

Table S1. Statistical analysis of Table 1. (variable of RA-u70, RA-o71, OA-u70 and OA-o71 groups)

	p value					
	RA-u70 / RA-o71	RA-u70 / OA-u70	RA- u70 / OA-o71	RA- o71 / OA-u70	RA- o71 / OA- o71	OA- u70 / OA-o71
female (%)	0.532	0.478	0.197	0.240	1.000	0.041
age at operation (y)	0.001	0.001	0.001	0.001	0.8387	0.001
height	0.003	1.000	0.001	0.017	1.000	0.008
body weight	0.448	0.001	0.001	0.001	0.001	0.002
BMI	1.000	0.001	0.001	0.001	0.001	0.245
bilateral TKA (pts)	0.389	0.016	0.389	1.000	0.155	0.065
CR type	0.871	0.847	0.871	0.078	0.126	0.596
ROM	0.390	0.005	0.001	1.000	0.616	1.000
JOA total score	0.044	1.000	1.000	0.814	0.047	1.000
FTA	0.121	0.001	0.001	0.001	0.001	1.000
follow-up period (y)	0.001	1.000	0.014	0.001	0.339	0.001
Death patients (female)	0.007	0.205	1.000	0.001	0.003	0.155
age at death	0.001	0.001	0.001	0.111	0.369	0.001

The item of female, bilateral TKA (pts), CR type and death patients is statistically analyzed by Chi-square test. Another item is analyzed by one-way ANOVA followed Bonnferroni post hoc.

CR; cruciate retention, FTA; femorotibial angle, JOA; Japanese Orthopaedic Association, OA; Osteoarthritis, o71; over 71 years old, pts; patients, RA; rheumatoid arthritis, ROM; range of motion, TKA; total knee arthroplasty, u70; under 70 years old, y; year.

Table S2. Statistical analysis of Table 3. Differences in cumulative survival rates every 5 years of the female patients with rheumatoid arthritis and osteoarthritis were evaluated with the log-rank test.

	p value (log-rank)			
	5 years	10 years	15 years	20 years
RA vs OA	0.044	0.004	0.008	0.005
RA-u70 vs RA-o71	0.058	0.330	0.017	0.002
RA-u70 vs OA-u70	0.795	0.005	0.007	0.011
RA-u70-vs OA-o71	0.596	0.145	0.950	0.472
RA-o71 vs OA-u70	0.042	< 0.001	< 0.001	< 0.001
RA-o71 vs OA-o71	0.004	0.014	0.006	0.002
OA-u70 vs OA- o71	0.851	0.059	0.002	< 0.001

OA; osteoarthritis, RA; rheumatoid arthritis, o71; over 71 years old, u70; under 70 years old.