxity	5.1±0.9	4.4±1.8mm	<b>&gt;0.05</b>



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## Functional Outcomes & Anterior Laxity

### ACL tears with Unstable Ramp versus ACL tears with No Ramp Lesions

	UNSTABLE RAMP Repair	No Ramp lesions	P VALUE
TEGNER LYSHOLM	86+/-12.2	81.3+/-14.1	<b>&gt;0.05</b>
IKDC	77+/-8.3	74+/-6.3	
KOOS	83+/-4.8	84+/-3.2	
Anterior Laxity	4.1±1.1mm	4.4±1.8mm	



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## Conclusion

- Ramp lesions are not rare injuries & have a prevalence of 9% with more predominance in acute ACL injuries.
- MRI has a limited role in diagnosing Ramp lesions & thus careful intraoperative assessment is required in all cases of ACL tears.
- Conservatively treated Ramp lesions have comparable outcomes and stability to knees without Ramp lesions.
- Repair of unstable Ramp tears results in good functional outcome & stability.

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