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HAMSTRING AUTOGRAFT RETAINING MUSCLE TISSUE IN ACL RECONSTRUCTION OUTCOMES: A FUNCTIONAL EVALUATION OVER TWO YEARS FOLLOW-UP

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Faculty disclosure

- Nothing to Disclose

Purpose

Assess post-surgical outcomes

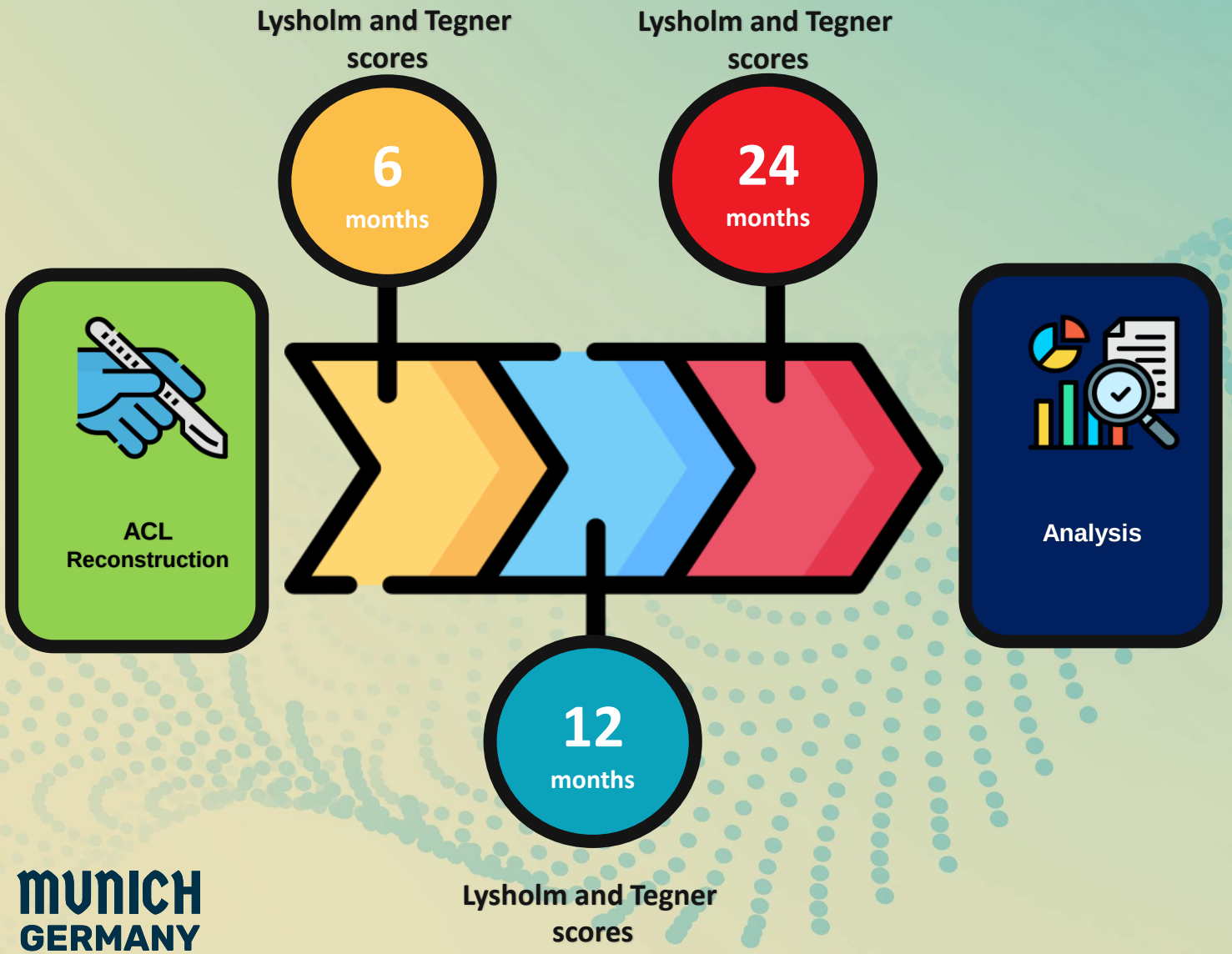
- Patients undergoing ACL reconstruction
- Hamstring autograft
- Adjacent muscle preservation

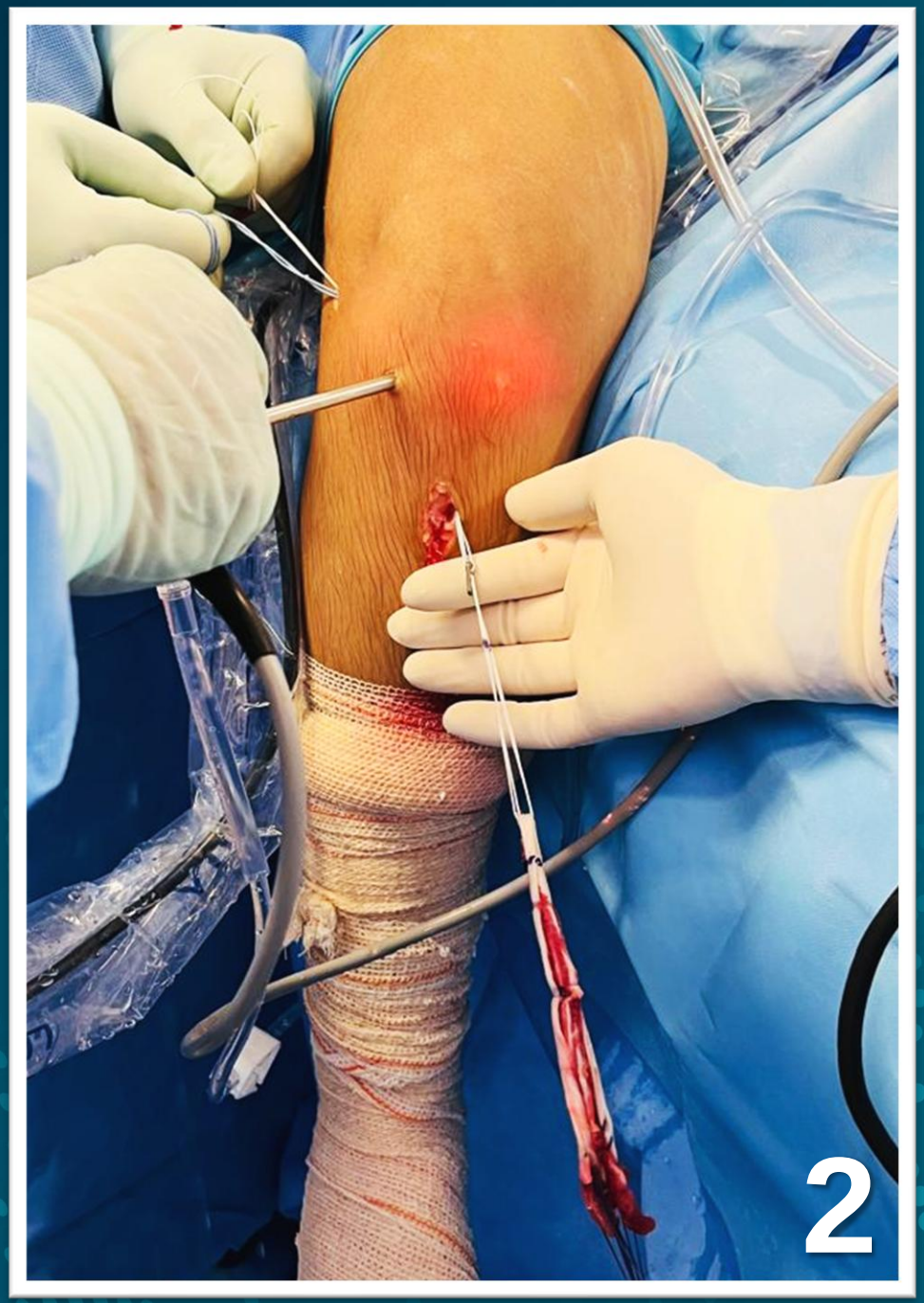
Functional recovery over a 24-month follow-up

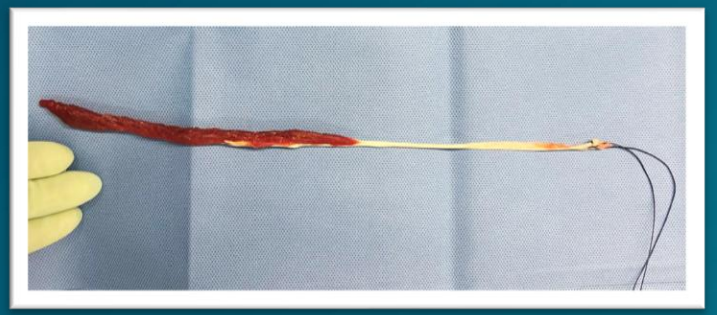
Methods

- Prospective cohort with patients from the Sports Medicine and Traumatology Center (CETE-UNIFESP), Sao Paulo, Brazil

Methods


Lysholm and Tegner scores
6 months
Lysholm and Tegner scores
24 months
ACL Reconstruction
Analysis
12 months
Lysholm and Tegner scores





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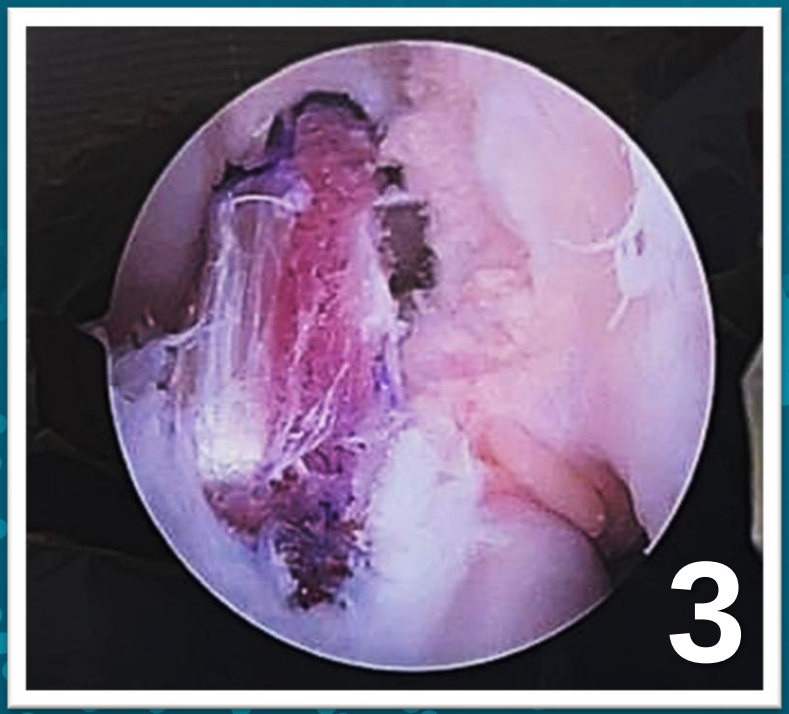

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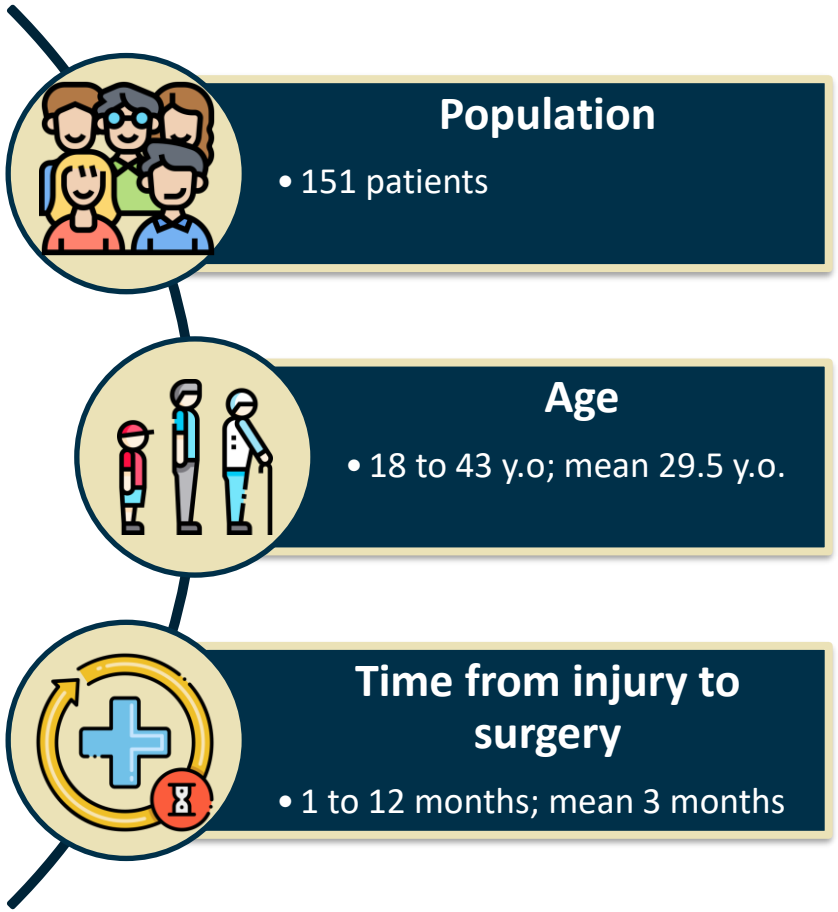
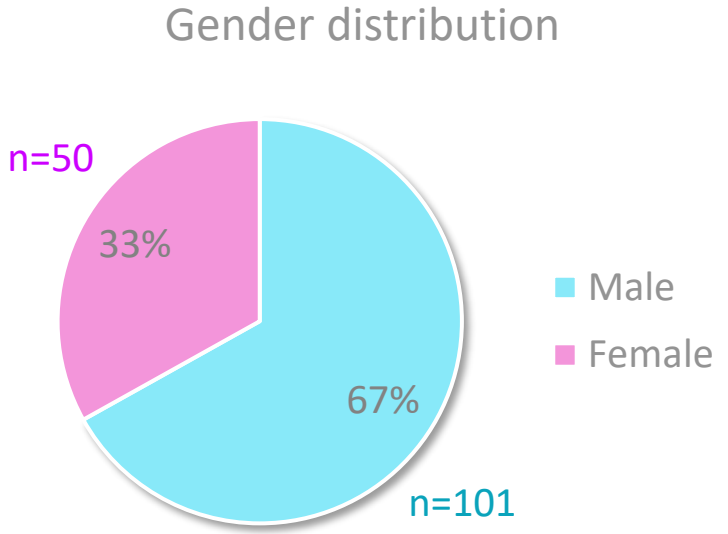
Hamstring autograft with preservation of adjacent muscle tissue

1. Autograft
2. External view
3. Arthoscopic view

Results





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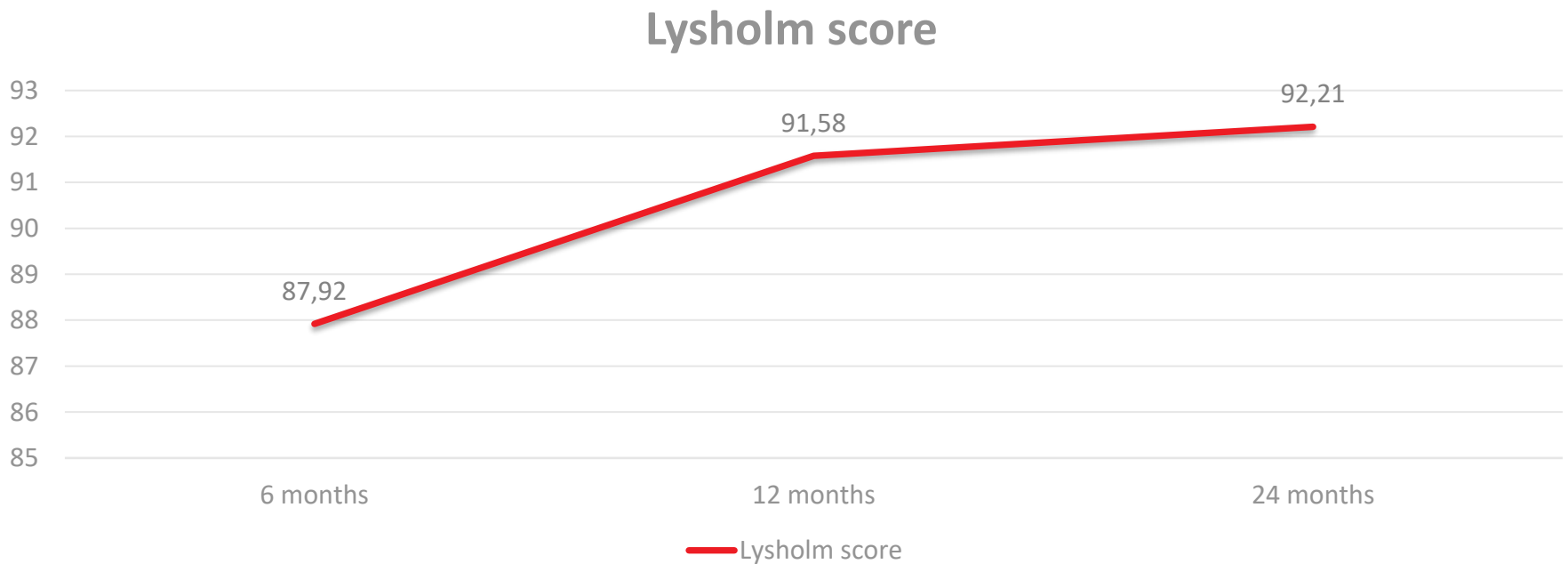
Results


Lysholm score
93
92
91
90
89
88
87
86
85
87,92
91,58
92,21
6 months
12 months
24 months
Lysholm score

Discussion

- Functional outcomes were measured using Lysholm and Tegner scales
- Lysholm scores steadily improved over time
- Most patients reached 85–99 points, indicating high recovery levels.
- Tegner scores showed that many patients returned to pre-injury activity levels, although some variability exists depending on individual context.

Discussion

- Muscle retention during ACL reconstruction may enhance ligamentization and functional recovery.
- This technique is particularly beneficial for:
  - Women
  - Elderly
  - Patients with thin hamstring tendons
- Younger patients showed slightly faster and more complete recovery, possibly due to better overall physical condition.
- No clear gender difference in outcomes was established

Discussion

- Post-surgical complications, though rare, were associated with lower functional outcomes
- The technique is:
  - Safe
  - Implant-sparing
  - Simple to perform with a manageable learning curve
- The research emphasizes the value of personalized surgical strategies and targeted care based on patient characteristics.

Conclusions

ACL reconstruction with muscle-preserved hamstring autograft shows promising functional results, especially in patients with thin hamstring tendons

Earlier surgical timing (average 3 months) may favor better recovery.

Results support this approach as a viable alternative technique.

Further research is warranted to compare long-term outcomes with other reconstruction methods.

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