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Clinical And Radiographic Results After Isolated MPFL Reconstruction For Patella Instability

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Faculty Disclosure Information

- Nothing to disclosure



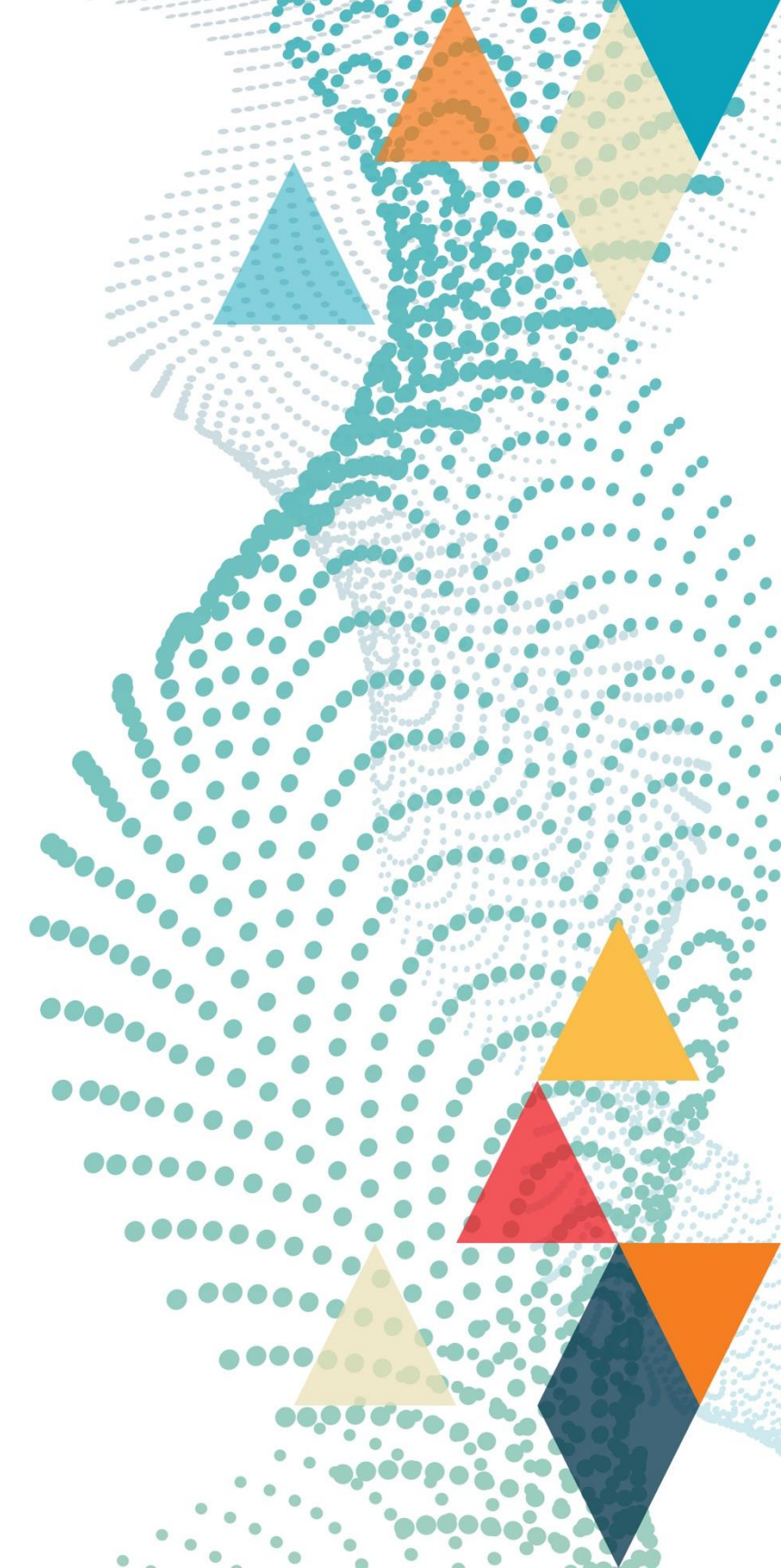
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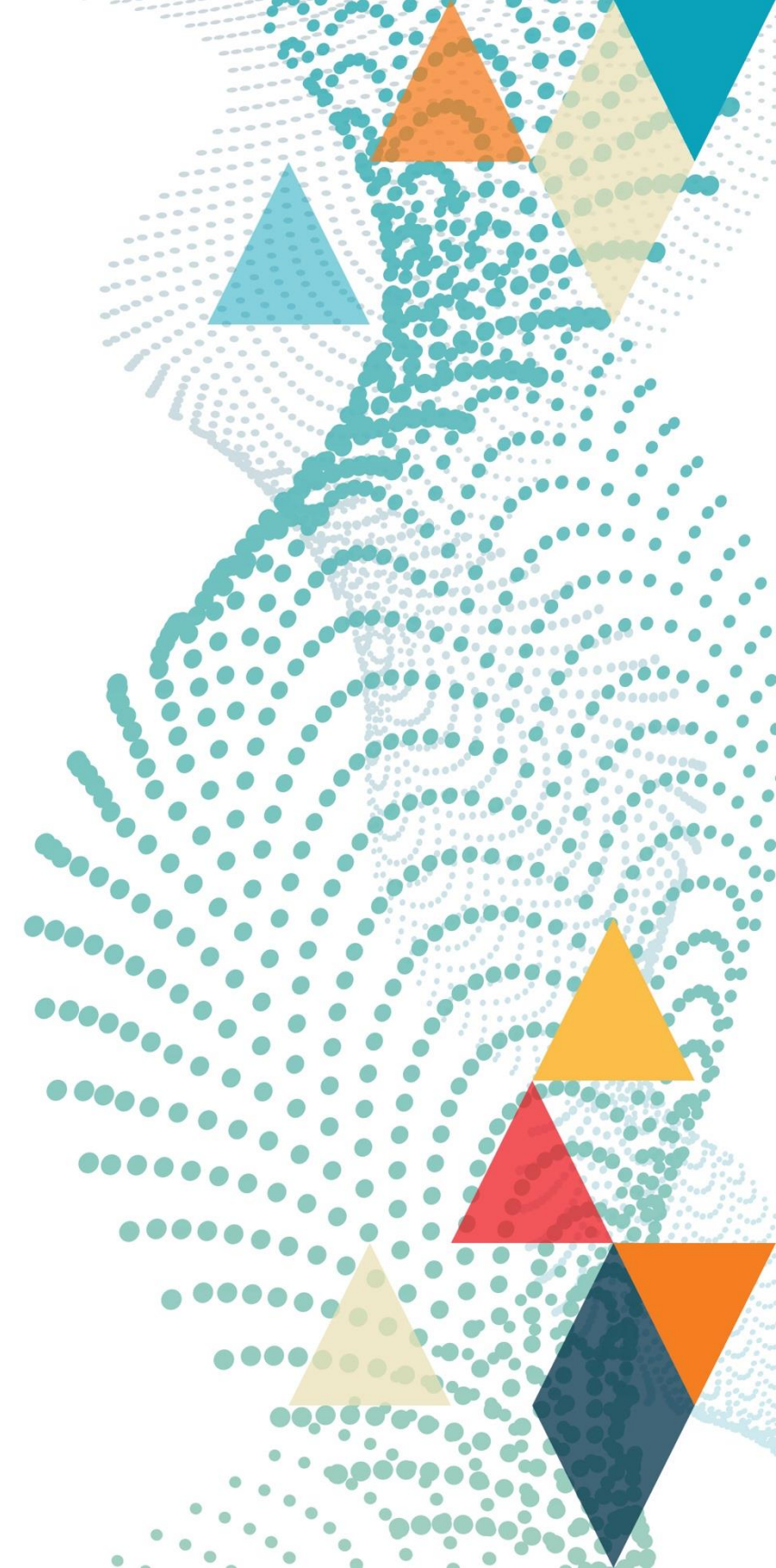
Introduction and Objective

- Patella dislocation is one of the most common pathologies of the knee in the young population
- MPFL lesions account for 3% of total knee injuries and are commonly found in young females between 10-17 years old
- **Aim to** evaluate the medium-term clinical and radiographic results of our implant-free, double-bundle technique for isolated MPFL reconstruction with hamstrings autograft



Materials and Methods

- Retrospective analysis of 31 patients (33 patellae) with patella instability treated with isolated MPFL reconstruction between 2010 and 2022
- Used PROMs: IKDC, Lysholm, Kujala, Modified Cincinnati pre and postoperatively
- Radiographic evaluation to assess the development of patellofemoral arthritis based on the IWANO classification
- **Excluded patients** with severe trochlear dysplasia (Dejour II, III, IV)



Outcomes

- Mean patients' age at the time of the first dislocation: 16.1 years (range from 10 to 21 years)
- Mean age at the time of surgery: 20.3 years (from 20 to 34)
- ≥ 1 dislocations before surgery
- 56,2% females vs 43.8% males
- 50% of the injuries during sports/exercise and 6.2% after a direct hit
- Mean follow up: 7.3 years (from 2 to 13)

Total number of patients (N)	35 (39 patellae)
Male/Female	20/15
Type A trochlear dysplasia	12/35 (34.2%)
Mean age at first dislocation (years)	16.1 (10-21)
Mean age at surgery (years)	20.3 (20-34)
Mean no of dislocations	4.2
Mean follow up (years)	7.3 (1-13)

Table 1: Demographic data of patients who underwent isolated MPFL reconstruction

Outcomes

- Significant improvement of all scores
- No immediate postoperative complications and no redislocation
- 9.6% of the patients had a positive patella apprehension test
- Low rates of postop patellofemoral arthritis

Scores	Mean Preoperative Values	Mean Postoperative Values	P-value
IKDC	49.2 (S.D.=11.03)	84,5 (S.D.=13.25)	<0,001
Lysholm	53 (S.D.= 11.79)	88.2 (S.D.=11.75)	<0,001
Kujala	61 (S.D.=10.34)	88.5 (S.D.=13.51)	<0,001
Modified Cincinatti	49.2 (S.D.=15.28)	83.6 (S.D.=15.70)	<0,001

Table 2: All of the functional scores showed a significant increase post-operatively

Outcomes



Figure 1: Patella skyline view x-ray and profile knee x-ray indicating Grade 2 patellofemoral arthritis according to IWANO classification system, 6 years after MPFL reconstruction

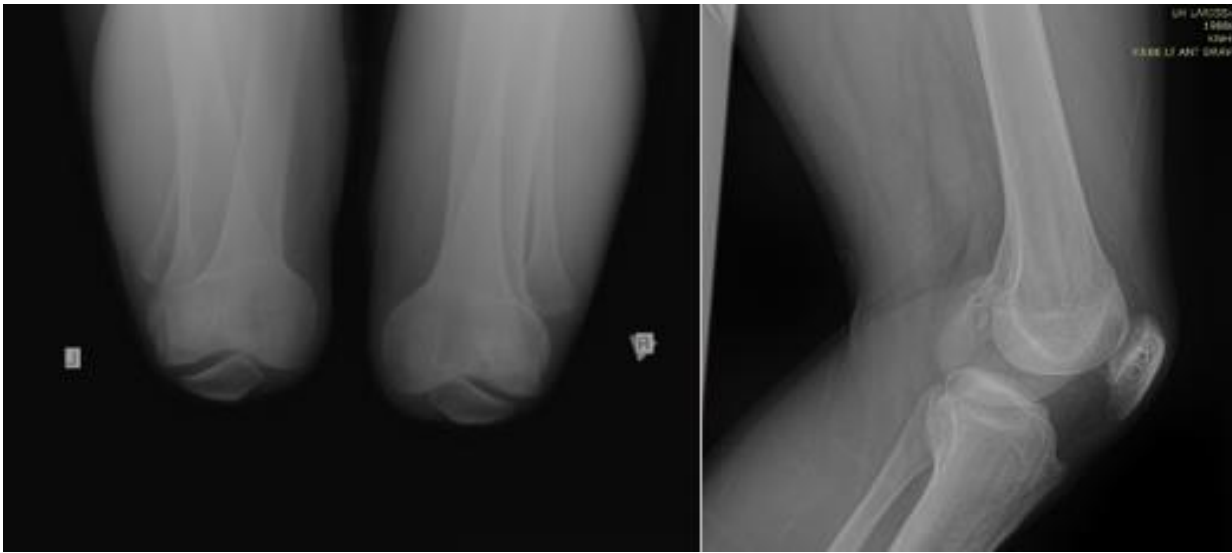


Figure 6: Bilateral patella skyline view x-ray and profile knee xray indicating Grade 3 patellofemoral arthritis according to IWANO classification system in the right knee, 7 years after MPFL reconstruction

	No arthritis	IWANO I	IWANO II	IWANO III	IWANO IV
Preoperative	36/39	3/39 (7,7%)	-	-	-
Postoperative	31/39	5/39 (12,8%)	2/39 (5,1%)	1/39 (2,5%)	-

Table 3: Patients’ knees classified regarding the preoperative and postoperative signs of patellofemoral arthritis using the IWANO classification system at the latest follow-up

Conclusions

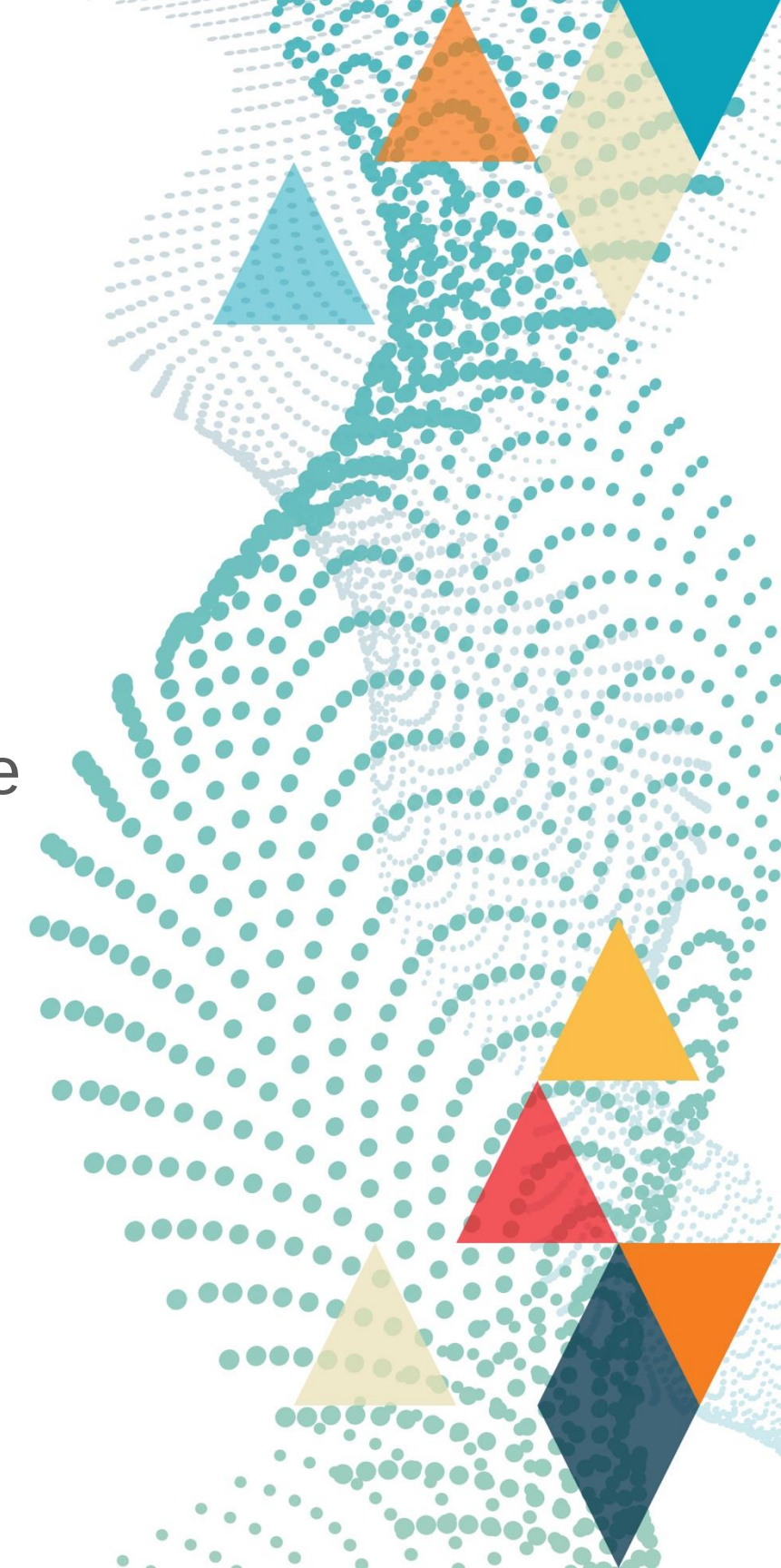
- The implant-free, double-bundle technique for MPFL reconstruction with hamstrings autograft is a safe and reliable option for treating patella dislocation providing satisfactory patient reported outcomes
- No severe complications were recorded and only mild cartilage lesions could be developed after the procedure and at the latest follow up



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