

TABLE E-1 Patient Data Summary

Patient #	Age	Gender	Body Mass Index (kg/m²)	MRI Findings	Lesion Size (Location)	Arthroscopic Findings	Arthroscopic Procedure	Anesthesia	Laser/RF
1	62	F	32	Tear m.m.	Medium (MFC), small (MTP)	Chondromalacia, tear m.m.	Chondroplasty, medial meniscectomy, abrasion femoral condyle and tibial plateau	General	Laser
2	71	F	28	Chondral damage (MFC)	Medium (MFC)	Chondral flap (MFC)	Chondroplasty, partial medial meniscectomy	Spinal	Laser
3	80	F	28	Tear m.m.	Medium (MFC)	Chondromalacia, tear m.m.	Partial meniscectomy	Epidural, spinal	Laser
5	52	F	36	Tear lat.m.	Small (LFC)	Chondromalacia, tear lat.m.	Chondroplasty patella and medial femoral condyle, medial meniscectomy, abrasion medial femoral condyle	General	Laser
14	60	F	27	Tear m.m.	Medium (MFC)	Chondromalacia, tear m.m.	Chondroplasty patellofemoral joint and medial femoral condyle, abrasion medial femoral condyle	General	Laser
17	75	F	33	Tear m.m.	Large (MFC)	Chondromalacia, multiple chondral loose fragments, tear m.m.	Chondroplasty patellofemoral joint	Spinal	Laser
4	62	F	30	Chondral damage (MFC), degenerative signals m.m.	Medium (MFC), medium (MTP)	Chondromalacia, tear m.m.	Chondroplasty patellofemoral joint and medial femoral condyle, lateral tibial plateau, lateral and medial meniscectomy	Epidural, spinal	RF
6	72	F	35	Tear lat.m.	Medium (LFC)	Multiple loose chondral fragments, tear lat.m.	Chondroplasty patellofemoral joint and medial femoral condyle, lateral meniscectomy	Epidural, spinal	RF
7	76	F	19	Tear lat.m.	Medium (MFC)	Chondral damage (MFC), tear lat.m.	Lateral and medial meniscectomy, abrasion medial femoral condyle	Spinal	RF
9	55	M	28	Chondral damage (MFC)	Medium (MTP)	Chondromalacia	Chondroplasty	Epidural, spinal	RF
10	83	M	30	Tear m.m.	Small (MFC)	Chondromalacia, tear m.m.	Chondroplasty patellofemoral joint and medial femoral condyle, medial meniscectomy	Epidural	RF
11	54	M	35	Degenerative signals patellofemoral joint	Medium (LFC), medium (LTP)	Synovitis, multiple loose chondral fragments	Chondroplasty of patellofemoral joint, notchplasty, medial meniscectomy, abrasion lateral joint	Epidural, spinal	RF
13	81	F	32	Tear lat.m., degenerative signals, both menisci	Medium (MTP)	Degenerative medial meniscus, tear lat.m.	Chondroplasty of patellofemoral joint and medial femoral condyle, lateral and medial meniscectomy, abrasion patellofemoral joint	Epidural, spinal	RF
15	70	M	27	Tear m.m.	Medium (MFC)	Chondromalacia, tear m.m.	Chondroplasty patellofemoral joint, medial meniscectomy	General	RF
16	48	F	29	Chondral damage (MFC)	Medium (MFC)	Chondral flap (MFC)	Chondroplasty medial femoral condyle, medial facet of patella	Epidural, spinal	RF
18	69	M	32	Chondral damage (MFC)	Small (MFC)	Chondromalacia, popliteus muscle impingement, synovitis	Chondroplasty, lateral meniscectomy, abrasion medial femoral condyle	Epidural, spinal	RF
8	80	F	23	Degenerative signals m.m., osteoarthritis	Small (MFC)	Chondromalacia, tear m.m.	Chondroplasty, medial meniscectomy, microfracture (MFC)	Spinal	Shaver
12	74	F	29	Tear m.m.	Medium (MFC), small (MTP)	Tear m.m.	Partial lateral and medial meniscectomy, microfracture (MFC)	Epidural	Shaver
19	86	F	21	Tear m.m.	Medium (MFC)	Multiple loose chondral fragments, tear m.m.	Partial medial meniscectomy, microfracture (MFC)	Spinal	Shaver

MRI = magnetic resonance imaging, m.m. = medial meniscus, lat.m. = lateral meniscus, LFC = lateral femoral condyle, LTP = lateral tibial plateau, MFC = medial femoral condyle, MTP = medial tibial plateau, RF = radiofrequency.

TABLE E-2 Preoperative and Postoperative Knee Scores

Patient #	Gender	Procedure	Time from Arthroscopy to Osteonecrosis (mo)	Preoperative Knee Scores		Postoperative Knee Scores		Follow-up (mo)
				Objective	Functional	Objective	Functional	
1	F	TKA	8	43	50	92	80	131
2	F	TKA	7	53	50	92	90	52
3	F	TKA	5	52	50	99	100	24
4	F	TKA	9	55	50	93	60	46
5	F	TKA	2	50	50	96	100	123
6	F	TKA	6	54	50	98	100	44
7	F	TKA	15	59	50	99	100	133
8	F	TKA	3	47	50	98	90	48
9	M	TKA	9	41	50	91	90	24
10	M	TKA	3	49	45	100	100	56
11	M	TKA	3	31	45	92	100	24
12	F	TKA	4	50	50	98	100	51
13	F	TKA	6	50	50	95	90	43
14	F	TKA	10	38	35	97	90	132
15	M	TKA	3	69	50	92	90	45
16	F	UKA	3	57	35	94	95	24
17	F	UKA	2	40	35	94	90	126
18	M	UKA	3	49	40	94	80	24
19	F	UKA	3	45	50	99	100	37

TKA = tricompartmental knee arthroplasty, UKA = unicompartmental knee arthroplasty.

TABLE E-3 Literature Review

Author	Age (Range)	Gender		Procedure	Laser	Time from Arthroscopy to Osteonecrosis (Range)
		Female	Male			
DeFalco et al. ⁹	48		1	Arthroscopic meniscectomy	None	18 Weeks
Encalada and Richmond ¹³	53		1	Partial medial and lateral meniscectomy	Radiofrequency	28 Weeks
Faletti et al. ²	66		1	Medial meniscectomy, meniscal recontouring without any cartilage intervention	None	16 Weeks
Fink et al. ¹²	52 (47-57)		2	2 Arthroscopies, 1 including lavage	Holmium:YAG	36 Weeks (32-40)
Garino et al. ¹⁰	38 (30-50)	5	1	2 Partial meniscectomies, 4 chondroplasties	5 Neodymium:YAG, 1 Holmium:YAG	28 Weeks (10-36)
Janzen et al. ¹¹	35 (32-38)		2	Medial meniscectomies	Neodymium:YAG	22 Weeks (20-24)
Johnson et al. ⁵	60 (41-79)	4	3	7 Partial meniscectomies	None	16 Weeks (12-32)
Muscolo et al. ⁷	65 (54-75)	5	3	3 Partial, 5 total meniscectomies	None	18 Weeks (6-36)
Pruès-Latour et al. ⁸	69 (58-82)	5	4	7 Partial meniscectomies, 1 total meniscectomy, 1 partial meniscectomy and chondroplasty	Holmium:YAG	24 Weeks (6-48)
Santori et al. ⁶	34 (21-47)	1	1	2 Partial medial meniscectomies	None	28 Weeks (4-20)
Rozbruch et al. ¹⁸	25	1		Arthroscopic partial medial meniscectomy	Neodymium:YAG	92 Weeks
Total	50 (21-82)	Female (53%)	Male (47%)			28 Weeks (4-92)
Present study	69 (52-86)	Female (74%)	Male (26%)			22 Weeks (8-60)