Appendix 1: Patient characteristics:

Case	Age	Gender	BMI	Time preOp(day)	Tendinitis	Corticosteroid Injection	Mechanism	Pomranz Classification	Follow-up Time(month)	Fixation	Tendon Lengthen	Complications
1	32	M	27.78	1	-	-	Up/down stairs	II	51	Bone Tunnel	None	
2	45	M	22.52	3	+	-	Jumping	IB	50	2 Metal Anchors	None	wound problem
3	67	M	26.81	13	+	-	Falling	III	63	Bone Tunnel	None	
4	39	M	24.07	1	+	-	Falling	III	27	Bone Tunnel	None	
5	52	M	27.15	2	-	-	Soccer	IB	27	2 Metal Anchors	None	Followed up online
6	43	M	24.07	5	+	-	Soccer	IB	33	2 Absorbable Anchors	V-Y plasty	
7	25	M	25.51	11	+	-	Basketball	IB	27	3 Metal Anchors	None	
8	36	M	24.22	1	+	-	Soccer	IB	29	2 Metal Anchors	None	Followed up online
9	47	M	24.91	2	+	-	Walking/jogging	IB	34	2 Absorbable Anchors	None	
10	32	M	25.50	4	-	-	Badminton	II	24	2 Absorbable Anchors	None	Followed up online
11	26	M	36.73	2	+	-	Basketball	IB	41	3 Metal Anchors	None	
12	62	F	27.34	5	+	-	Walking/jogging	IB	67	2 Metal Anchors	None	Followed up online
13	44	M	26.45	10	-	-	Badminton	II	51	2 Metal Anchors	V-Y plasty	wound problem
14	30	M	32.66	16	+	-	Basketball	II	54	4 Metal Anchors	None	Re-rupture
15	53	M	24.57	10	-	-	Badminton	IB	30	3 Metal Anchors	Z plasty	
16	41	M	28.41	3	+	+	Up/down stairs	II	29	3 Metal Anchors	None	

17	57	M	27.34	7	+	-	Falling	III	46	2 Metal Anchors	None	
18	66	M	33.98	5	+	+	Walking/jogging	III	49	Bone Tunnel	None	
19	36	M	28.70	7	+	-	Up/down stairs	II	63	Bone Tunnel	None	
20	38	M	31.70	7	+	-	Soccer	III	52	2 Absorbable Anchors	None	
21	44	M	27.76	3	-	-	Soccer	II	63	Bone Tunnel	None	
22	32	M	25.43	12	-	-	Basketball	III	83	2 Metal Anchors	None	
y23	39	M	30.07	5	+	-	Walking/jogging	II	60	2 Metal Anchors	None	wound problem
24	37	M	24.34	7	-	-	Soccer	IB	27	2 Metal Anchors	None	
25	40	M	24.69	6	-	-	Badminton	II	27	2 Metal Anchors	V-Y plasty	
26	38	M	25.21	10	-	-	Soccer	III	27	2 Absorbable Anchors	V-Y plasty	
27	41	M	23.84	1	+	-	Soccer	IB	38	2 Metal Anchors	None	
28	43	M	24.82	1	-	-	Basketball	II	61	1 Metal Anchors	V-Y plasty	
29	31	M	27.70	2	-	-	Basketball	II	N/A	3 Metal Anchors	None	Lose Follow up
30	74	M	23.69	1	–	–	Falling	II	N/A	Bone Tunnel	None	Lose Follow up
31	44	M	29.07	6	–	–	Soccer	II	N/A	2 Metal Anchors	None	Lose Follow up
32	48	M	28.96	5	-	-	Basketball	II	24	2 Absorbable Anchors	None	
33	63	M	29.38	12	+	+	Walking/jogging	IB	33	2 Absorbable Anchors	None	
34	62	M	24.09	7	–	–	Badminton	II	N/A	4 Absorbable Anchors	None	Lose Follow up
35	63	M	24..80	6	-	-	Falling	III	33	Bone Tunnel	None	

Mean ±SD	44.85 ±8.22	34(M) 1(F)	26.88 ±2.53	5.35 ±3.39	19 (54.39%)	4 (11.43%)	IB (12) II (15) III (8)	43.65 ±13.73	Bone Tunnel (8) Metal Anchors (19) Absorbable Anchors (8)	6

Appendix Table A2: Univariable analysis for assessing the prognostic value of patients' baseline characteristics. Coefficient: the regression coefficient represents the difference in outcome compared with the reference group. A positive value indicates that the group has a better postoperative score. * P<0.05; § P<0.20.

Variables	VAS	AOFAS	FFI	AAS	Tegner
	univariable Coefficient (95% CI)				
Age (Year)	0.04(-0.04, 0.06)	0.12(-0.30, 0.19)	0.18(-0.24, 0.51)	0.035(-0.132, 0.013) §	0.02(-0.06, 0.04)
BMI (Kg/m^2)	0.35(0.00, 0.34) *	0.39(-1.80, -0.21) *	0.64(-0.44, 2.18) §	0.129(-0.103, 0.424)	0.08(-0.04, 0.28) §
Insertional Tenderness (Y/N)	0.58(-0.80, 1.56)	2.57(-11.07, -0.54) *	4.23(-4.28, 13.00)	0.86(-1.43, 2.08)	0.53(-1.08, 1.09)
Avulsion Fracture (mm)	0.06(-0.08, -0.14)	0.26(-0.81, 0.27)	0.41(-0.67, 1.02)	0.08(-0.26, 0.07)	0.05(-0.16, 0.05)
Preoperative VAS	0.18(-0.10, 0.62) §	0.83(-3.05, 0.37) §	1.30(-0.74, 4.56) §	0.27(-0.42, 0.67)	0.17(-0.32, 0.36)
Preoperative AOFAS	0.02(-0.04, 0.02)	0.07(-0.10, 0.20)	0.12(-0.30, 0.18)	0.02(-0.05, 0.05)	0.01(-0.04, 0.02)
Time of followed up	*0.02(-0.05, 0.03)*	0.09(-0.20, 0.16)	0.13(-0.24,0.31)	0.03(0.18, -0.17) §	0.02(-0.03, 0.04)
Preoperative MRI Classification	*0.34(-0.03, 1.35)* §	*1.65(-6.05,0.68)* §	*2.55(-1.36, 9.08)* §	*0.51(-1.81, 0.28)* §	*0.32(-1.02, 0.29)*
Pitch Line (Positive/Negative)	0.57(-1.05, 1.30)	2.72(-3.26, 7.87)	4.17(-12.85, 4.21)	0.85(-1.57, 1.90)	0.52(-0.56, 1.54)

Haglund Deformity Height (mm)	0.14(-0.36, 0.19)	0.64(-0.51, 2.11)	1.01(-2.80, 1.31)	0.20(-0.35, 0.48)	0.12(-0.15,0.36)
Fowler-Philip Angle (degree)	0.05(-0.01, 0.18) §	0.23(-0.68, 0.26)	0.35(-0.40, 1.03)	0.07(-0.16, 0.14)	0.04(-0.07, 0.11)
Chauveaux-Liet angle	0.04(-0.02, 0.13) §	0.18(-0.39, 0.34)	0.28(-0.54, 0.59)	0.06(-0.10, 0.13)	0.03(-0.04, 0.10)

Appendix Table A3. Multivariable analysis of subscale scores for a range of potential predictors, including patient characteristics, Haglund's deformity, preoperative MRI classification, and deficits in dorsi-/plantar flexion of the ankles. Coefficient: the regression coefficient represents the difference in outcome compared with the reference group. P<0.05 indicates significant effects of baseline scores on postoperative outcome measures. Coefficient: the regression coefficient represents the difference in outcome compared with the reference group. A positive value indicates that the group has a better postoperative score. * P<0.05; § P<0.20.

Variables	VAS	AOFAS	FFI	AAS	Tegner
	Multivariable Coefficient (95% CI)				
	R^2=43.9%	R^2=27.9%	R^2=48.8%	R^2=31.5%	R^2=25.3%
Age (Year)	*P=0.21, 0.02(-0.08, 0.02)*	----------	----------	*P=0.06, 0.03(-0.12, 0.00)*	----------
BMI (Kg/m^2)	----------	*P=0.05*, 0.38(-7.98, 2.93)*	*P=0.004**, 0.31(0.34, 1.63)*	----------	*P=0.12, 0.07(-0.03, 0.25)*
Insertional Tenderness (Y/N)	----------	*P=0.34, 2.61(-7.98, 2.93)*	----------	----------	----------
Preoperative VAS	*P=0.36, 0.19(-0.22, 0.57)*	*P=0.67, 0.93(-2.37, 1.55)*	*P=0.68, 0.77(-1.92, 1.28)*	----------	----------
Fowler-Philip Angle (degree)	*P=0.35, 0.05(-0.05, 0.11)*	----------	----------	----------	----------
Time of followed up	*P=0.14, 0.02(-0.06, 0.01)*	*P=0.23, 0.08(-0.07, 0.27)*	*P=0.03*, 0.07(-0.29, -0.02)*	*P=0.06, 0.02(0.58, -0.002)*	*P=0.45, 0.02(-0.02, 0.04)*
Complete/Partial Avulsion	*P=0.49, 0.54(-1.53, 0.76)*	----------	----------	*P=0.71, 0.79(-1.94, 1.35)*	----------
Preoperative MRI Classification	*P=0.11, 0.36(-0.16, 1.34)*	*P=0.41, 1.55(-4.55,1.94)*	*P=0.70, 1.29(-2.18, 3.19)*	*P=0.10, 0.46(-1.77, 0.15)*	*P=0.08, 0.29(-1.13, 0.06)*
Deficit of Dorsi-flexion (degree)	*P=0.68, 0.04(-0.11, 0.07)*	*P=0.72, 0.20(-0.34, 0.49)*	*P=0.009*, 0.16(0.13, 0.81)*	*P=0.02*, 0.06(-0.25, -0.02)*	*P=0.01*, 0.04(-0.17, -0.02)*
Deficit of Plantar flexion (degree)	*P=0.002*, 0.06(-0.34, -0.09)*	*P=0.20, 0.33(-0.25, 1.13)*	*P=1.00, 0.26(-0.55, 0.55)*	*P=0.67, 0.09(-0.22, 0.14)*	*P=0.54, 0.06(-0.16, 0.09)*