Evidence Table 1. Primary TKA studies with at least a pre/post design

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Bachmeier et al, 2001[94]	WOMAC, SF-36		108			10	72	61% Female	100% OA		Compared WOMAC and SF-36; no control variables used; WOMAC more sensitive than SF-36
Baldwin & Rubinstein, 1996[101]	HSS	300		346	301	48	67.5	58% Female			Tested only effect of bone quality
Beaupre et al., 2001[95]	WOMAC, SF-36	120	93			4.5	68.4	40% Female	91% OA		RCT to test role of exercise; no effect
Bert et al., 2000, 2001[69, 99]	KS, SF-36	279	277			12	72	70% Female		Mean=30	No effect of expected post-op activity/demand level according to pre-op activity level
Bourne et al., 1995[70]	KS	100				24	70	42 Male 83 Female	100% OA		Resurfacing patella
Brown et al., 2001[82]	KS, HSS	268	246	536		76.8	68	68% Female	89% OA 8% RA		No effect of component size asymmetry
Bullens et al., 2001[75]	KS, WOMAC	108	86	126	100	58.8	67.4		67 OA 37 RA		Done to compare KS scores and satisfaction visual anolog scale; poor correlation, No difference in RA/OA in KS scores but RA had better satisfaction
Clark et al., 2001[98]	KS, WOMAC	143	108			36	71.4		75% OA 25% RA		RCT of posterior-stabilized vs. cruciate-retaining implants; no significant difference
Cloutier et al., 2001[83]	KS	130	89	163	107	120	67	34 Male 96 Female	122 OA 41 RA		Cruciate ligament retention
Cohen et al., 1997[71]	KS	186		272		6	69.5	71 Male 115 Female	148 OA 22 RA	Mean = 177 pounds	No difference in pre- or post-op scores

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Deshmukh et al., 2002[27]	KS	180	130			12	68.8	85 Male 95 Female		31 normal, 83 over-weight 64 obese, 2 morbidly obese	Regression model included age, sex, side of arthritis, comorbidity, preop scores, and BMI R2 15.5%; age, sex, side of arthritis 3.4%; comorbidity 2.9%; baseline 9.2%; BMI accounted for almost no variance
Diduch et al., 1997[61]	HSS, KS	88	84	114	103	96	51	29 Male 55 Female	64%OA		
Duffy et al., 1998[84]	KS	104	102	120	108	120	Unce-mented = 54 Ce-mented = 65	Cementless: 23 Male 23 Female Cemented: 23 Male 24 Female	OA: Unce-mented-42 Cemented-42 RA: Unce-mented-9 Cemented-6	Mean = 80.9 kg	Cemented had better survival
Elke et al., 1995[76]	KS	394		524		50.4	75.1 68.4	No difference	61 RA 415 OA		RA vs. OA no difference
Evanich et al., 1997[62]	HSS	251	169	302	212	91	66	48% Female	78% OA 17% RA		Countersunk metal-backed patellas
Ewald et al., 1999[85]	KS	412	180	539	306		63		RA 151 OA 155		Kinematic arthroplasty
Fortin et al., 1999[28]	SF-36, WOMAC	130	106			6	67	96 Male 126 Female	All had OA		In regression model, education and comorbidity did not predict outcomes for knees alone but did in pooled TKAR/THR

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Gill & Joshi, 2001[86]	KS	223	223	254	254	201.6	68	89 Male 165 Female	289 total TKAs 254 with OA, 35 with RA. ONLY studied patients with OA		Survivorship of TKAR; no further analysis. PCL retaining
Gill et al., 1999[108]	KS	139	63	159	72	206.4	61	21 Male 42 Female	68 OA 3 RA		Total condylar TKA; survival analysis
Gioe & Bowman, 2000[103]	KS, SF-36	296	195	324	213	49	69±6	285 Male 11 Female	272 OA		RCT of tibial components; no multivariate analysis
Griffin et al., 1998[110]	KS, HSS	120	56	165	73	127.2	67.8	15 Male 41 Female	51 OA	20 obese 30 nonobese	Obese showed more improvement
Harwin, 1998[102]	KS, HSS	336	326	366	356	61.2	65.1	138 Male 188 Female	241 OA 109 RA		Symmetrical TKA; pre/post only. Results reported separately by OA and RA
Hawker et al., 1998[29]	WOMAC, KS	1496	1193			24-84	72.6	70% Female	87% OA 6% RA	Mean BMI=28	Primary & revision: education, race, income, living environment. Correlates of pain at followup: pre-op pain, osteotomy before replacement, low SF-36 social function & emotional role function, high SF-36 pain, less satisfaction; none significant in multivariate. Age, BMI not related to outcomes

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Hasegawa et al., 2002[54]	HSS	140		221		12-60	68	16 Male 124 Female	129 OA 92 RA	Mean = 53 kg	Risk factors for heterotopic ossification: knee flexion, effusion (bivariate only);age, gender, arthritis, BMI not significant
Healy et al. 2002[63]	KS, HSS	159	142	159	142	96 (no CP) 60 (CP)	69.9		100% OA	Mean = 84.5 kg	Clinical pathway vs. no clinical pathway. Clinical pathways reduced hospital cost for TKA without affecting short-term patient outcome.
Heck et al. 1998[72]	KS, WOMAC, SF-36	291	268	330		24	70.2	109 Male 182 Female	100%OA	Mean Body Mass Index = 30.2	Logistic regression found maximal improvement in SF-36 physical component score in subjects who had surgery at institutions performing ≥50 TKA/year, had a better mental health status at baseline, and were treated with physical composite sparing device.
Hsu et al., 1998[55]	HSS	113	113	140	140	57.6	62.6	73% Female	135 OA 5 RA		Test hybrid: uncemented femur/cemented tibia, decreased pain, increased muscle strength
Hube et al., 2002[104]	KS	221		297	276	36.2	66.3 (33-81)	123 Male 153 Female	261 OA 33 RA 3 infection		Midvastus approach; pre/post only
Ilkejiani et al., 2000[64]	HSS	185	185	185	185	78	67	79 Male 121 Female	OA	Weight recorded	Patellar resurfacing; pre/post
Indelli et al., 2002[87]	KS	91	85	100	92	90	69 (57-85)	13 Male 72 Female	All with OA		Prosthesis; pre/post

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Jenny & Jenny, 1998[77]	KS	125	125	125	125	30	69	39 Male 86 Female			Anterior cruciate ligament-retaining vs. replacing prostheses; pre/post
Jones et al., 2001[96]	WOMAC, SF-36	257	257	257	257	6	70.7	63% Female	93% OA	Mean Body Mass Index 31.4	Education, age, gender, BMI, prior joint surgery, living arrangement, comorbidity included in regression model. Age not associated with improvement in WOMAC. Gains in WOMAC & SF-36 but not significant OLS: pain (WOMAC): LOS -, preop pain (SF36 +, cementless -; function (WOMAC): LOS-, preop joint pain (WOMAC)-, # comorb-, preop bodily pain (SF36)
Jordan et al., 1997[105]	KS	375		473	410	56.4	68	113 Male 261 Female	427 OA 45 RA	Weight recorded	Cementless miniscal bearing TKAs; pre/post
Kiebzak et al., 2002[100]	SF-36	415				24		234 Female			American Society of Anesthesiologists (ASA), number of cormorb, differences greater for men (except role emotional). Only 54 used in analysis
Konig et al., 1997, 1998, 2000[30, 106,111]	KS	357	294	399	329	56.4	69.4	56 Male 238 Female	278 OA 34 RA 16 other		Preop walking distance related to pain on followup; none predicted KS score; KS function score predicted by: preop walk distance, age, BMI, preop patient category

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Larson et al., 2001[56]	HSS	94	82	127	118	48	67 (41-81)	20 Male 62 Female	87 OA 30 RA	Mean 28 (17-44) 26 obese 1 morbidly obese	Mean BMI same with and without patellar complications 50% of patellar fracture or anterior knee pain obese cf 32% without; not significant. No significant difference in age, gender, preop diagnosis, knee score, followup time; range of motion; lateral release; knee manipulation; type of prosthesis
Lin et al., 2002[73]	KS	122	78			24	67.7-70		100% OA		Impact of clinical pathway; affected utilization but not outcomes
Liu & Chen, 1998[57]	HSS	88		176		31	67.4	97.5% Female	82 OA 6 RA		No sign diff
Lombardi Jr et al., 2001[112]	HSS, KS	240	240	351	351	77	65.5	Reported	223 OA 23 RA	Reported	No difference in followup KS, significant difference in pain improvement & outcome improvement stabilized > retain
Malkani et al., 1995[65]	HSS, KS,	118	84	168	119	120	64			Height and weight reported	Improvement
Martin et al., 1997[88]	KS	290	231	378	306	78	67	60 Male 171 Female	202 OA 91 RA		Followup knee and function scores significant by Charnley scores. Function pre/post difference significant by Charnley score. No difference by surfaced patellas. Cemented femur had better function score

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Matsueda & Gustilo, 2000[74]	KS	365	291	425	336	6	68.4	90 Male 211 Female	253 OA 27 RA other 11		Compared subvastus and medial parapatellar approaches; no functional difference
Meding et al., 2001[78]	KS	1888	1888	2759	2759	30	70.6	60% Female		Recorded	Preop KS and KS functional score related to radiographic changes but not pain score
Miyasaka et al., 1997[89]	KS	83	46	108	60	169	61	22 Male 39 Female	RA: 38 OA: 21	Weight recorded	Pre/post valgus deformity
Mokris, et al., 1997[90]	KS	90	90	105	105	51	68.7	34 Male 56 Female	97 OA 6 RA		Pre/post
Mont et al., 1999[91]	KS	104	101	121	118	65	70	38 Male 63 Female (62% Female)	97 OA 2 RA		Pre/post
Moskal & Diduch, 1998[58]	HSS	514	488	646	617	51.6	64	69.6% Female		Mean height & weight	Test role of post op x-rays; pre/post
O'Rourke et al., 2002[66]	KS, HSS	134	114	176	153	76.8	72.4	59.4% Female		Mean BMI 30.9	Improved osteolysis correl with KS. Trend towards anterior knee pain with higher BMI
Pereira et al., 1998[59]	HSS		107	163		36	69	40 Male 103 Female	130 OA 8 RA		PCL sparing vs. sacrificing associated with greater improvement
Ranawat et al., 1997[79]	KS	118	96	150	125	58.7	70		OA vs. RA		Functional status for OA significance better than for RA Knee score for OA better than for RA
Rand & Gustilo, 1996[60]	KS	202	182	277	251	27.6	69	69 Male 113 Female	156 OA 19 RA		Inset vs. resurfacing patellar prostheses; resurfacing had better function; pain score higher

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Regner et al., 1997[67]	HSS	120	88	144		81.6	61	22 Male 98 Female			Pre- and post-op reported by OA/RA. Revision rate not affected by age, sex, arthritis, alignment or prosthesis
Rinta-Kiikka et al., 1996[92]	KS	97	89	102	94	64	67	77% Female	74 OA 16 RA	Reported	Correlates of survival: age; extension deficit, knee score, function score, pain score at last review. BMI not associated
Ritter et al., 1995[109]	KS	3054		4583		180	70.4	60 Female	87% OA		
Rodriguez et al., 1996[80]	HSS KS	99	67	145	104	52	12.7 (5-18)	91Male 13 Female	All with RA		RA patients stage II/IV
Schroder et al., 2001[68]	HSS	102	52	114	58	120	78		48 OA 10 RA		Pre/post OA/RA no difference
Sextro et al., 2001[93]	KS	118	50	168	66	188.4	65.1	72 Female	109 OA knees 52 RA knees		
Stickles et al., 2001[97]	WOMAC, SF-36	4161	1011			12	69.9	637 Female	100% OA	Mean 31.2	No difference in WOMAC, SF physical component score, mental component score by BMIcategories in multiple regression model
Title et al., 2001[107]	KS	128	128	148	148	51	63	53 Female	122 OA knees 24 RA knees		Total condylar prosthesis vs. press fit condylar – 2 cohorts matched for age, diagnosis, gender, and body weight
Ververeli et al., 1995[52]	HSS	103	103			24	69.5	73 Female	100% OA		Continuous passive motion better than physical therapy alone

Evidence Table 1. Primary TKA studies with at least a pre/post design (continued)

Reference	Measure	N Patients Baseline	N Patients Followup	Knees Baseline	Knees Followup	Followup (months)	Age	Gender	Arthritis	BMI	Notes
Worland et al., 1998[53]	HSS	91	80	114	103	6	70.2	53 Female 27 Male	100% OA		RCT, Continuous passive machine vs. professional physical therapy. Continuous passive motion adequate rehabilitation alternative with lower costs and no differences in results vs. physical therapy
Yang et al., 2001[81]	KS	90	86	113	109	36	69	13 Male 73 Female	82 OA 4 RA		

Evidence Table 2. Basic information for calculating revision rates

Study	Patients	Knees	Followup - Years	Revisions Related to Knee Prosthesis	Unit of Reporting	Total Reoperations (Revisions + Other)	Notes
Bachmeier et al., 2001[94]	108	NR	0.5	0	subjects	0	
Baldwin & Rubinstein, 1996[101]	300	346	4	9	knees	17	17 reoperations total (revisions + infections)
Beaupre et al., 2001[95]	120	NR	0.5	0	subjects	0	
Bert et al., 2001[69]	279	NR	1	1	both	1	From Bert et al., 2000
Bourne et al., 1995[70]	100	NR	2	2	subjects	2	Not due to infection, pat-femoral joints resurfaced due to pain
Brown et al., 2001[82]	268	536	6.4	0	both	0	
Bullens et al., 2001[75]	108	126	4.9	1	knees	5	Survival rates, no numbers; 5 reoperations total
Clark et al., 2001[98]	143	NR	3	NR		NR	
Cloutier et al., 2001[83]	130	163	10	3	knees	7	3 due to infection
Cohen et al., 1997[71]	186	272	0.5	0	both	0	6 month followup
Deshmukh et al., 2002[27]	180	NR	1	NR		NR	12 month followup
Diduch, et al., 1997[61]	88	114	18	4	subjects	6	3 subjects had a revision of patellar component only; 2 revised because of infection
Duffy, et al., 1998[84]	104	120	10	37	knees	38	25 patellar revisions plus 10 cementless and 2 cemented, femoral or tibial aseptic loosening only, 1 infection
Elke et al., 1995[76]	394	524	4.2	28	knees	38	All problems, including infections (6), others (4)
Evanich et al., 1997[62]	251	302	7.6	11	subjects	12	One deep wound infection requiring removal of knee
Ewald et al., 1999[85]	412	539	=10	15	knees	20	10 patellar loosening, 3 extensive polyethylene wear, 2 for other loosenings
Fortin et al., 1999[28]	130	NR	0.5	0	both	1	1 severe infection requiring removal of knee; 6 month followup
Gill et al., 2001[86]	223	254	16.8	9	knees	10	1 knee revised for infection
Gill et al., 1999[108]	139	159	17.2	1	knees	1	3 failures, only 1 revised
Gioe & Bowman, 2000[103]	296	324	4.1	5	knees	13	8 for infection
Griffin et al., 1998[110]	120	165	10.6	3	knees	3	

Evidence Table 2. Basic information for calculating revision rates (continued)

Study	Patients	Knees	Followup - Years	Revisions Related to Knee Prosthesis	Unit of Reporting	Total Reoperations (Revisions + Other)	Notes
Harwin et al., 1998[102]	336	366	5.1	0	knees	10	8 for infection
Hasegawa et al., 2002[54]	140	221	12-60	NR			
Hawker et al., 1998[29]	1496	NR	24-84	NR			
Healy et al., 2002[63]	159	159	5,8	2	both	8	6 for manipulation
Heck et al., 1998[72]	291	330	2	0	both	0	
Hsu et al., 1998[55]	113	140	4.8	20	knees	23	3 infections. Knee-related includes 4 Insall operations
Hube et al., 2002[104]	221	276	3	0			1 arthroscopic resection to correct patella clunk syndrome
Ikejiani et al., 2000[64]	145	185	6.5	1	subjects	1	
Indelli et al., 2002[87]	91	100	7.5	0	both	0	1 revision recommended
Jenny & Jenny 1998[77]	125	125	2.5	8	subjects	8	
Jones et al., 2001[96]	257	257	0.5	0	subjects		6 month followup
Jordan et al., 1997[105]	375	473	4.7	19	both	24	5 infections
Kiebzak et al., 2002[100]	415	NR	2	NR			Focuses on use of SF-36
Konig et al., 1998[30]	357	399	4.7	1	knees	2	Exchange operations from Konig et al., 2000
Larson et al., 1999[138]	94	127	4	0	both	0	
Lin et al., 2002[73]	122	NR	2	0			
Liu & Chen, 1998[57]	88	176	2.6	NR			
Lombardi et al., 2001[112]	240	351	4.4	0	knees	17	No revisions due to aseptic loosening
Malkani et al., 1995[65]	118	168	10	6	knees	21	13 for manipulation, 1 infection, 1 fracture
Martin et al., 1997[88]	290	378	6.5	12	both	17	2 due to infection, 2 hemarthroses, 1 crepitus
Matsueda & Gustilo, 2000[74]	365	425	.5	0		0	Retrospective - No revisions
Meding et al., 2001[78]	1888	2759	2.5	NR			
Miyasaka et al., 1997[89]	83	108	14.1	3	knees	6	2 for infection, 1 for trauma
Mokris et al., 1997[90]	90	105	4.25	0		0	
Mont et al., 1999[91]	104	121	5.4	0	knees	5	4 subjects
Moskal & Diduch, 1998[58]	514	646	4.3	0	both	6	Retrospective, included 57 revision subjects
O'Rourke et al., 2002[66]	134	176	6.4	3	knees	5	2 subjects

Evidence Table 2. Basic information for calculating revision rates (continued)

Study	Patients	Knees	Followup - Years	Revisions Related to Knee Prosthesis	Unit of Reporting	Total Reoperations (Revisions + Other)	Notes
Pereira et al., 1998[59]	107	163	3	NR			
Ranawat et al., 1997[79]	118	150	4.9	1	knees	3	2 for infection
Rand & Gustilo, 1996[60]	202	277	2.3	0	knees	4	2 manipulation, 1 deep infection, 1 fracture
Regner et al., 1997[67]	120	144	6.8	17	knees	17	
Rinta-Kiikka et al., 1996[92]	97	102	5.3	4	knees	5	1 for trauma
Ritter et al., 2001[139]	3054	4583	15	68	knees	68	6 femoral, 19 tibial, 15 all polyethylene, 28 metal-back patellar components
Rodriguez et al., 1996[80]	99	145	4.3	2	knees	7	revision = 2 subjects
Schroder et al., 2001[68]	102	114	10	2	both	4	1 infection, 1 fracture
Sextro et al., 2001[93]	118	168	15.7	12	knees	13	1 trauma fracture
Stickles et al., 2001[97]	4161	NR	1	Noted but not reported			
Title et al., 2001[107]	128	148	4.3	0			
Ververeli et al., 1995[52]	103	NR	2	0	both	1	1 infection
Worland et al., 1998[53]	91	114	5	NR			
Yang et al., 2001[81]	90	113	3	0	both	8	6 for infection, 1 for pain, 1 for fracture

Evidence Table 3. Basic information for calculating complication rates

Study	Patients	Knees	Complications	Number of Knees	Number of Subjects	Notes: Complications
Bachmeier, et al., 2001[94]	108	NR	14	14	14	Adverse events requiring hospitalization, 10 maniupulations, 3 infections, 1 DVT
Baldwin & Rubinstein, 1996[140]	300	346	41	39	NR	4 DVT, 7 pulmonary embolisms, 3 deep infections, 3 manipulations, 6 subluxations. Revisions included.
Beaupre et al., 2001[95]	120	NR	20	20	20	Adverse events requiring hospitalization. 14 knee-related, 4 DVT, 2 increased hemovac drainage, 4 cardiovascular, 1 pulmonary embolism
Bert et al., 2001[69]	279	NR	27	22	22	All complications, non-device (21) and device (6).
Bourne et al., 1995[70]	100	NR	2	2	2	"Reoperations" for disabling pain
Brown et al., 2001[82]	268	536	15	NR	NR	2 DVT, 3 late infections, 1 arthrofibrosis (requiring manipulation), 1 hemarthrosis (requiring evacuation).
Bullens et al., 2001[75]	108	126	12	12	NR	Knee-related including 7 maniupulations, 1 tibial fissure, 1 femur shaft perforation. 5 reoperations (3 infections, 1 fracture, 1 looseneing)
Clark et al., 2001[98]	143	NR	NR			
Cloutier et al., 2001[83]	130	163	12	12	NR	Knee-related only, 1 operative drainage
Cohen et al., 1997[71]	186	272	40	NR	NR	26 local (16 infections , 3 manipulations), 14 systemic (2 pulmonary embolisms, 1 DVT
Deshmukh et al., 2002[27]	180	NR	NR			
Diduch et al., 1997[61]	88	114	3	3	3	Dislocations only
Duffy et al., 1998[84]	104	120	8	8	NR	8 complications minus revisions including 3 DVT, 3 deep, 1 fibrous ankylosis infections,
Elke et al., 1995[76]	394	524	NR	NR	NR	Revisions only
Evanich et al., 1997[62]	251	302	20	20	20	4 perioperative, skin slough, superficial wound infection, transient peroneal nerve palsy, deep wound infection. 16 postop knee manipulations 4-8 weeks from procedure.
Ewald et al., 1999[85]	412	539	NR			Revisions only
Fortin et al., 1999[28]	130	NR	3	3	3	Requiring hospitalization (1 angina, 1 infected knee, 1 manipulation)
Gill et al., 2001[86]	223	254	13	13	NR	Knee related, 3 infections, 10 fractures

Evidence Table 3. Basic information for calculating complication rates (continued)

Study	Patients	Knees	Complications	Number of Knees	Number of Subjects	Notes: Complications
Gill et al., 1999[108]	139	159	5	5	NR	Knee related - 4 fractures, 1 tendon rupture
Gioe & Bowman, 2000[103]	296	324	NR			Requiring revision only
Griffin et al., 1998[110]	120	165	11	11	NR	"Symptoms of the patellofemoral joint," including patellar clunk and fractures
Harwin, 1998[102]	336	366	15	NR	NR	5 patellofemoral complications plus 10 reoperations (infection, fracture, sublaxation)
Hasegawa et al., 2002[54]	140	221	10	10	NR	Heterotopic ossification, study focus
Hawker et al., 1998[29]	1496	NR	NR			
Healy et al., 2002[63]	159	159	7	7	7	7 readmissions to hospital, 6 manipulations under anesthesia
Heck et al., 1998[72]	291	330	94	NR	NR	In hospital complications, including 5 DVT
Hsu et al., 1998[55]	113	140	23	23	NR	Knee-related only, including revisions
Hube et al., 2002[104]	221	276	2	2	2	Knee-related only, 2 patellar clunk syndrome.
Ikejani et al., 2000[64]	145	185	10	10	10	7 falls, 1 DVT, 1 phlebitis, 1 revision
Indelli et al., 2002[87]	91	100	10	10	10	Postoperative (6 DVT, 2 urinary tract infections, 1 hematoma, 1 mobilization).
Jenny & Jenny, 1998[77]	125	125	8	NR	NR	Knee-related only (3 deep infections, 2 fractures, 2 loosenings, 1 ligamnet instability).
Jones et al., 2001[96]	257	257	29	29	29	In-hospital (9 DVT, 12 urinary tract infections, 4 infection)
Jordan et al., 1997[105]	375	473	24	NR	NR	12 polyethylene fractures, 5 tibial subluxations, 2 loosenings, 5 infections.
Kiebzak et al., 2002[100]	415	NR	NR			
Konig et al., 1998[30]	357	399	20	NR	NR	(From Konig et al., 2000) 10 DVT (2 pulmonary emobolisms), 1 peroneal palsy, 1 ruptured tendon, 2 mobilizations, 4 deep infections, 1 exchange of femoral component
Larson et al., 1999[138]	94	127	3	3	NR	3 patellar fractures
Lin et al., 2002[73]	122	NR	NR			No readmissions within 30 days
Liu & Chen, 1998[57]	88	176	22	NR	NR	Postoperative (including 1 DVT, 6 subluxations, 3 infections)

Evidence Table 3. Basic information for calculating complication rates (continued)

Study	Patients	Knees	Complications	Number of Knees	Number of Subjects	Notes: Complications
Lombardi et al., 2001[112]	240	351	17	17	NR	"Subsequent surgeries only"
Malkani et al., 1995[65]	118	168	26	26	23	5 hematomas postop, 5 infections, loosenings and fractures, 2 thrombophlebitis, 2 gastro intestinal hemorrhages, 1 peptic ulcer, 1 peptic ileus. Includes revisions
Martin et al., 1997[88]	290	378	17	17	17	Requiring reoperations including wear of previously used metal-backed patellas, loosenings and infections, 1 knee crepitus, 2 hem arthroses
Matsueda & Gustilo, 2000[74]	365	425	6	6	NR	Sublaxations only
Meding et al., 2001[78]	1888	2759	NR			
Miyasaka et al., 1997[89]	83	108	3	3	3	Knee-related only, 3 fractures
Mokris et al., 1997[90]	90	105	14	14	11	3 DVT, 3 subluxations, 2 infections, 2 fractures, 2 hematomas, 1 cerebro vascular accident, 1 wound slough.
Mont et al., 1999[91]	104	121	5	5	4	Reoperations only (2 infection, 1 fracture, 1 tendon rupture, 1 due to instability)
Moskal & Diduch, 1998[58]	514	646	10	10	10	3 late fractures, 7 soft tissue complications
O'Rourke et al., 2002[66]	134	176	11	11	10	3 manipulations, 4 fractures, 1 avulsion of the medial collateral ligament, 1 wound necrosis, 1 hematoma, 1 DVT. Revisions excluded
Pereira et al., 1998[59]	107	163	NR			
Ranawat et al., 1997[79]	118	150	10	10	NR	Complications of the patellofemoral joint
Rand & Gustilo, 1996[60]	202	277	18	18	17	Includes infections, fractures, pulmonary emboli (4), myocardial infarction, manipulations (2).
Regner et al., 1997[67]	120	144	NR			Revisions only
Rinta-Kiikka et al., 1996[92]	97	102	6	6	NR	Superficial infections
Ritter et al., 2001[139]	3054	4583	NR			Revisions only
Rodriguez et al., 1996[80]	99	145	8	8	7	Knee failures only, 6 due to sepsis
Schroder et al., 2001[68]	102	114	6	6	6	Knee failures only, 3 due to fractures

Evidence Table 3. Basic information for calculating complication rates (continued)

Study	Patients	Knees	Complications	Number of Knees	Number of Subjects	Notes: Complications
Sextro et al., 2001[93]	118	168	35	NR	NR	Includes 7 hematomas, 5 superficial wound infections, 2 pulmonary embolisms, 1 amputation/fracture, 2 femoral and 4 patella fractures, 16 subjects requiring manipulation
Stickles et al., 2001[97]	1011	NR	90	NR	90	Based on total complication rates. Complications included medical (DVT) and orthopaedic (hematoma, fracture, infection, loosening, failure).
Title et al., 2001[107]	128	148	NR			
Ververeli et al., 1995[52]	103	NR	9	9	9	Perioperative: 3 pulmonary embolisms; 5 persistent serious drainage. Late: 1 infected knee
Worland et al., 1998[53]	91	114	NR			
Yang et al., 2001[81]	90	113	45	NR	NR	Perioperative: 8 calf swellings (1 DVT), 17 UTI, 8 superficial infections, 3 deep infections, 1 myocardial infarction, 1 cerebro vascular accident. Late: 3 deep infections, 1 manipulation, 1 fracture, 2 loosenings