

Supplementary data

Table 1. Patient demographics and clinical characteristics of included and excluded patients

Variables	Included patients (n = 4,026)			Excluded patients (n = 1,283)			p-value ^a
	n (%)	median (IQR)	mean (SD)	n (%)	median (IQR)	mean (SD)	
Age (years) (SD)		68 (63–73)	68 (8)		68 (63–74)	68 (8)	0.02
Women	3,003 (75)			940 (73)			0.3
Contralateral knee pain	2,420 (60)			711 (56)			0.02
BMI		27 (24–30)	28 (5)		27 (25–30)	28 (5)	0.2
Education level:							0.002
None (no formal education)	761 (20)			271 (24)			
Primary (6 years or fewer)	1,385 (37)			434 (38)			
Secondary (7 to 10 years)	1,192 (32)			332 (29)			
Tertiary (11 years or more)	375 (10)			95 (8)			
Ethnic group:							0.004
Chinese	3,423 (85)			1,030 (82)			
Malay	306 (8)			110 (9)			
Indian	225 (6)			83 (7)			
Others	71 (2)			40 (3)			
Hypertension	2,436 (61)			730 (57)			0.02
Dyslipidemia	1,643 (41)			494 (39)			0.1
Diabetes	794 (20)			229 (18)			0.1
Caregiver available	2,908 (73)			935 (73)			0.7
Preop walking aids:							0.01
None	2,792 (70)			842 (66)			
Stick	965 (24)			346 (27)			
Quadstick	145 (4)			38 (3)			
Frame	101 (3)			49 (4)			
Preop depression level:							0.9
Most or all	144 (4)			34 (3)			
A good bit	222 (6)			66 (5)			
Some	681 (17)			232 (18)			
A little	492 (12)			160 (13)			
None	2,485 (62)			770 (61)			
Preop knee extension (°)		6 (2–10)	7.2 (7.1)		5 (2–11)	7.1 (7.3)	0.6
Preop knee flexion (°)		121 (108–131)	118 (18)		120 (107–130)	117 (18)	0.07
Preop knee pain							0.4
None or very mild	78 (2)			15 (1)			
Mild	602 (15)			199 (16)			
Moderate	1,793 (45)			541 (43)			
Severe	1,552 (39)			507 (40)			
Preop walking limitation:							0.2
> 30 mins	671 (17)			175 (14)			
16 to 30 mins	1,142 (28)			378 (30)			
5 to 15 mins	1,751 (43)			561 (44)			
Around the house	462 (11)			150 (12)			
Weeks from surgery to assessment		25 (22–28)	25 (4.3)				
Week-24 knee extension (°)		4 (0–8)	4.8 (5.4)				
Week-24 knee flexion (°)		115 (105–123)	113 (14)				
Week-24 knee pain:							
None	2,510 (62)						
Very mild	502 (12)						
Mild	661 (16)						
Moderate	313 (8)						
Severe	39 (1)						
Week-24 walking limitation:							
> 30 mins	2,749 (68)						
16 to 30 mins	738 (18)						
5 to 15 mins	476 (12)						
Around the house	57 (1)						

Continuous variables are summarized as median (25th–75th percentiles; IQR) and mean (SD), and tested with the Wilcoxon Mann–Whitney test.

Categorical variables are tested with Pearson's chi-square test or the proportional odds likelihood ratio test.

^a Although some of the differences are statistically significant, they are not clinically important in our judgment.

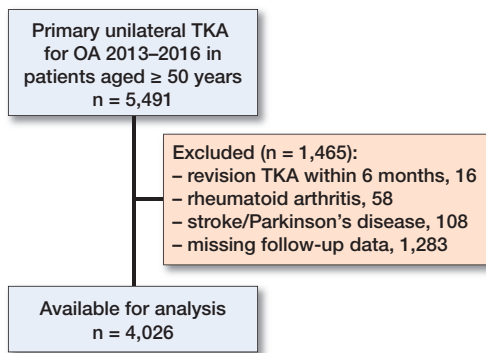


Figure 1. Flow diagram on the selection of patients.

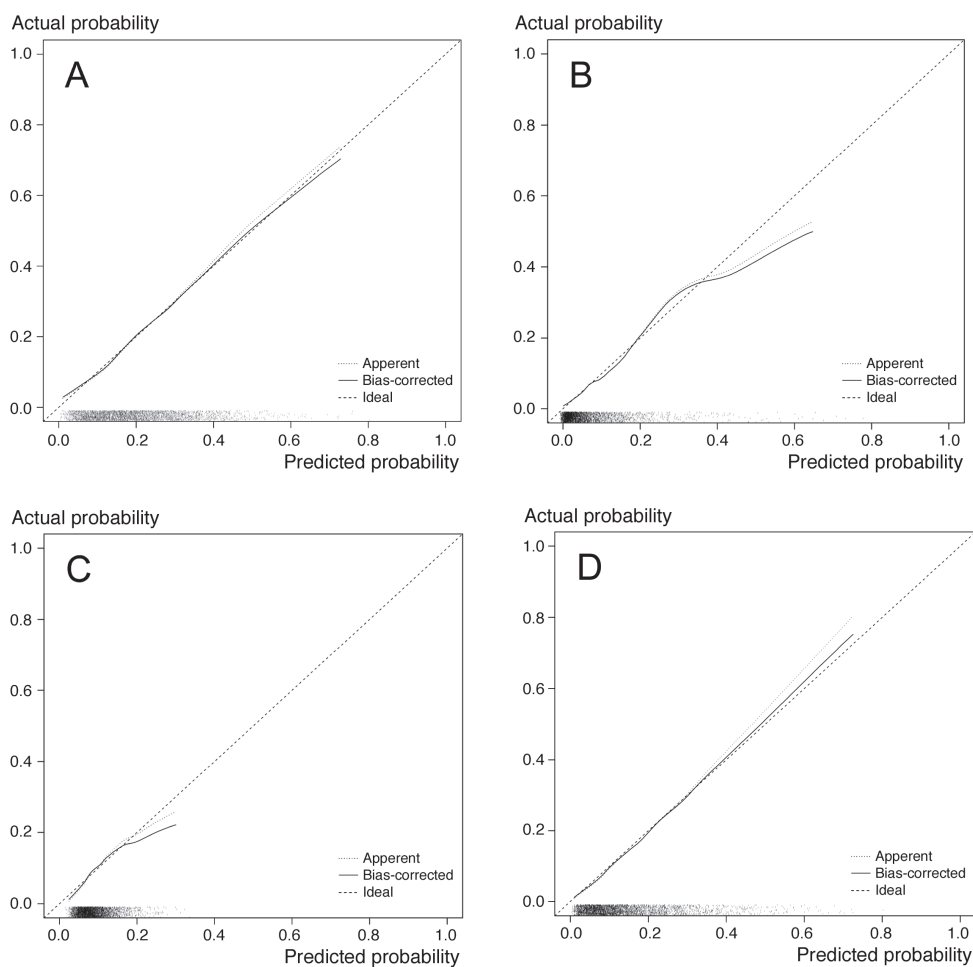


Figure 3. Calibration plots showing the accuracy of the original prediction model (“Apparent”) and the bootstrap model (“Bias-corrected”) in predicting the probability of (A) knee flexion contracture $\geq 10^\circ$, (B) knee flexion range $< 90^\circ$, (C) knee pain rating of “moderate” or “severe,” and (D) maximum walk time ≤ 15 minutes at 6 months post-TKA. The light dotted and solid lines represent the calibration accuracy of the original and (optimism-corrected) bootstrap models, respectively. Locally weighted scatterplot smoothing is used to model the relationship between observed and predicted probabilities. The 2 lines were relatively close to the dashed line of unity (which represents perfect agreement between the observed and predicted values), indicating moderately good calibration. Rug plot on each x-axis shows the distribution of the predicted probabilities. TKA: total knee arthroplasty.