

## BACKGROUND

A "Ramp" lesion is an injury defined by a tear affecting the posterior horn of the medial meniscus (PHMM), often associated with anterior cruciate ligament (ACL) ruptures[1]. It is often difficult to visualize due to its location within the posterior septum of the knee and MRI is of questionable value in diagnosis [2].

## PURPOSE

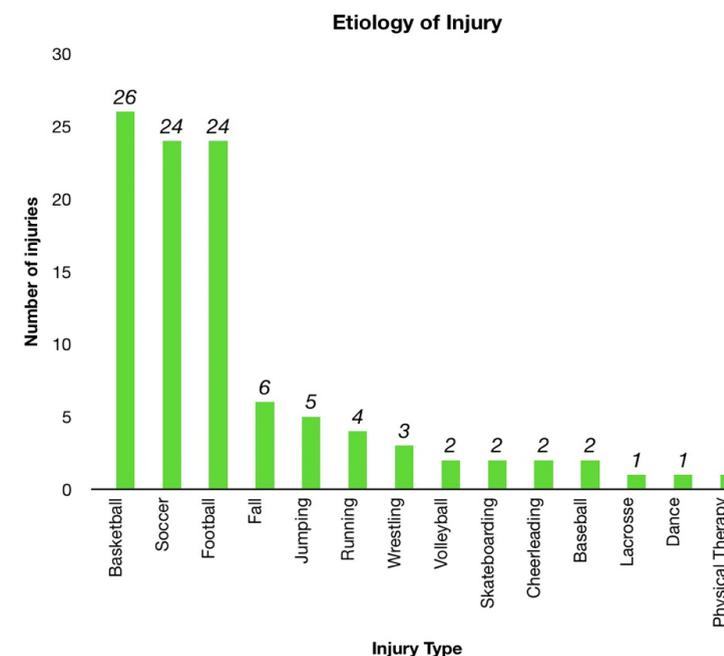
We aimed to characterize Ramp lesions in a pediatric population at a single tertiary children's hospital over three years

## METHODS

- Patients under 18 years old with ACL ruptures and PHMM injuries with a ramp lesion identified arthroscopically were reviewed retrospectively from January 2018 to December 2021.
- 105 patients were found to have a medial meniscus Ramp lesion at arthroscopy.
- Descriptive statistics were estimated and reported as means with standard deviation or counts with percentages

Table 1. Lesions Detected Versus Not Detected on MRI

	Detected on MRI (69)	Not detected on MRI (32)	<i>p</i>
Sex	30 female, 39 male	12 female, 20 male	0.66
Age at Diagnosis (mean)	15.5 ± 1.4	15.0 ± 1.5	0.12
BMI	25.8 ± 5.5	26.2 ± 4.9	0.74
Injury location	medial and lateral (27), medial only (40), lateral only (2)	medial and lateral (10), medial only (19), lateral only (2)	0.61
Tender to palpation	58% (40)	53% (17)	0.67
Swelling	68% (47)	63% (20)	0.65
Range of motion	52% (36)	44% (14)	0.52



## RESULTS

- 105 out of 546 patients with ACL ruptures were diagnosed with a Ramp lesion (62 females, 43 males)
- Average age of 15.3 years ±1.5 at the time of diagnosis.
- Mean BMI at the time of injury was 26.0 ± 5.3.
- The most common mechanism of injury was sport related (88), followed by falls (6) and jumping (5).
- MRI sensitivity in our cohort was 66% (69).

## CONCLUSION

Ramp lesions had an incidence rate of 19% in pediatric patients with ACL rupture undergoing surgical treatment. MRI had low sensitivity at 66%. Diligent exploration of the posteromedial compartment is necessary during ACL reconstruction to accurately diagnose and repair Ramp lesions in both the pediatric and adult population.

## REFERENCES

- [1] Taneja, AK, Miranda, FC, Roseberg, LA et al (2021) Meniscal ramp lesions: an illustrated review. *Insights Imaging*. 12(1):134.
- [2] Peltier A, Lording TD, Lustig S, Servien E, Maubisson L, Neyret P (2015) Posteromedial meniscal tears may be missed during anterior cruciate ligament reconstruction. *Arthroscopy*. 31(4):691–8.