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Quadrupled Semitendinosus vs. Semitendinosus-Gracilis Graft for ACL Reconstruction: a Randomized Controlled Trial

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The authors do not have any disclosures related with this research



Aim

- The purpose of this study is to compare quadrupled semitendinosus (**STx4**) with semitendinosus-gracilis graft in ACL reconstruction surgery.

Methods

- Randomized controlled trial
- 42 patients with ACL tear, were randomized to traditional semitendinosus-gracilis autograft (control group) or quadrupled semitendinosus autograft (STx4) and were followed-up for 2 years
- Outcomes were studied at baseline, 3, 6, 12 and 24 months: functional scores (KOOS, IKDC, Tegner-Lysholm), anterior knee laxity and strength (quadriceps and hamstrings)
- Re-tear was studied clinically and with MRI when needed

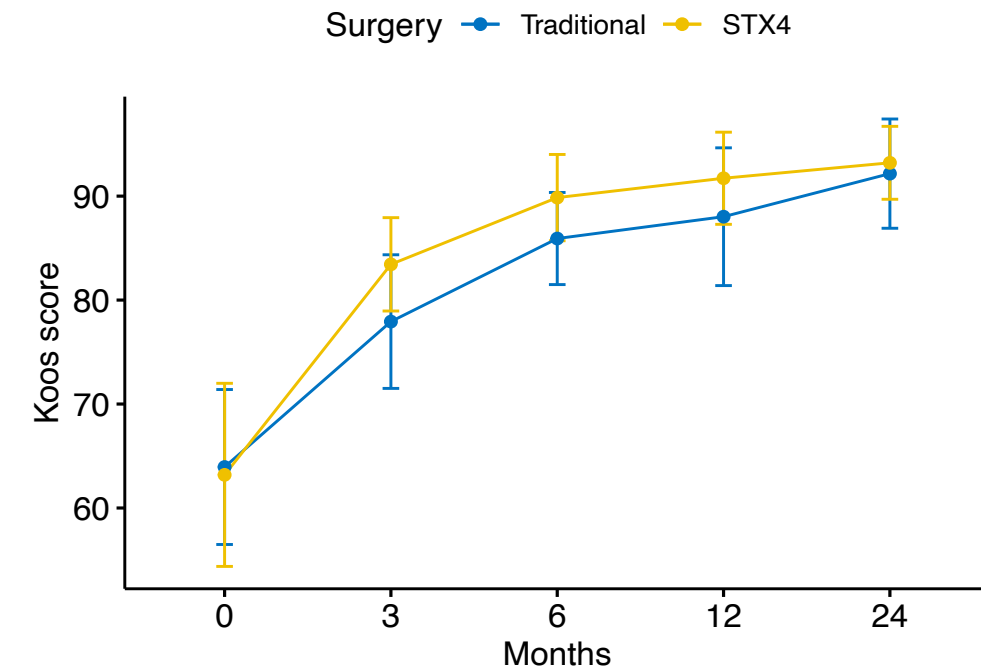
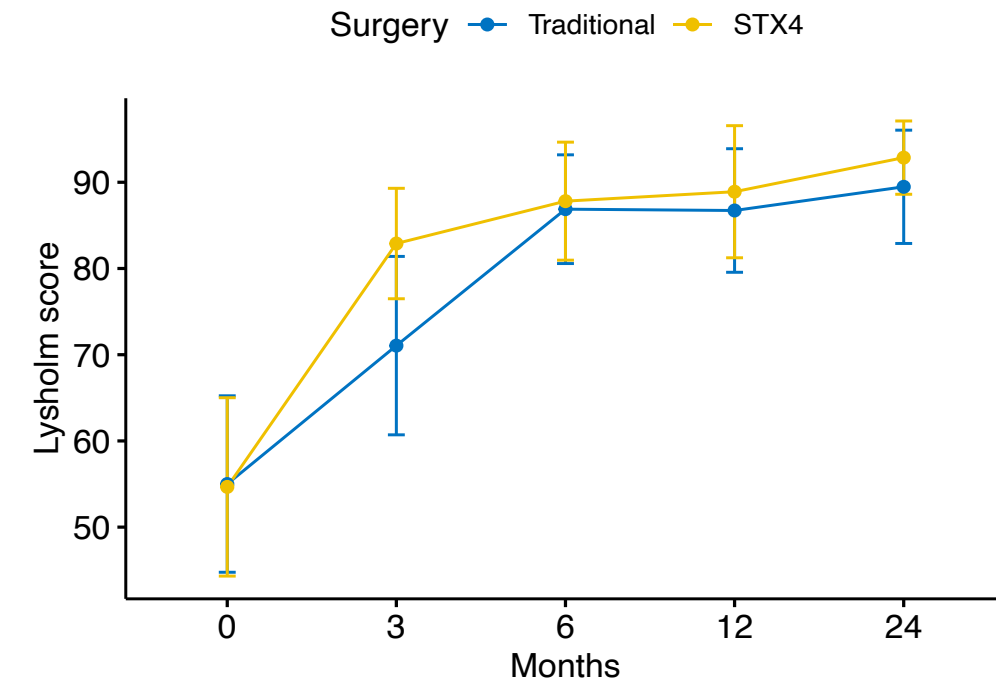
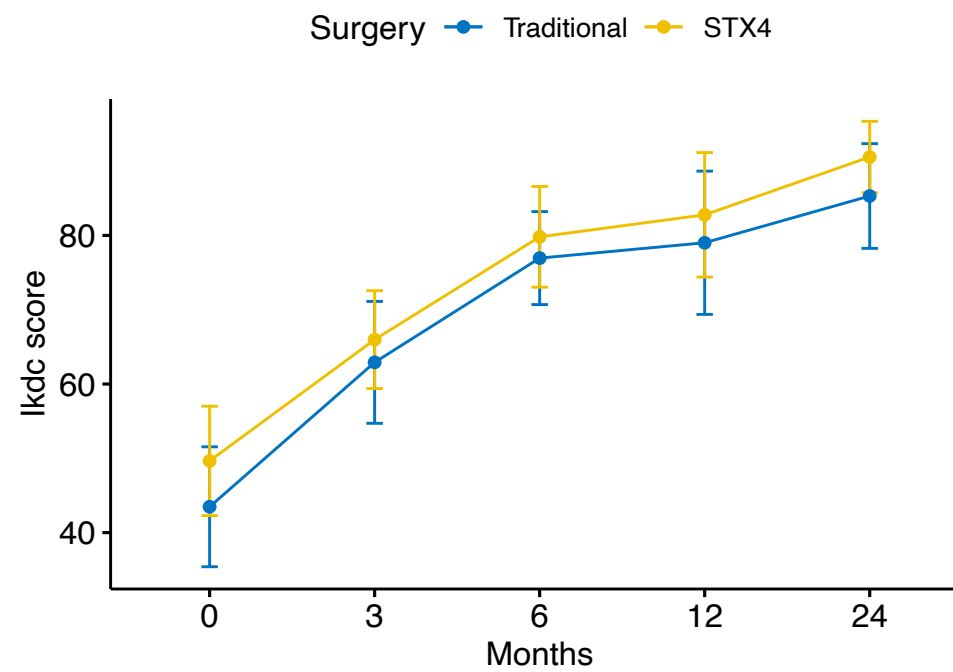
Results

- There were no statistically significant differences in strength for knee flexion or extension between groups
- There was one ACL re-rupture for STx4 and two for the control group ($p=0.9$)
- One additional surgery for each group: ACL revision (control group) and meniscectomy (STx4)

Results

- There were no other complications and no differences in PROMs between grafts, except for Tegner-Lysholm at 3 months, that favored the STx4 group (76.0, IC95%: 56.0-86.0 vs 85.0, IC95%: 77.0-93.0), $p=0.04$
- Both groups had satisfaction equal to or above to 95%

Results (PROMs)

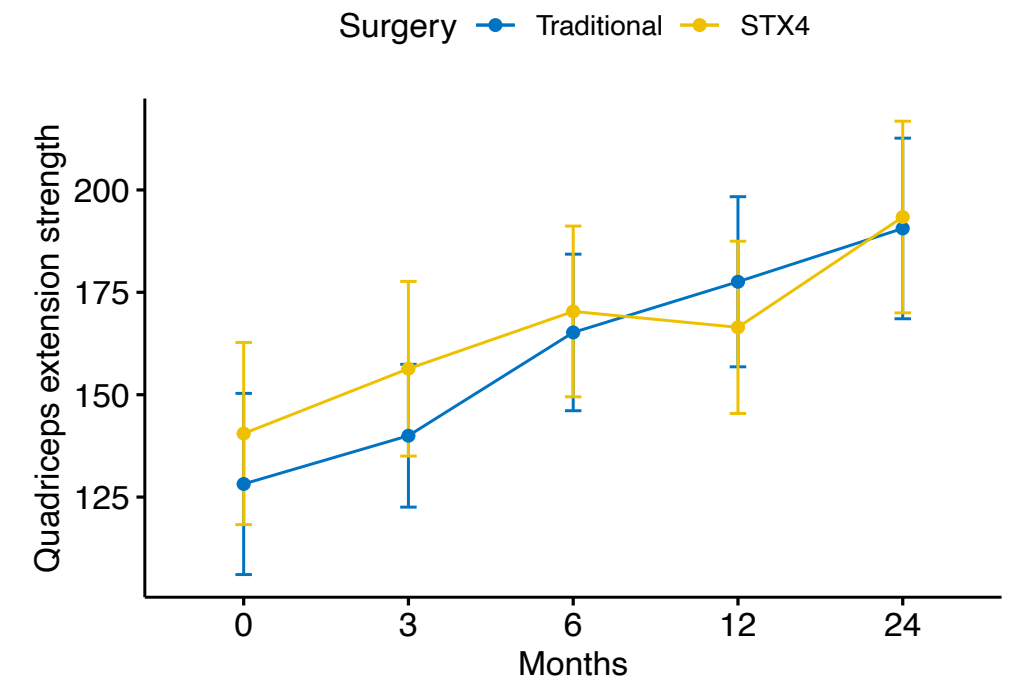
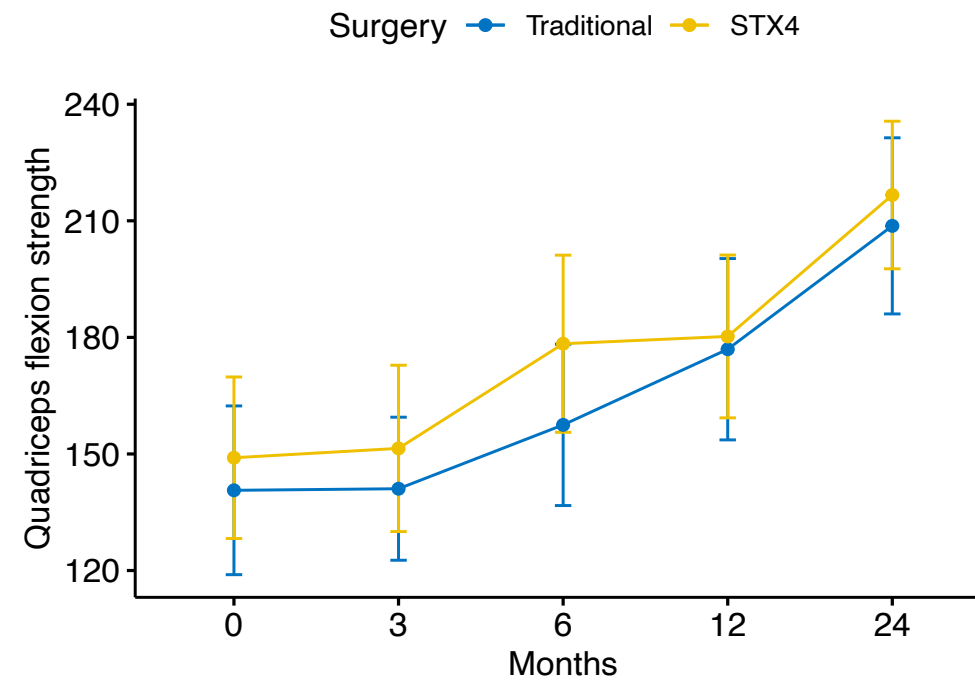


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Results (Strength)

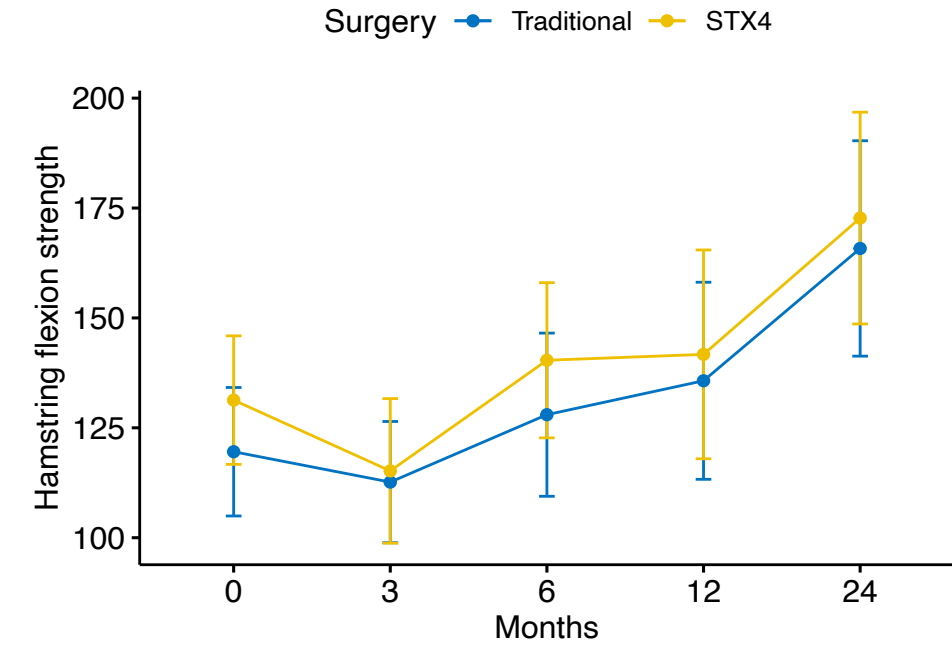
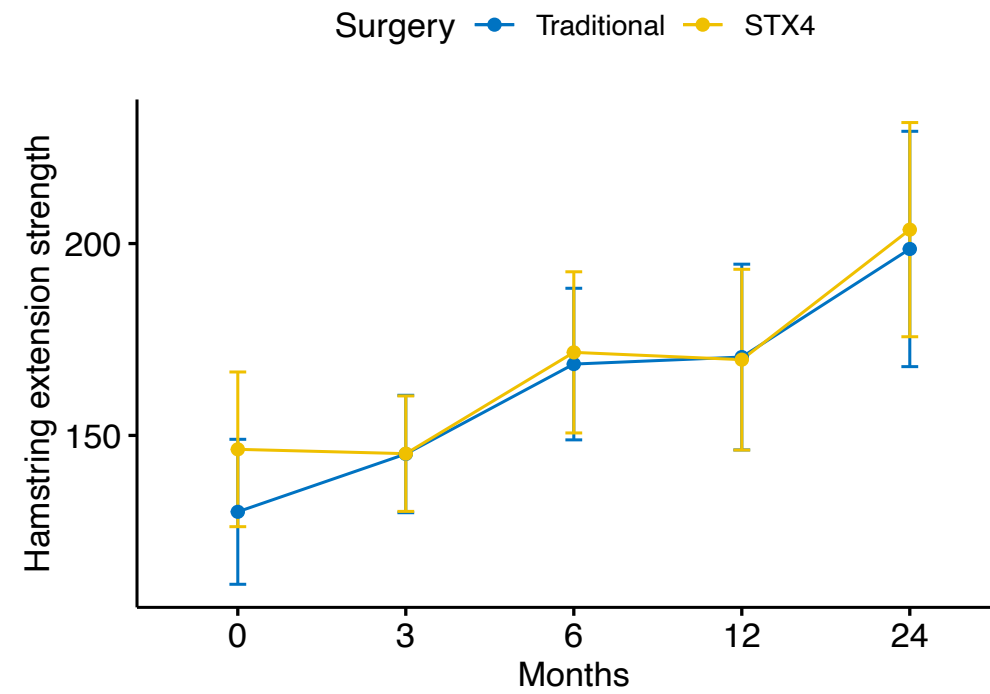


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Results (Strength)



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Conclusion

- There were no differences for most of the outcomes between the two types of hamstrings grafts (quadrupled semitendinosus and semitendinosus-gracilis)
- Both techniques were safe and achieved very high patient satisfaction



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