

## SUPPLEMENTAL MATERIAL

Supplemental Table S1. Methodological quality of the studies

Study (Year)	Randomized adequately <sup>a</sup>	Allocation concealed	Patient blinded	Care provider blinded	Outcome assessor blinded	Acceptable dropout rate <sup>b</sup>	ITT analysis <sup>c</sup>	Avoided selective reporting	Similar baseline	Similar or avoided cofactor	Patient compliance <sup>d</sup>	Similar timing	Overall Quality <sup>e</sup>
<b>Clinical Studies</b>													
Alentorn-Geli (2010) <sup>3</sup>	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Unsure	Mod
Azboy (2014) <sup>6</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Basdelioglul (2019) <sup>7</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Eysturoy (2019) <sup>15</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Franceschi (2013) <sup>17</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Geng (2018) <sup>21</sup>	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Guglielmetti (2016) <sup>24</sup>	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Guler (2016) <sup>25</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Jamsher (2020) <sup>29</sup>	No	No	No	No	No	Unsure	No	Yes	Yes	Yes	Yes	Yes	Mod
Mardani-Kivi (2012) <sup>45</sup>	No	No	No	No	No	Yes	No	Yes	Unsure	Yes	Yes	Yes	Mod
Osti (2015) <sup>50</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Ozel (2017) <sup>51</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Rezazadeh (2016) <sup>56</sup>	No	No	No	No	No	Unsure	No	Yes	Yes	Yes	Yes	Yes	Mod
Stone (2019) <sup>71</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Sukur (2016) <sup>72</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Tasdemir (2015) <sup>74</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Tucciarone (2019) <sup>76</sup>	Yes	Yes	Yes	No	Unsure	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Tudisco (2015) <sup>78</sup>	No	No	No	No	No	Unsure	No	Yes	Yes	Yes	Yes	Yes	Mod
Kim (2011) <sup>31</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Koutras (2013) <sup>35</sup>	No	No	No	Unsure	No	Unsure	No	Yes	Yes	Yes	Yes	Yes	Mod
MacDonald (2018) <sup>43</sup>	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Mandal (2012) <sup>44</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Zhang (2012) <sup>88</sup>	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Hussein (2012) <sup>28</sup>	Yes	Yes	No	Unsure	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Lee (2014) <sup>37</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
<b>Radiological Studies</b>													
Abebe (2009) <sup>1</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Ahn (2013) <sup>2</sup>	No	No	No	No	No	Unsure	No	Yes	Yes	Yes	Yes	Yes	Mod
Dargel (2009) <sup>12</sup>	No	No	No	No	No	Unsure	No	Yes	Yes	Yes	Unsure	Yes	Mod
Hantes (2009) <sup>26</sup>	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Noh (2013) <sup>48</sup>	Yes	Yes	Unsure	Unsure	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Özer (2018) <sup>52</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Pascual-Garrido (2013) <sup>53</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Schairer (2011) <sup>63</sup>	No	No	No	No	No	Unsure	No	Yes	Yes	Yes	Unsure	Yes	Mod
Shetty (2016) <sup>66</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Song (2014) <sup>70</sup>	No	No	No	Unsure	No	Unsure	No	Yes	Yes	Yes	Yes	Yes	Mod
Vermesan (2015) <sup>80</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Yau (2013) <sup>84</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod
Venosa (2017) <sup>79</sup>	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Hgh
Wang (2013) <sup>83</sup>	No	No	No	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Mod

ITT, intention to treat; Mod, moderate.

<sup>a</sup>"Yes" response indicates only if the method of sequence made was explicitly introduced.<sup>b</sup>"Yes" response indicates dropout rate <20%.<sup>c</sup>"Yes" response indicates all randomized participants were analyzed in the group they were allocated to.<sup>d</sup>"Yes" response indicates intermittent therapy or treatment duration >6 months.<sup>e</sup>High = "yes" responses on >7 items; moderate = "yes" responses on >4 but ≤7 items; low = "yes" response on ≤4 items.

**Supplemental Table S2. Study Characteristics**

Lead Author (Year)	Study design	LOE	N	Number of patients		Implant	Source	Mean Age (Range, years) -TT		Mean time from injury to surgery (months)		Sex, male:female, n		Minimum/Mean Follow-up (Range, Months)	
				TT	AM			TT	AM	TT	AM	TT	AM		
<b>Clinical Studies</b>															
Alentorn-Geli (2010) <sup>3</sup>	Retrospective, nonrandomized	III	47	21	26	BPTB	Autologous	27.5	26.4	2.0	3.0	21:0	26:0	24	24
Azboy (2014) <sup>6</sup>	Retrospective, nonrandomized	III	64	34	30	Hamstring	Autologous	27.6	26.5	NA	NA	33:1	29:1	24.6	20.4
Basdelioglu (2019) <sup>7</sup>	Retrospective, nonrandomized	III	30	14	16	Hamstring	NA	27.2 ± 7.04	29.4 ± 8.82	6.5	9	12:2	15:1	17.1 ± 6.48	17.1 ± 6.48
Eysturoy (2019) <sup>15</sup>	Retrospective, nonrandomized	III	8818	1413	7405	BPTB / Hamstring	NA	<20: 339; >20: 1074	<20: 1813 >20: 5592	NA	NA	4567:2838	849:564	37 (12-61)	
Franceschi (2013) <sup>17</sup>	Retrospective, nonrandomized	III	88	46	42	Hamstring	Autologous	29	28	8	8	39:7	34:8	78.1 ± 5.3	75.6 ± 4.8
Geng (2018) <sup>21</sup>	Prospective randomized	I	104	48	56	Hamstring	Autologous	31.8 ± 11.0	29.6 ± 11.7	10.6 ± 6.8	9.8 ± 6.3	40:8	46:10	24.9 ± 6.0	25.7 ± 6.8
Guglielmetti (2016) <sup>24</sup>	Prospective randomized	II	71	34	37	Hamstring	Autologous	NA	NA	NA	NA	NA	NA	NA	NA
Guler (2016) <sup>25</sup>	Retrospective, nonrandomized	III	48	25	23	Hamstring	Autologous	31.4 ± 4.1	30.9 ± 3.7	NA	NA	25:0	22:1	19.7	18.4
Jamsher (2020) <sup>29</sup>	Retrospective, nonrandomized	III	72	18	37	Hamstring	Autologous	32.9 ± 9.3	33.4 ± 12.6	NA	NA	14:4	27:9	6	NA
Mardani-Kivi (2012) <sup>45</sup>	Retrospective, nonrandomized	III	124	60	64	Hamstring	Autologous	28.48 ± 8.3		NA	NA	107:17		12	NA
Osti (2015) <sup>50</sup>	Retrospective cohort	III	100	36	32	Hamstring	Autologous	32.93 ± 10.32		NA	NA	74:26		NA	NA
Ozel (2017) <sup>51</sup>	Retrospective, nonrandomized	III	80	38	42	Hamstring	Autologous	31.2 ± 5.2	29.6 ± 4.3	NA	NA	41:1	38:0	45	36.4
Rezazadeh (2016) <sup>56</sup>	Retrospective, nonrandomized	III	94	44	50	Hamstring	Autologous	30.0 ± 6.5	30.6 ± 6.5	NA	NA	40:4	45:5	25.7	18.2
Stone (2019) <sup>71</sup>	Prospective cohort	II	29	15	14	BPTB	Autologous	23.79 ± 3.29	24.26 ± 3.62	6.33 ± 12.56	1.57 ± 1.34	11:4	11:3	66.85 ± 9.01	66.08 ± 6.89
Sukur (2016) <sup>72</sup>	Retrospective, nonrandomized	III	105	49	56	Hamstring	Autologous	25.5 ± 5.0	26.8 ± 5.7	10.3 ± 5.1	10.6 ± 4.7	52:4	45:4	30.1 ± 5.4	30.9 ± 5.6
Tasdemir (2015) <sup>74</sup>	Retrospective, nonrandomized	III	43	12	21	Hamstring	Autologous	29.73 ± 6.33	29.04±7.53	NA	NA	13:2	20:4	23.13 ± 3.52	24.96 ± 5.73
Tucciarone (2019) <sup>76</sup>	Prospective randomized	II	20	10	10	Hamstring	Autologous	NA	NA	NA	NA	NA	NA	NA	NA
Tudisco (2015) <sup>78</sup>	Retrospective, nonrandomized	III	43	20	23	Hamstring	NA	31 ( 22-38)	27 (19-38)	NA	NA	NA	NA	82 ± 11	27 ± 12
Kim (2011) <sup>31</sup>	Retrospective, nonrandomized	III	66	33	33	BPTB	53 allograft/ 13 autograft	30.3 (19-51)	29.8 (17-58)	NA	NA	23:10	25:8	32	20.8
Koutras (2013) <sup>35</sup>	Prospective cohort	II	51	36	15	Hamstring	Autologous	24.9	21.5	NA	NA	NA	NA	6	
MacDonald (2018) <sup>43</sup>	Prospective randomized	I	96	39	45	Hamstring	Autologous	32.4 ± 8.9	30.7 ± 9.3	NA	NA	27:15	31:15	24	
Mandal (2012) <sup>44</sup>	Retrospective cohort	III	31	13	18	Hamstring	Autologous	NA	NA	NA	NA	NA	NA	12	
Zhang (2012) <sup>88</sup>	Prospective randomized	II	65	34	31	Hamstring	Autologous	28.0	NA	NA	NA	56:20		12	
Hussein (2012) <sup>28</sup>	Prospective randomized	I	150	72	78	Hamstring	Autologous	32.6	34.2	NA	NA	NA	NA	39	

Lee (2014) <sup>37</sup>	Retrospective, nonrandomized	III	104	52	52	Hamstring	NA	NA	NA	NA	NA	NA	NA	24	
<b>Radiological studies</b>															
Abebe (2009) <sup>1</sup>	Retrospective, nonrandomized	III	16	8	8	NA	NA	34.5 ± 11.6	30.6 ± 3.5	NA	NA	5:3	5:3	NA	NA
Ahn (2013) <sup>2</sup>	Retrospective, nonrandomized	III	69	34	35	Hamstring	Autologous	30.06 ± 8.32	29.77 ± 10.11	NA	NA	25:9	29:6	8	
Dargel (2009) <sup>12</sup>	Retrospective, nonrandomized	III	70	35	35	BPTB / Hamstring	Autologous	NA	NA	NA	NA	NA	NA	NA	NA
Hantes (2009) <sup>26</sup>	Retrospective, nonrandomized	III	56	30	26	Hamstring	Autologous	25.6	27.2	NA	NA	28:2	26:4	18.4 (15-26)	22.6 (17-28)
Noh (2013) <sup>48</sup>	Prospective randomized	I	61	30	31	Achilles tendon	Allograft	24.0	22.0	1.8	1.5	NA	NA	24	NA
Özer (2018) <sup>52</sup>	Retrospective, nonrandomized	III	67	33	34	Hamstring	Autologous	28.17 ± 5.61	28.07 ± 7.42	NA	NA	30:0	28:2	12	NA
Pascual-Garrido (2013) <sup>53</sup>	Retrospective, nonrandomized	III	40	17	23	BPTB / Hamstring	Autologous	NA	NA	NA	NA	NA	NA	NA	NA
Schairer (2011) <sup>63</sup>	Retrospective, nonrandomized	III	21	9	12	BPTB / Hamstring / Posterior tibialis / Achilles tendon		30 ± 7.9	32 ± 8.8	NA	NA	5:4	5:7	18 ± 5	12 ± 8
Shetty (2016) <sup>66</sup>	Retrospective, nonrandomized	III	60	30	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Song (2014) <sup>70</sup>	Prospective cohort	II	60	30	30	Hamstring	Autologous	NA	NA	NA	NA	NA	NA	NA	NA
Vermesan (2015) <sup>80</sup>	Retrospective, nonrandomized	III	29	19	21	BPTB / Hamstring	Autologous	NA	NA	NA	NA	NA	NA	NA	NA
Yau (2013) <sup>84</sup>	Retrospective, nonrandomized	III	39	20	19	Hamstring	Autologous	25.4 ± 6.1	25.6 ± 9.4	NA	NA	18:3	21:0	12	
Venosa (2017) <sup>79</sup>	Prospective randomized	I	52	26	26	Hamstring	Autologous	26.4 (16-40)	25.2 (16-40)	NA	NA	18:8	20:6	12	
Wang (2013) <sup>83</sup>	Retrospective, nonrandomized	III	24	12	12	Hamstring	NA	32.75 ± 7.2	29.6 ± 7.2	NA	NA	7:5	7:5	NA	NA

AM, anteromedial; BPTB, bone–patellar tendon–bone; LOE, level of evidence; NA, not available; TT, transtibial.

Supplemental Table S3. Summary of clinical outcomes

Study (Year)	Drilling techniques	No. of patients with negative Lachman test	No. of patients with negative pivot-shift test	KT-1000 manual maximum displacement (mm)	Lysholm score	Tegner Score	IKDC grade/score	SSD side-to-side difference	VAS for satisfaction with surgery	Time From Surgery to Return to Play (mo)
Alentorn-Geli (2010) <sup>3</sup>	TT	11	7	1.9 ± 1.8	97.1 ± 7.2	7.1 ± 1.3	19A/B	-	8.6 ± 1.6	8 (9–11.5)
	AM	21	19	0.2 ± 1.6	99.3 ± 2.3	7.8 ± 1.6	26A/B	-	9.1 ± 1.3	7 (7–8.75)
Azboy (2014) <sup>6</sup>	TT	27	26	-	78.4	6.1 ± 1.0	31A/B	-	8.2 ± 1.1	8.7 (7–11)
	AM	25	26	-	83.7	6.7 ± 1.2	28A/B	-	8.9 ± 0.9	7.2 (6–10)
Basdelioglu (2019) <sup>7</sup>	TT	-	-	-	92.4 ± 4.4	-	90.02 ± 4.43	-	-	-
	AM	-	-	-	96.7 ± 3.3	-	94.67 ± 4.65	-	-	-
Eysturoy (2019) <sup>15</sup>	TT	-	86	-	-	4.7	-	-	-	-
	AM	-	669	-	-	5.2	-	-	-	-
Franceschi (2013) <sup>17</sup>	TT	25	23	2.7 ± 2.2	92.3 ± 6.9	-	44A/B	-	-	-
	AM	35	36	1.7 ± 1.6	94.0 ± 6.8	-	42A/B	-	-	-
Geng (2018) <sup>21</sup>	TT	36	32	1.6 ± 0.8	91.6 ± 6.5	6.3 ± 1.4	87.4 ± 10.0	-	-	-
	AM	44	44	1.5 ± 0.9	93.3 ± 5.0	6.8 ± 1.4	89.5 ± 8.8	-	-	-
Guglielmetti (2016) <sup>24</sup>	TT	24	26	1.44	91.32	-	90.65	-	-	-
	AM	30	30	1.23	92.81	-	92.65	-	-	-
Guler (2016) <sup>25</sup>	TT	-	-	-	84.36	-	-	-	-	-
	AM	-	-	-	88.28	-	-	-	-	-
Mardani-Kivi (2012) <sup>45</sup>	TT	38	-	-	92.2 ± 4.1	-	89.2 ± 4.1	-	9.53 ± 0.5	11.72 ± 1.98
	AM	47	-	-	96.1 ± 3.0	-	94.8 ± 3.9	-	9.78 ± 0.4	14.57 ± 3.02
Ozel (2017) <sup>51</sup>	TT	-	-	4.4 ± 2.1	90.6 ± 10.3	4.7 ± 2.0	-	-	-	-
	AM	-	-	2.8 ± 1.8	91.7 ± 9.9	5.5 ± 1.4	-	-	-	-
Stone (2019) <sup>71</sup>	TT	15	15	-	-	-	-	-	-	-
	AM	13	13	-	-	-	-	-	-	-
Sukur (2016) <sup>72</sup>	TT	29	29	-	93.9	6.1	91.4	-	8.9 ± 0.8	14.4 ± 2.2
	AM	42	42	-	95.4	6.3	93.1	-	9.4 ± 0.8	12.4 ± 1.6
Tasdemir (2015) <sup>74</sup>	TT	0	0	11 < 3 mm, 4 3-5mm	82 (59–95)	-	79 (62–86)	-	-	-
	AM	0	0	21 < 3mm, 3 3-5 mm	85 (68–90)	-	82 (76–85)	-	-	-
Tucciarone (2019) <sup>76</sup>	TT	-	-	-	-	8.1	-	-	-	7.9 (7-10)
	AM	-	-	-	-	8.9	-	-	-	6.8 (6-9)
Tudisco (2015) <sup>78</sup>	TT	-	-	-	80.9 ± 12.3	-	73.14 ± 13.20	-	-	-
	AM	-	-	-	84.9 ± 14.4	-	78.53 ± 14.96	-	-	-
Kim (2011) <sup>31</sup>	TT	27	26	-	77.2 ± 19.3	-	31A/B	9.6 ± 0.9	-	-
	AM	28	30	-	88.3 ± 13.1	-	32A/B	9.0 ± 0.5	-	-
Koutras (2013) <sup>35</sup>	TT	-	-	-	98.8 ± 2.1	-	-	-	-	-
	AM	-	-	-	99.0 ± 2	-	-	-	-	-
MacDonald (2018) <sup>43</sup>	TT	-	21	-	-	-	33A/B	-	-	-
	AM	-	24	-	-	-	41A/B	-	-	-
Mandal (2012) <sup>44</sup>	TT	3	-	-	-	-	12A/B	-	-	7.5
	AM	12	-	-	-	-	18A/B	-	-	6.2
Zhang (2012) <sup>88</sup>	TT	-	-	2.1 ± 0.9	94.5 ± 1.1	-	-	-	-	-
	AM	-	-	1.9 ± 1.0	95.1 ± 1.0	-	-	-	-	-
Hussein (2012) <sup>28</sup>	TT	-	30	2.0 ± 0.9	90.9 ± 7.0	-	90.2 ± 7.6	-	-	-
	AM	-	52	1.6 ± 0.8	91.8 ± 4.3	-	90.6 ± 6.4	-	-	-
Lee (2014) <sup>37</sup>	TT	40	41	1.6 ± 1.4	91.3 ± 8.9	-	78.6 ± 12.5	-	-	-
	AM	38	39	1.6 ± 1.4	89.9 ± 8.1	-	75.9 ± 14.4	-	-	-
Noh (2013) <sup>48</sup>	TT	17	20	2.7 ± 2.1	91.0 ± 5.8	-	26A/B	-	-	-
	AM	25	27	1.4 ± 1.6	94.5 ± 11.9	-	30A/B	-	-	-
Wang (2013) <sup>83</sup>	TT	-	-	-	-	-	72.1 ± 10.8	-	-	-
	AM	-	-	-	-	-	72.6 ± 14.7	-	-	-

Supplemental Table S4: Radiographic Outcomes

Study	Imaging	Tunnel center from the center of the ACL attachment		Femoral graft angle (FGA)		Tibial graft angle (TGA)		ACL angle		Diameter of tibial/femoral tunnel		Length of tibial/femoral tunnel (mm)		KOOS score		Tunnel widening (mm)	
		AM	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM	TT
Eysturoy (2019) <sup>15</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	70	70.3	-	-
Geng (2018) <sup>21</sup>	3D CT	-	-	-	-	-	-	-	-	-	-	37.3 ± 3.9	42.0 ± 4.8	-	-	-	-
Guler (2016) <sup>25</sup>	MRI	-	-	46.8°	70.04°	57.78°	58.87°	-	-	-	-	-	-	-	-	-	-
Jamsher (2020) <sup>29</sup>	MRI	-	-	69.3 ± 4.5°	73.1 ± 5.3°	49.9 ± 5.0°	58.9 ± 5.3°	-	-	-	-	-	-	-	-	-	-
Osti (2015) <sup>50</sup>	CT	-	-	27.76°	-	66.90° ± 6.67°	-	-	-	-	-	33.35 ± 6.67	-	-	-	-	-
Ozel (2017) <sup>51</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2 ± 0.47	3.0 ± 0.9
Stone (2019) <sup>71</sup>	MRI	-	-	48.06° ± 4.74°	57.28 ± 9.29	67.43 ± 6.66	62.61 ± 7.03	-	-	-	-	-	-	97.90 ± 3.49	95.59 ± 9.60	-	-
Tucciarone (2019) <sup>76</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tudisco (2015) <sup>78</sup>	X-ray	-	-	-	-	-	-	-	-	-	-	-	-	87.94 ± 9.40	82.38 ± 7.74	-	-
Kim (2011) <sup>31</sup>	X-ray	-	-	31°	59°	-	-	-	-	-	-	-	-	-	-	-	-
MacDonald (2018) <sup>43</sup>	X-ray	-	-	43°	58°	-	-	-	-	-	-	-	-	-	-	-	-
Abebe (2009) <sup>1</sup>	MRI	3.2 ± 1.0 mm	8.5 ± 2.1 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ahn (2013) <sup>2</sup>	3D CT	18.08% ± 7.38%	38.20% ± 7.15%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dargel (2009) <sup>12</sup>	X-ray	59.4 ± 3.4%	55.2 ± 6.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hantes (2009) <sup>26</sup>	MRI	-	-	53° (46°-59°)	71° (66°-76°)	63° (57°-66°)	64° (57°-67°)	51° (46°-56°)	52° (45°-56°)	-	-	-	-	-	-	-	-
Noh (2013) <sup>48</sup>	MRI	-	-	-	-	-	-	-	-	-	-	42 (38-44)	49 (46-54)	-	-	-	-
Özer (2018) <sup>52</sup>	Xray	-	-	-	-	-	-	-	-	37.76 ± 5.0%	45.32 ± 3.45%	-	-	-	-	-	-
Pascual-Garrido (2013) <sup>53</sup>	MRI	-	-	50° ± 6°	58° ± 9°	54° ± 6°	59° ± 12°	-	-	-	-	-	-	-	-	-	-
Schairer (2011) <sup>63</sup>	MRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shetty (2016) <sup>66</sup>	X-ray	-	-	38.4 ± 8.75°	46.97 ± 12.75°	-	-	-	-	-	-	-	-	-	-	-	-
Vermesan (2015) <sup>80</sup>	MRI & CT	-	-	72.38° (69°-76°)	75.47° (72°-78°)	54.5° (51°-58.5°)	63.68° (59°-69.5°)	-	-	-	-	-	-	-	-	-	-
Yau (2013) <sup>84</sup>	MRI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venosa (2017) <sup>79</sup>	3D-CT	-	-	-	-	-	-	-	-	-	-	34.7 ± 3.5	40.7 ± 4.0	-	-	-	-

**Supplemental Table S5. Other characteristics**

Lead Author (Year)	Revision rate		Postoperative complications		Stability		Recovery time from surgery		Operative time (min)		ACL quality of life (ACL-QOL)		Intraoperative complications		Fairbank 1-2 degenerative changes (osteorthritis)	
	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM	TT	AM
Alentorn-Geli (2010) <sup>3</sup>	-	-	-	-	-	significantly improved	3 (2-3.5)	2 (1.5-3)	-	-	-	-	-	-	-	-
Azboy (2014) <sup>6</sup>	No revisions	-	Infection 2.9%	Infection 3.3%	-	-	-	-	49 ( 39-76)	58 (42-80)	-	-	-	-	-	-
Eysturoy (2019) <sup>15</sup>	3.0%	2.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Franceschi (2013) <sup>17</sup>	6.50%	0%	-	-	-	-	-	-	-	-	-	-	13%*	11.9%*	28.20%	11.90%
Guglielmetti (2016) <sup>24</sup>	9.0%	8.0%	-	Infection 1.2%	-	-	-	-	-	-	-	-	-	-	-	-
Mardani-Kivi (2012) <sup>45</sup>	-	-	-	-	-	-	7.14 ± 1.44	8.68 ± 1.80	-	-	-	-	-	-	-	-
Stone (2019) <sup>71</sup>	0%	7%	-	-	13% showed instability	14% showed instability	-	-	-	-	-	-	-	-	-	-
Tucciarone (2019) <sup>76</sup>	No revisions	No revisions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MacDonald (2018) <sup>43</sup>	No revisions	No revisions	-	-	-	-	-	-	-	-	79%	78%	-	-	-	-

\*Neurosensory disturbances caused by the damage to the infrapatellar branch of the internal saphenous nerve.