

Title: Quadriceps Autograft is a Viable Graft Choice for ACL Reconstruction in Patients Over 50 Years Old

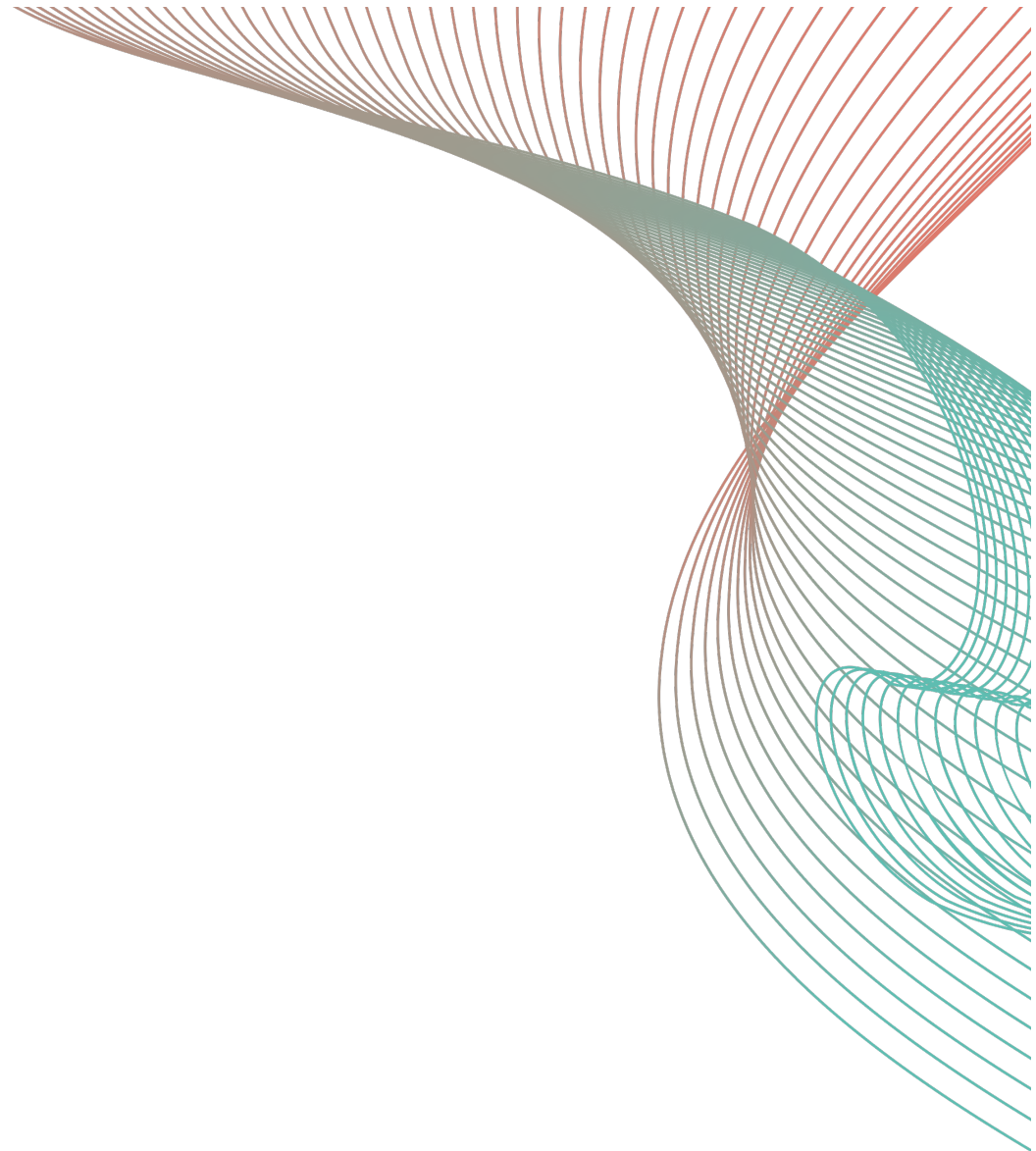
- Authors: Amit Meena, Jaipur, INDIA, PRESENTER
Luca Farinelli, Ancona, ITALY
Christian Hoser, Innsbruck, AUSTRIA
Elisabeth Abermann, Innsbruck, AUSTRIA
Mirco Herbort, Munich, GERMANY
Christian Fink, Innsbruck, AUSTRIA
- *Study performed at Gelenkpunkt - Sports and Joint Surgery, FIFA Medical Centre of Excellence, Innsbruck, AUSTRIA*

Disclosures:

- Nothing to disclose



Boston
Massachusetts
June 18–June 21



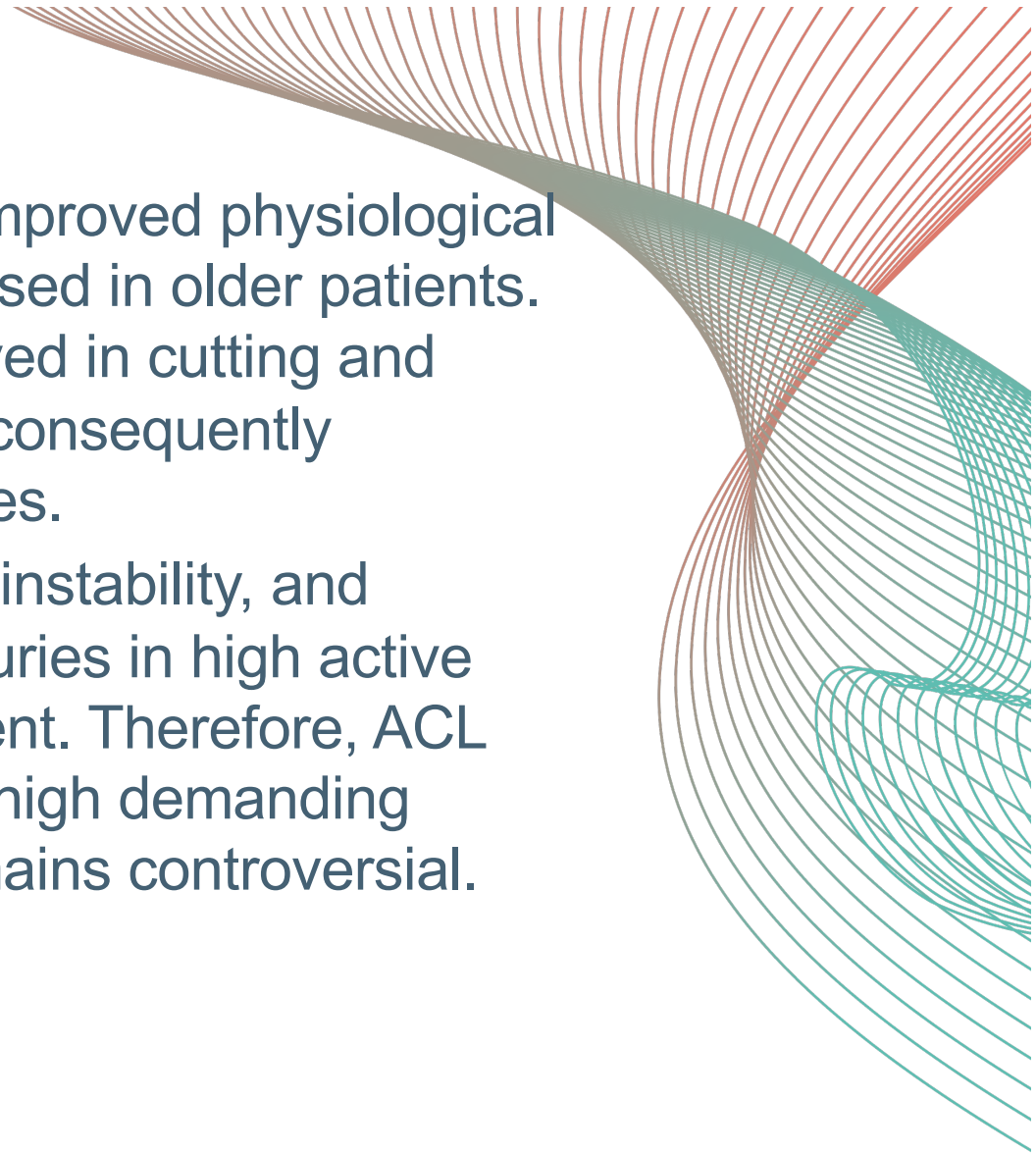
Summary

- Arthroscopic Anterior Cruciate Ligament (ACL) reconstruction by using QT autograft in highly active older patients (age>50 years) provides satisfactory patient reported functional outcomes, allows recovery of pre-injury level of activity.
- QT autograft is a viable graft choice in patients older than 50 years.



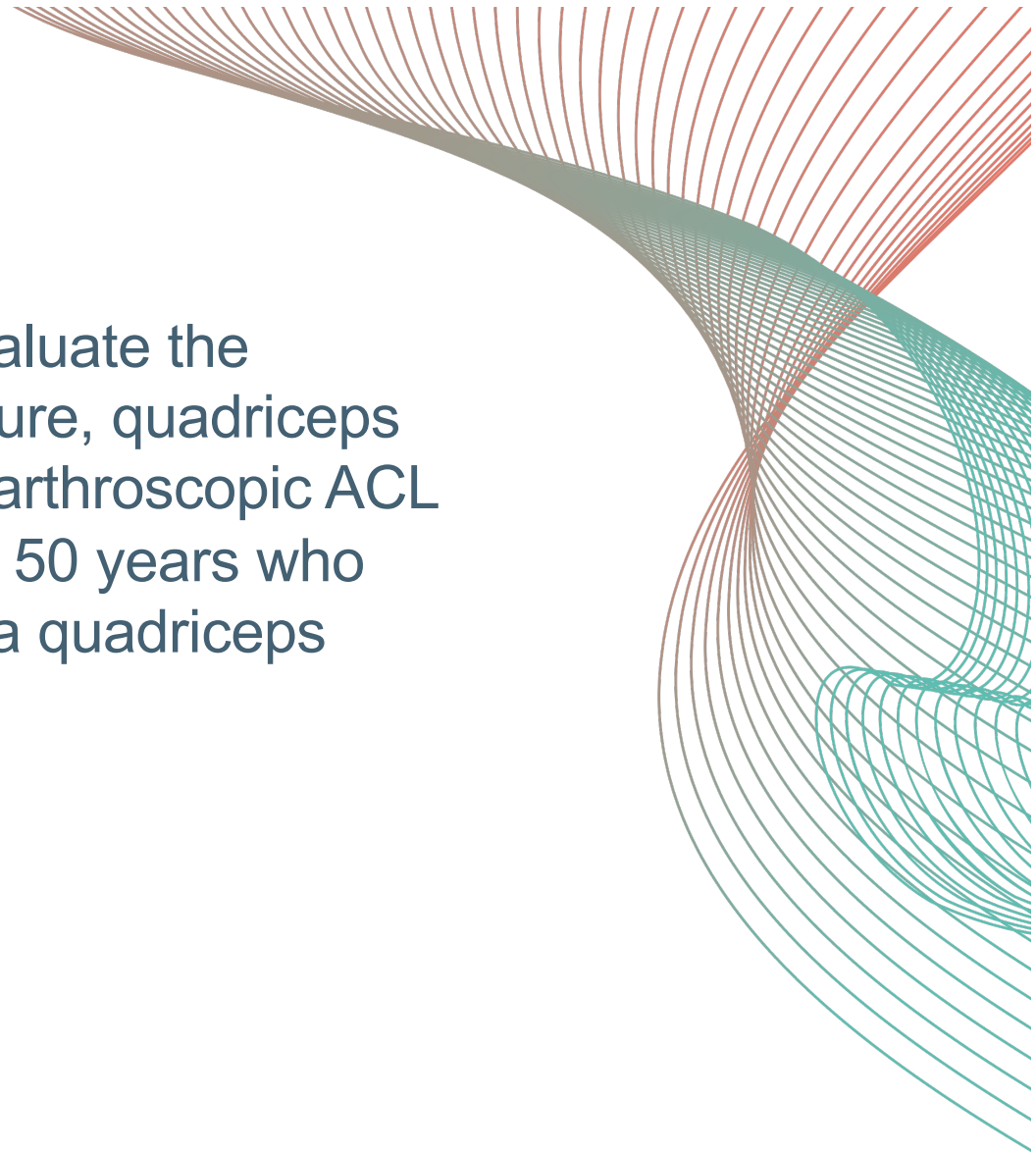
Background

- With increasing life expectancy and improved physiological health, sports participation has increased in older patients. These patients are increasingly involved in cutting and pivoting activities such as skiing and consequently increasing the incidence of ACL injuries.
- There is an increased risk of residual instability, and associated chondral and meniscal injuries in high active patients with conservative management. Therefore, ACL reconstruction is on the rise for older high demanding patients but the ideal graft choice remains controversial.



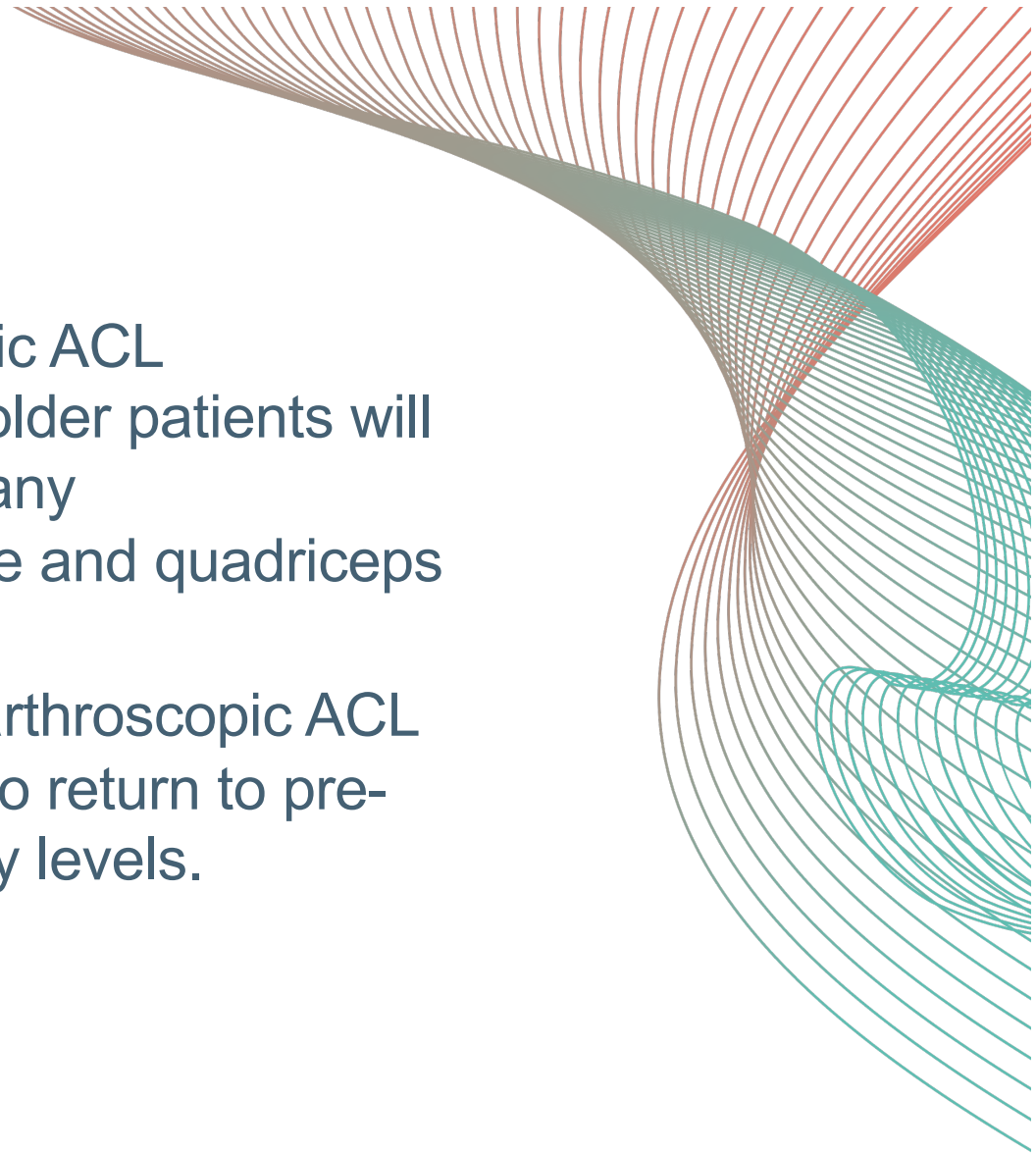
Purpose

- The purpose of this study was to evaluate the patient-reported outcomes, graft failure, quadriceps rupture and sports preference after arthroscopic ACL reconstruction in patients older than 50 years who underwent ACL reconstruction with a quadriceps tendon (QT) autograft.



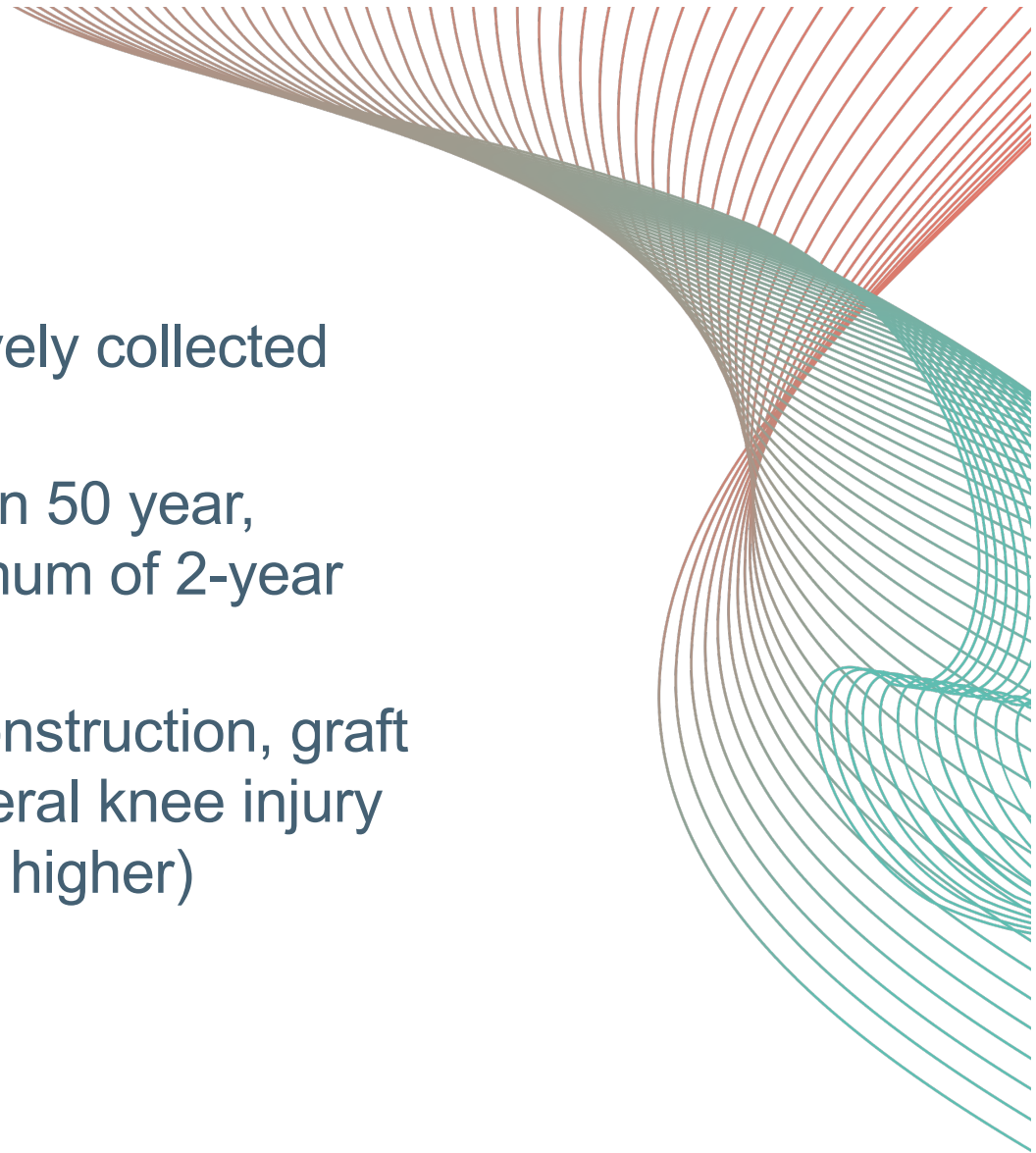
Hypothesis

- The hypothesis was that arthroscopic ACL reconstruction with QT autograft in older patients will provide satisfactory results without any complications in terms of graft failure and quadriceps tendon rupture.
- It was also hypothesized that after arthroscopic ACL reconstruction patients will be able to return to pre-injury sports preferences and activity levels.



Methods

- Between 2010 and 2020, prospectively collected data were obtained.
- *Inclusion criteria* : Patients older than 50 year, primary ACL reconstruction, a minimum of 2-year follow-up
- *Exclusion criteria*: revision ACL reconstruction, graft other than a QT autograft, contralateral knee injury or osteoarthritis (Ahlbäck stage 2 or higher)



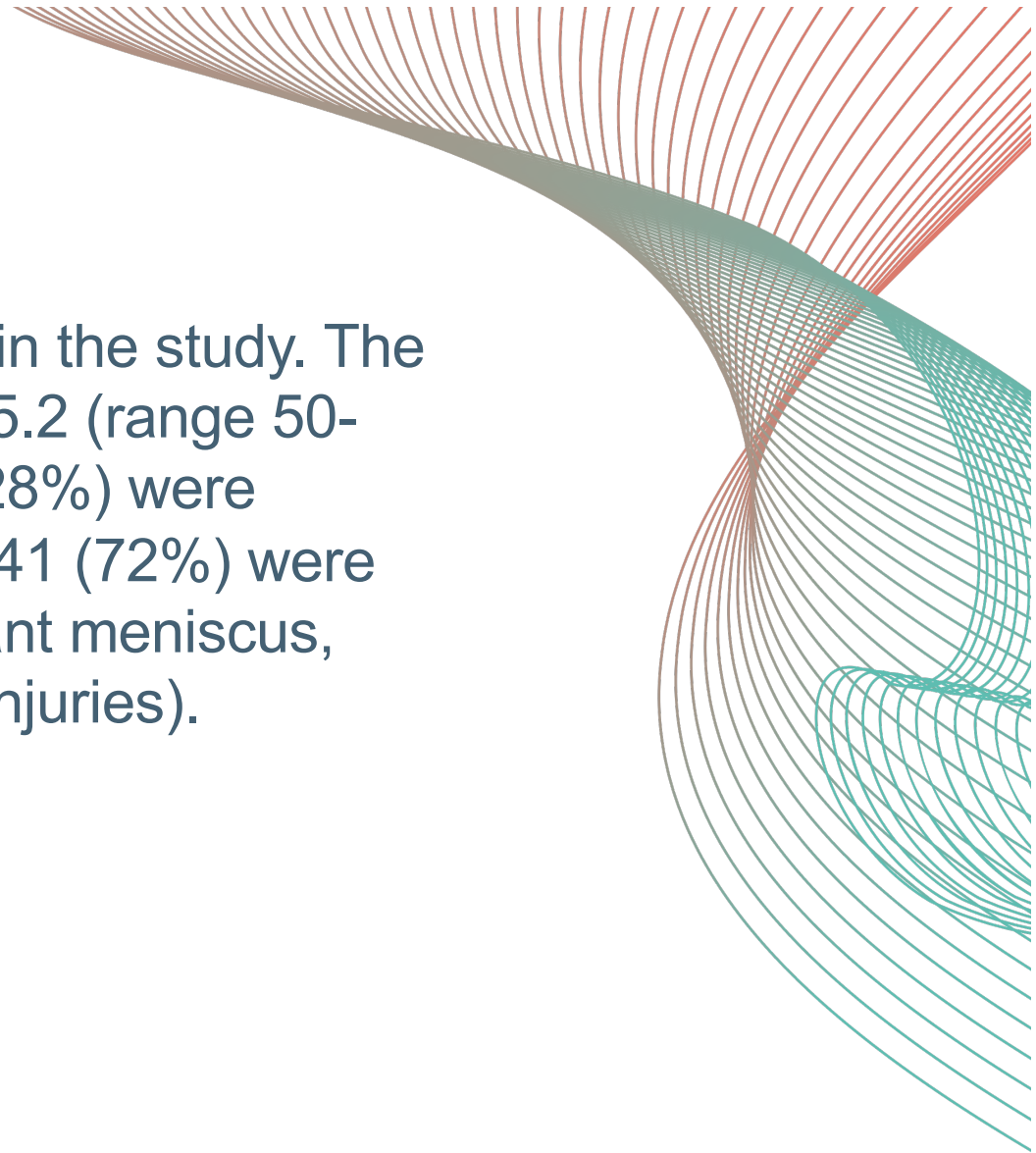
Methods

- A minimally invasive technique was used for QT autograft harvesting.
- Patients were evaluated for pre-injury and 2-year follow-up Lysholm knee score, Tegner activity level, Visual Analog Scale (VAS) for pain, graft failure, quadriceps tendon rupture, and return to sport.



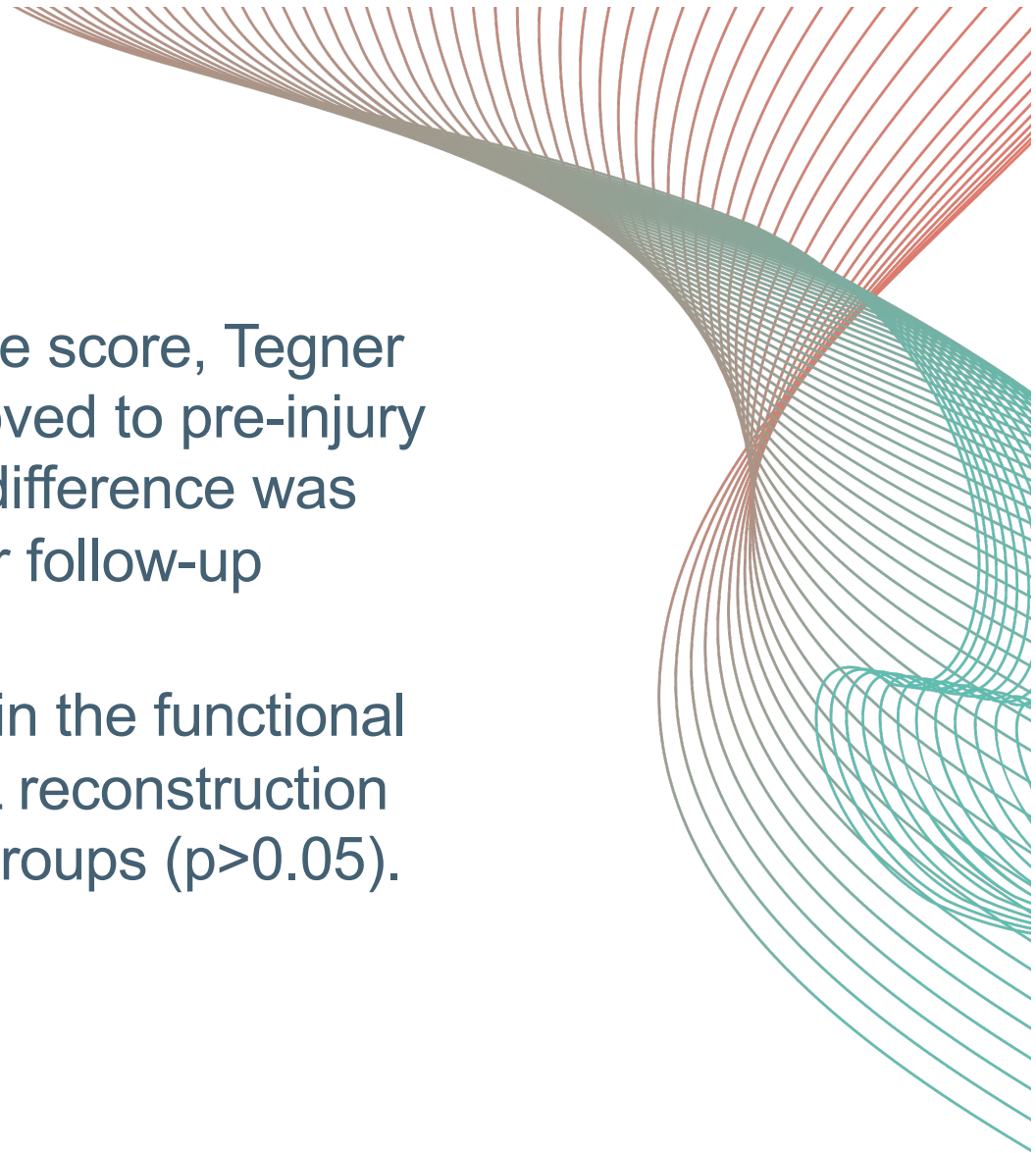
Results

- A total of 57 patients were included in the study. The mean age of the cohort was 54.9 ± 5.2 (range 50-75). Of the 57 reconstructions, 16 (28%) were isolated ACL reconstructions, while 41 (72%) were complex reconstructions (concomitant meniscus, cartilage and/or collateral ligament injuries).



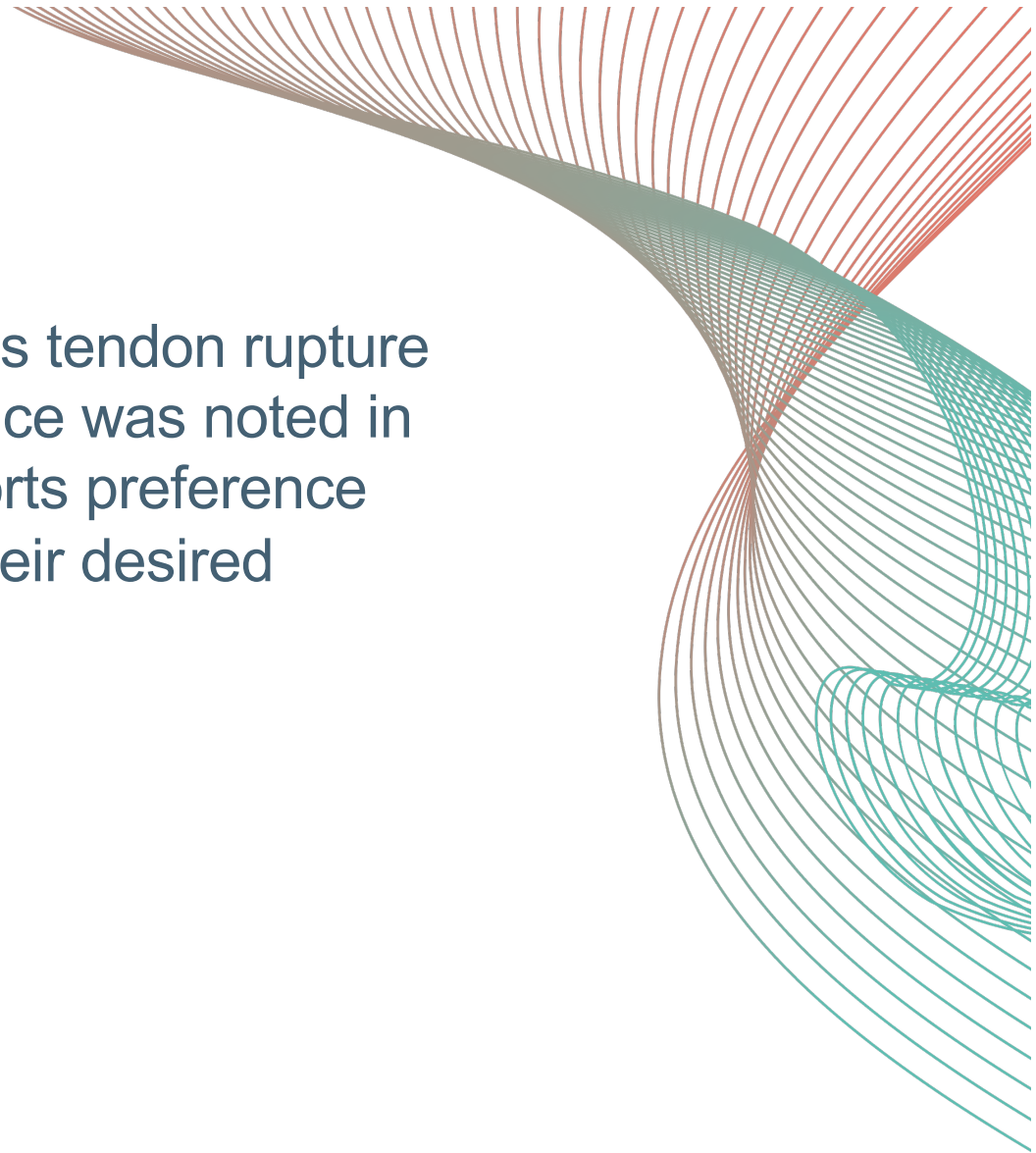
Results

- At the 2-year follow-up Lysholm knee score, Tegner activity level and VAS for pain improved to pre-injury level and no statistically significant difference was noted between pre-injury and 2-year follow-up functional scores ($p>0.05$).
- No significant difference was found in the functional outcomes between the isolated ACL reconstruction group and complex reconstruction groups ($p>0.05$).



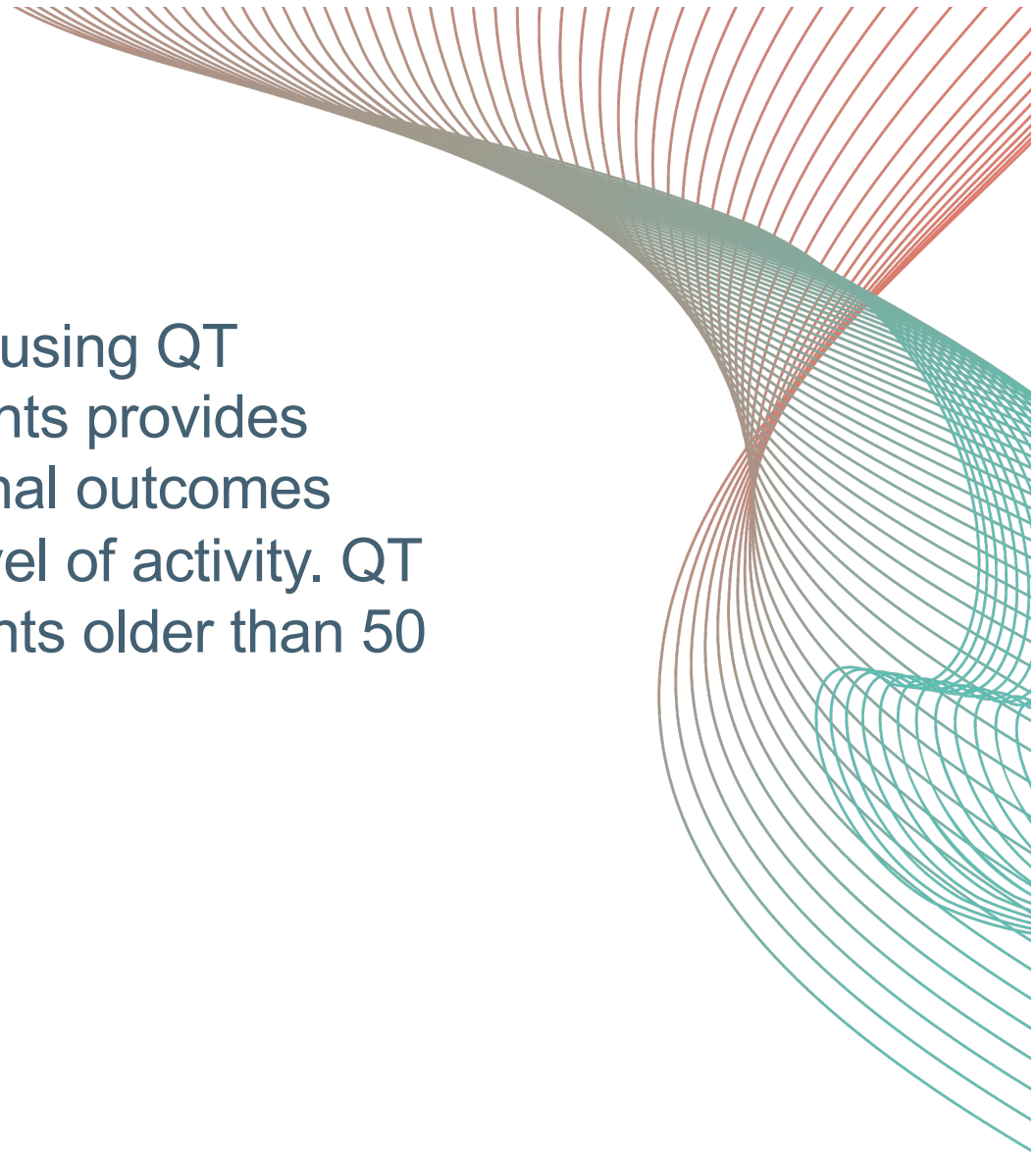
Results

- No case of graft failure or quadriceps tendon rupture was reported. No significant difference was noted in the pre-injury and postoperative sports preference ($p>0.05$) and all patients return to their desired sports activity.



Conclusion

- Arthroscopic ACL reconstruction by using QT autograft in highly active older patients provides satisfactory patient reported functional outcomes and allows recovery of pre-injury level of activity. QT graft is a viable graft choice in patients older than 50 years.



Reference

- Costa GG, Grassi A, Perelli S, Agrò G, Bozzi F, Lo Presti M, Zaffagnini S (2019) Age over 50 years is not a contraindication for anterior cruciate ligament reconstruction. *Knee Surg Sports Traumatol Arthrosc* 27:3679–3691
- Kim DK, Park G, Kuo L-T, Park WH (2019) Patients older than 50 years had similar results of knee strength and anteroposterior stability after ACL reconstruction compared to younger patients. *Knee Surg Sports Traumatol Arthrosc* 27:230–238
- Winkler PW, Vivacqua T, Thomassen S, Lovse L, Lesniak BP, Getgood AMJ, Musahl V (2022) Quadriceps tendon autograft is becoming increasingly popular in revision ACL reconstruction. *Knee Surg Sports Traumatol Arthrosc* 30:149–160
- Toanen C, Demey G, Ntagiopoulos PG, Ferrua P, Dejour D (2017) Is There Any Benefit in Anterior Cruciate Ligament Reconstruction in Patients Older Than 60 Years? *Am J Sports Med* 45:832–837
- Tan C-W, Hsu W-H, Yu P-A, Chen C-L, Kuo L-T, Chi C-C, Kim D, Park G (2020) Anterior Cruciate Ligament Reconstruction in Patients Older Than 50 Years: A Systematic Review and Meta-analysis. *Orthop J Sports Med* 8:232596712091569