

TABLE E-1 Kellgren and Lawrence Grading for Radiographic Evidence of Osteoarthritis		
Grade	Description	Radiographic Findings of Osteoarthritis
KL0	Normal joint	None
KL1	Possible osteophytes, no joint space narrowing or sclerosis	Mild
KL2	Definite osteophytes, possible joint space narrowing and sclerosis	Mild
KL3	Moderate osteophytes, definite joint space narrowing, some sclerosis, and possible bone contour deformity	Moderate
KL4	Large osteophytes, marked joint space narrowing, severe sclerosis, and definite bone contour deformity	Severe

**TABLE E-2 Literature Overview of Degenerative Changes After Curettage with PMMA for Giant Cell Tumor Around the Knee**

Study	Year	No.	Surgical Treatment			Recurrence Rate	
			Type	No.	(%)	No.	(%)
Bini et al. <sup>13</sup>	1995	28*	Curettage, burr, H <sub>2</sub> O <sub>2</sub> , PMMA	28	100	1	4
Wada et al. <sup>29</sup>	2002	14*	Curettage, burr, phenol, PMMA	14	100	1	7
Ward and Li <sup>41</sup>	2002	14	Curettage, burr, phenol, PMMA	13	93	1	8
			Curettage, burr, bone graft	1	7	—	—
Szalay et al. <sup>22**</sup>	2006	64*	Curettage, PMMA	36†	45	—	—
			Curettage, bone graft	44†	55	—	—
Suzuki et al. <sup>2</sup>	2007	30	Curettage, PMMA	12	40	10†	33
			Curettage, bone graft	18	60		
von Steyern et al. <sup>28</sup>	2007	9	Curettage, PMMA	9	100	4	44
Fraquet et al. <sup>3</sup>	2009	26*	Curettage, burr, PMMA	26	100	7	23
Gaston et al. <sup>17</sup>	2011	180*	Curettage, burr, PMMA	64	36	12†	14
			Curettage, bone graft	116	64	73†	30
Present study	2013	53	Curettage, phenol, PMMA	53	100	15	28

\*Only patients with a giant cell tumor around the knee are listed in this table. †Number given for the total group; it was not specified for patients with a giant cell tumor around the knee. ‡No definition of *good* and *excellent* was given. §This patient presented with an intra-articular pathologic fracture. #One patient underwent total knee replacement. \*\*This study compared degenerative changes after curettage with either bone graft or PMMA. The authors controlled for confounding by excluding patients with a giant cell tumor who had potential risk factors for secondary osteoarthritis (e.g., pathologic fractures, complications, and recurrences). ††Eight patients underwent endoprosthetic replacement and three patients, total knee replacement. ‡‡Three patients underwent total knee replacement.

TABLE E-2 (continued)

Degenerative Changes		Complications		Functional Outcome	Mean Duration of Follow-up (Range)
No.	(%)	No.	(%)		
4†	11	1 case of pain, PMMA remnants	4	32 patients: good/excellent MSTs-93†‡	5 (2-16)
1§	7	1 stress fracture	7	—	4 (2-16)
3#	23	1 pseudarthrosis; 1 case of pain, PMMA remnants	15	6 patients: good/excellent function‡	5 (1-10)
—	—	—	—		
7†	20	—	—	30 patients. MSTs-87: mean 32; SF-36: mean 80	7 (4-12)
7†	16	—	—	41 patients. MSTs-87: mean 32; SF-36: mean 80	
3	25	4 postoperative fractures†	—	—	5 (2-10)
7	39	—	—	—	
1§	11	1 case of pain, PMMA remnants; 1 postoperative fracture	22	Lysholm knee score: mean 92 (range 83-100)	11 (6-16)
1	3	1 infection	3	MSTs-93: mean 28 (range 26-30)	6 (0.5-13)
11††	17	4 postoperative fractures, 2 infections, 1 neuroma†	11	—	6 (0.2-27)
3‡‡	3	4 postoperative fractures, 3 cases of ulnar abutment, 2 cases of pain, 1 infection, 1 neuroma†	9	—	
KL3: 6; KL4: 3	11;6	3 cases of pain, PMMA remnants; 2 postoperative fractures; 1 pseudarthrosis; 1 infection	13	KL3-4: KOOS: mean 61; MSTs-93: mean 21; SF-36: mean 76. KL0-2: KOOS: mean 76; MSTs-93: mean 24; SF-36: mean 81	10 (5-24)