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Comparison of Full-Length Versus Anterior Half of the Peroneus Longus Tendon Grafts for Knee Ligament Reconstructions.

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Faculty Disclosure Information

- Nothing to disclosure



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Introduction

- The choice of graft influences the clinical result.
Runer 2023
- Extra-articular reconstructions improve the result.
 - BTB or HT are not always sufficient
Heliro 2018
- The long fibular appears as a graft option.
 - Features:
 - Superficial
 - Simple and minimally invasive removal
 - Does not affect structures around the knee
 - Can be removed:
 - In its entirety (PL)
 - Anterior half (AHPL) *Zhao 2016, 2018*



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Objective

- To compare the use of PL and AHPL in knee ligament reconstructions with regard to ankle functional results.



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Methods

 Retrospective Study

 April 2019 and
September 2022



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ACL injuries n(120)

6 excluded

4 Peroneal tendonitis
2 Plantar arch deformity

ACL reconstruction n(114)

PL n(75)

AHPL n(39)



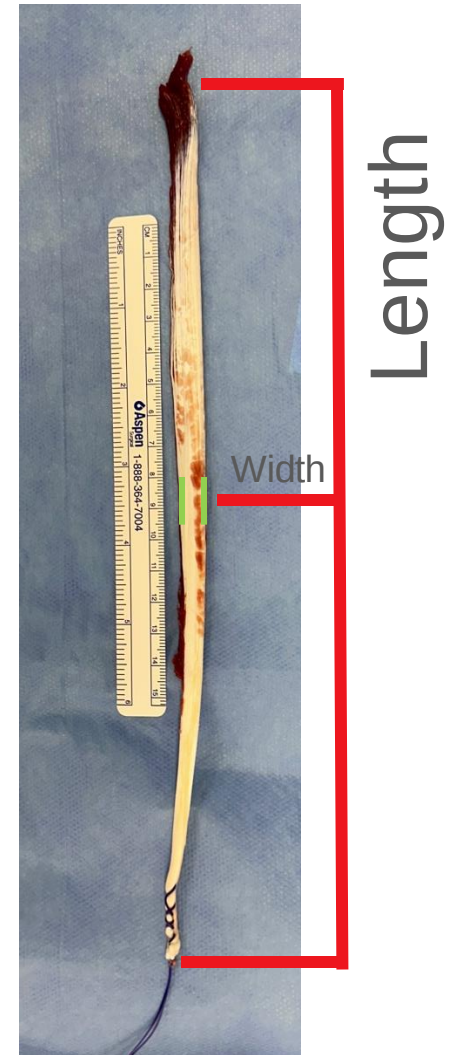
Methods

- All patients were evaluated:
 - American Orthopedic Foot and Ankle Score – AOFAS
 - Foot and Ankle Disability Index - FADI

6
months

24
months

Surgery



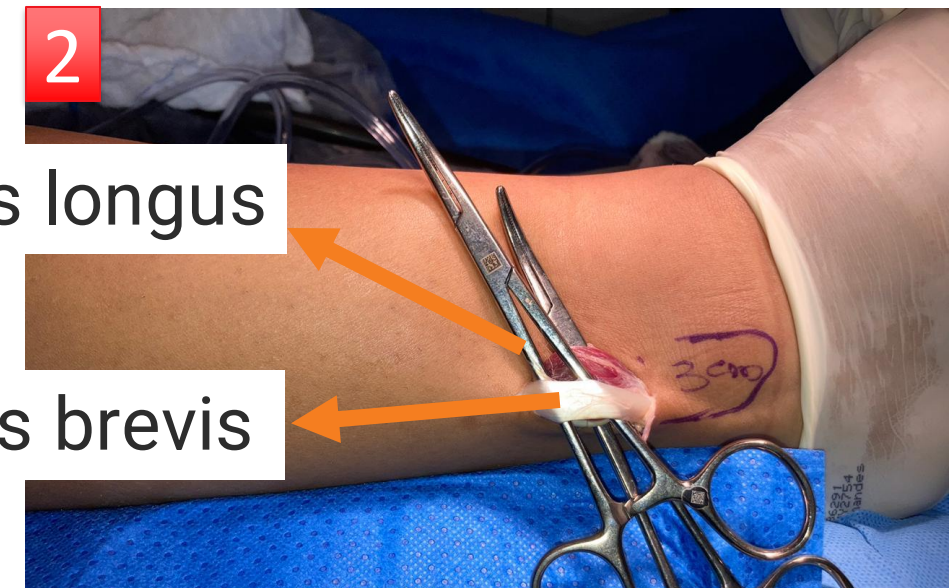
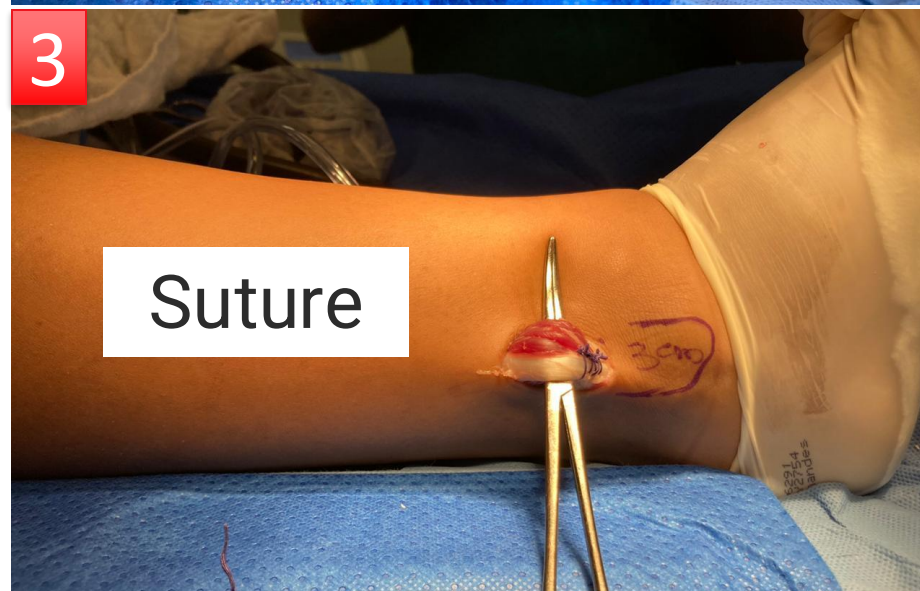
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Graft removal technique



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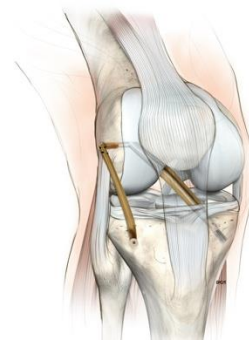
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Results

ACL + LAL

n 41



Anterior Cruciate and Anterolateral Ligament Reconstruction Using Hamstring and Peroneus Longus Tendons: Surgical Technique Description

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Aires Duarte Junior, M.D., and Pedro Baches Jorge, M.Sc.

Arthroscopy
Techniques

ACL + AOL

n 27



Anterior Cruciate and Anterior Oblique Ligament Reconstruction Using Hamstrings and Peroneus Longus' Anterior Half Grafts

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Arthroscopy
Techniques

ACL 6X

n 46



Brazilian Society of Knee Surgery Special Issue; Sociedade Brasileira de
Cirurgia do Joelho Special Issue



Augmentation of the Anterior Cruciate Ligament
Using the Peroneus Longus: Description of the Surgical
Technique

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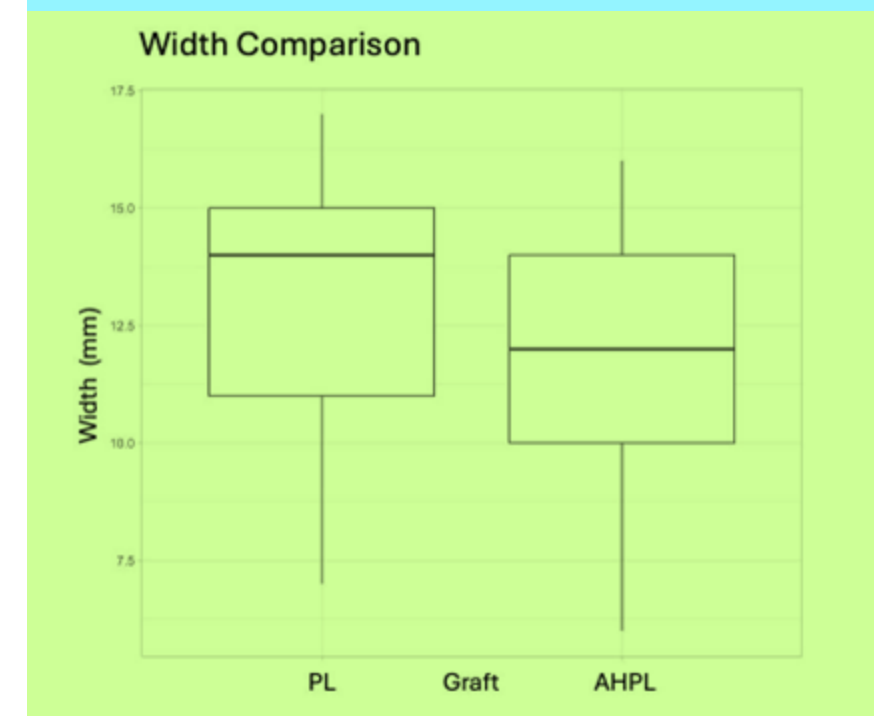
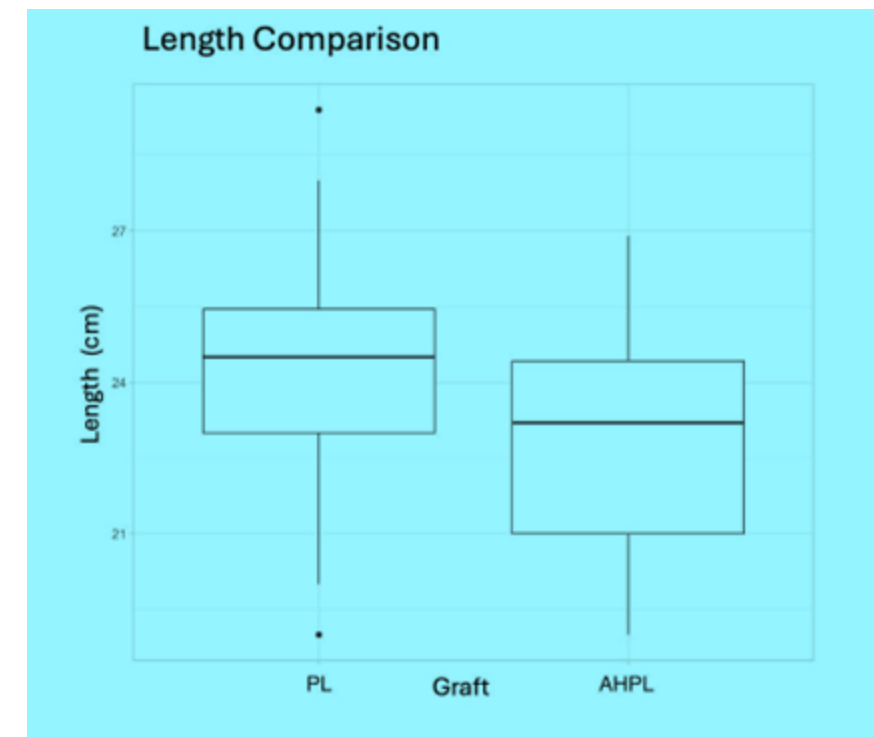
Results

Comparison of groups regarding graft length and width

Data	Mean (SD)	Estimated difference	Confidence Interval (95%)		p-value*
<i>Length (cm)</i>					
PL	24.16 (2.04)	1.29	0.50	2.09	<0.01
AHPL	22.86 (2.00)	ref.			
<i>Width(mm)</i>					
PL	13.05 (2.51)	1.08	0.09	2.07	0.03
AHPL	11.97 (2.59)	ref.			

*Student's t-test

SD: Standard deviation; PL: peroneus longus graft; AHPL: Anterior half peroneus longus; ref.: reference



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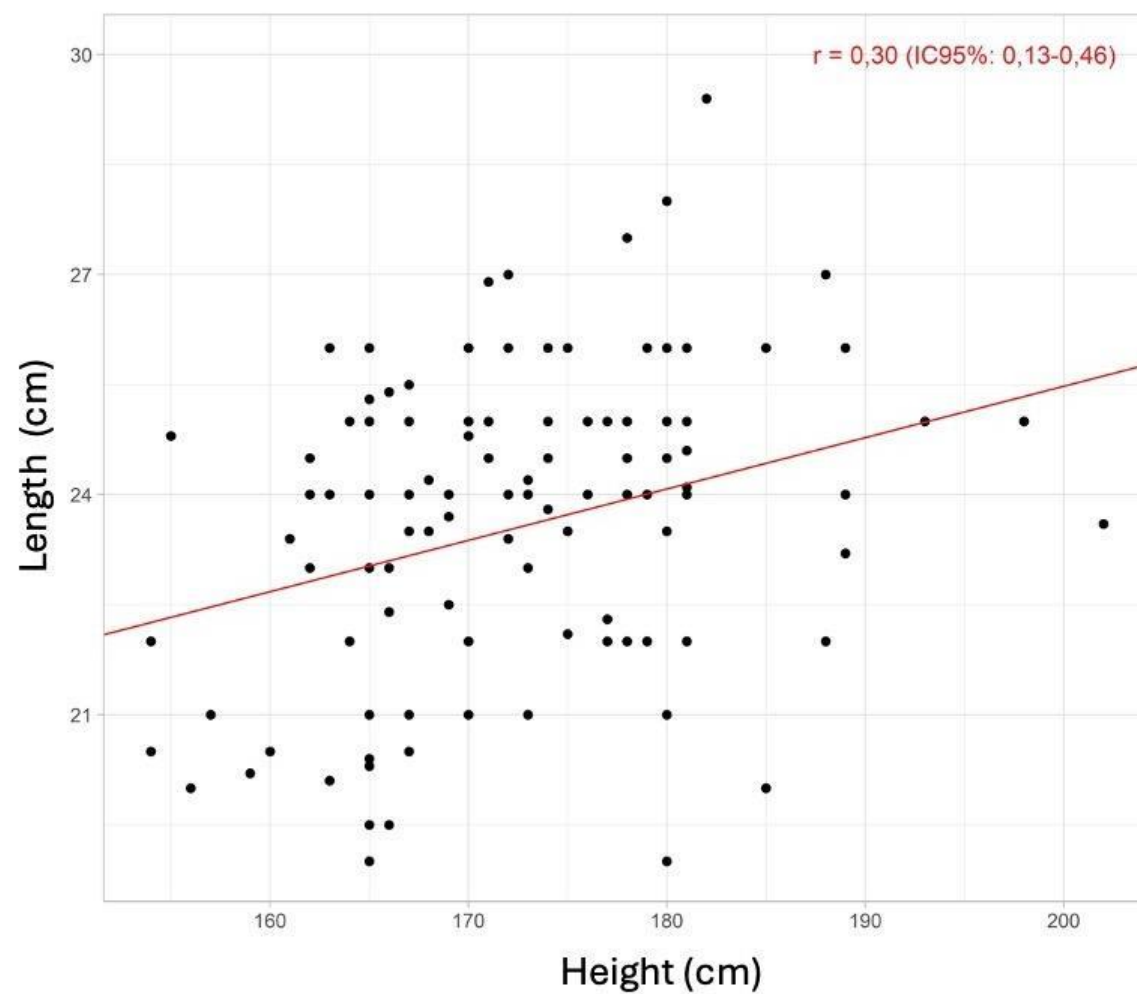


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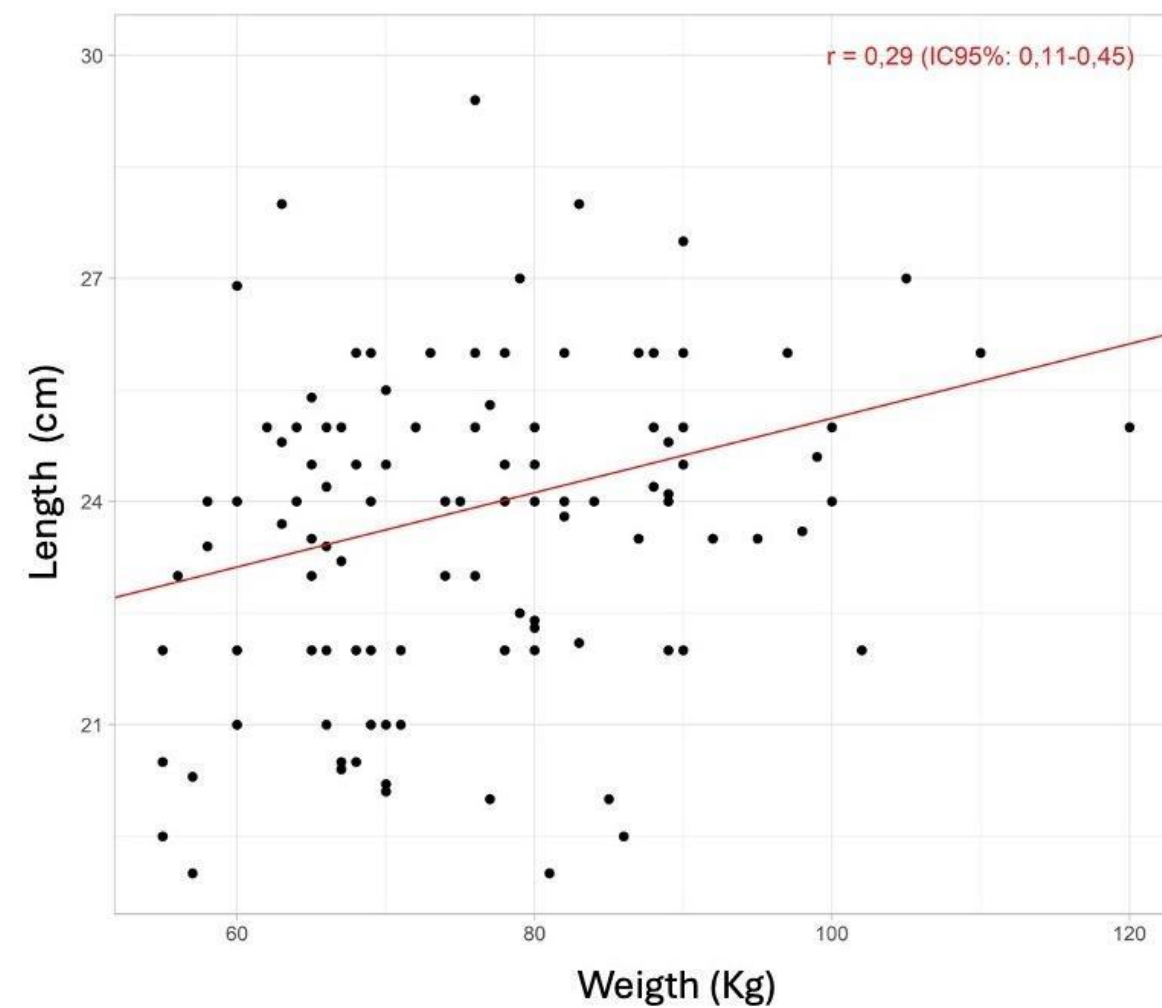


Results

Pearson Correlation (Height x Length)



Pearson Correlation (Weight x Length)



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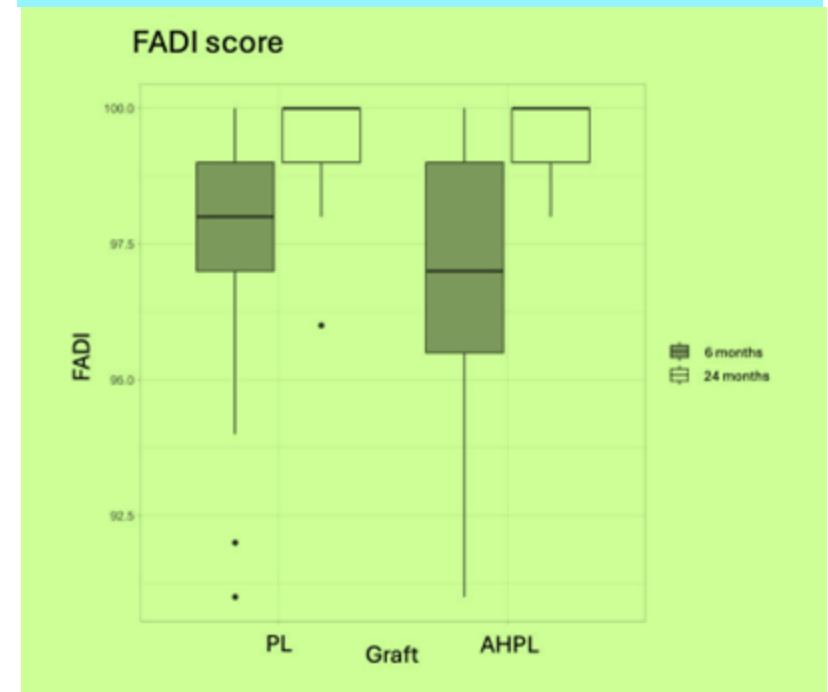
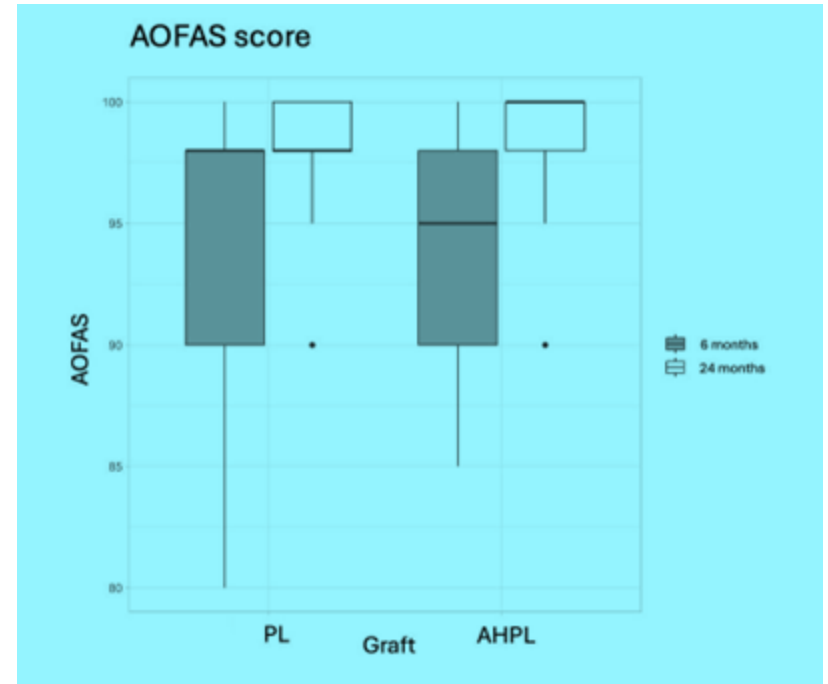


Results

Descriptions by group and time

Graft x Follow-up	AOFAS		FADI	
	Mean (SD)	Median (Min- Max)	Mean (SD)	Median (Min- Max)
<i>PL</i>				
6 months	94.43 (5.49)	98 (80 - 100)	97.69 (2.07)	98 (91-100)
24 months	97.97 (2.03)	98 (90 - 100)	99.47 (0.74)	100 (96-100)
<i>AHPL</i>				
6 months	94.13 (4.86)	95 (85 - 100)	97.08 (2.5)	97 (91-100)
24 months	98.28 (2.32)	100 (90 - 100)	99.44 (0.72)	100 (98-100)

SD: Standart deviation; Min: minimum value; Max: maximum value; AOFAS: American Orthopedic Foot and Ankle Score; FADI: Foot and Ankle Disability Index; PL: Peroneus longus graft; AHPL: Anterior half peroneus longus graft.



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Discussion

- The most important finding of the study is that the use of the peroneus longus as a graft in knee surgeries is safe regarding clinical scores of the foot and ankle.
- There is a weak relationship in this study between height, weight and graft size.

Conclusion

- Similar results between the two types of graft.
- Using AHPL may be sufficient for these surgical techniques, avoiding possible long-term degeneration of the foot and ankle.



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