

Supplementary Table 1. Baseline characteristics of patients who underwent routine primary TKA in 2019.

Baseline characteristic	No albumin (<i>n</i> =563)	Albumin use (<i>n</i> =97)	All (<i>n</i> =660)
Demographic characteristic			
Age (years)	67.33±8.55	69.44±7.86	67.64±8.48
Female	447 (79.4)	79 (81.4)	526 (79.7)
BMI (kg/m ²)	25.90±3.53	25.50±4.00	25.84±3.60
Diagnosis			
Primary osteoarthritis	529 (95.0)	85 (87.6)	614 (93.0)
Inflammatory arthritis	34 (6.04)	12 (12.3)	46 (6.97)
Comorbidity			
Hypertension	250 (44.4)	35 (36.1)	285 (43.2)
Diabetes	66 (11.7)	11 (11.3)	77 (11.7)
COPD	18 (3.20)	3 (3.09)	21 (3.18)
CHD	13 (2.31)	2 (2.06)	15 (2.27)
Preoperative laboratory test			
ALB (g/L)	43.23±2.48	40.36±3.48	42.85±2.84
Hb (g/L)	134.33±15.28	133.00±12.87	134.13±14.95
CRP (mg/L)	4.11±3.44	5.01±5.02	4.24±3.73
ESR (mm/h)	23.65±16.84	28.82±18.65	24.40±17.19

Values are shown as *n* (%) or mean ± standard deviation. ALB: albumin; BMI: body mass index; CHD: coronary heart disease; COPD: chronic obstructive pulmonary disease; CRP: C-reactive protein; ESR: erythrocyte sedimentation rate; Hb: hemoglobin.

Supplementary Table 2. Baseline characteristics of patients who underwent routine primary TKA from January to August 2020.

Baseline characteristic	No albumin (<i>n</i> =88)
Demographic characteristic	

Age (year)	64.32±10.88
Female	63 (71.6)
BMI (kg/m ²)	26.11±3.92
Diagnosis	
Primary osteoarthritis	81 (92.0)
Inflammatory arthritis	7 (7.95)
Comorbidity	
Hypertension	37 (42.0)
Diabetes	10 (11.4)
COPD	5 (5.68)
CHD	5 (5.67)
Preoperative waiting time (days)	39.05±22.78

Values are shown as *n* (%) or mean ± standard deviation. BMI: body mass index; COPD: chronic obstructive pulmonary disease; CHD: coronary heart disease.

Supplementary Table 3. Logistic regression analyses of preoperative albumin level and HAS use after primary TKA.

Model	Risk of postoperative albumin use	
	Risk ratio (95% confidence interval)	<i>P</i>
Crude model	0.720 (0.665-0.778)	<0.001
Model 1	0.772 (0.665-0.784)	<0.001
Model 2	0.722 (0.664-0.785)	<0.001
Model 3	0.725 (0.666-0.789)	<0.001

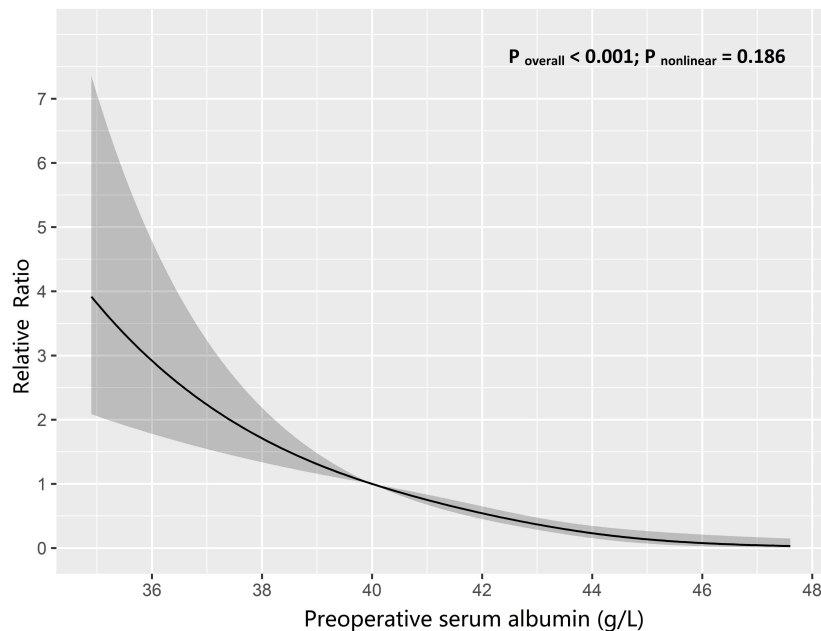
Model 1: adjusted for age, sex, body mass index and diagnosis.

Model 2: adjusted as in model 1 + hypertension, type 2 diabetes, chronic obstructive pulmonary disease, and coronary heart disease.

Model 3: adjusted as in model 2 + preoperative hemoglobin, C-reactive protein, and erythrocyte sedimentation rate.

Variables	Pre-op ESR	Pre-op CRP	Pre-op Hb	CHD	COPD	Diabetes	Variables
Pre-op ALB	1	0.285	-0.260	-0.020	0.007	-0.009	Pre-op ESR
Sex	0.000	1	-0.043	-0.089	-0.034	-0.045	Pre-op CRP
Age	0.000	-0.042	1	-0.046	-0.037	-0.118	Pre-op Hb
BMI	0.019	0.000	-0.016	1	0.030	0.040	CHD
Diagnosis*	-0.144	-0.079	-0.235	-0.223	1	-0.012	COPD
Hypertension	0.074	0.067	0.247	0.126	-0.046	1	Diabetes
Diabetes	0.086	0.090	0.103	0.051	-0.044	0.121	--
COPD	-0.037	-0.037	0.029	0.021	-0.016	0.051	--
CHD	0.001	0.001	0.065	0.004	-0.042	0.093	--
Pre-op Hb	0.096	-0.375	-0.050	0.245	-0.221	0.010	--
Pre-op CRP	-0.154	0.058	-0.066	0.092	0.240	-0.002	--
Pre-op ESR	-0.129	0.240	0.073	-0.074	0.188	0.071	--
Variables	Pre-op ALB	Sex	Age	BMI	Diagnosis	Hypertension	--

Supplementary Figure 1: Spearman's rank correlations between covariates included in the logistic regression analyzes. ALB: Albumin; BMI: Body mass index; CHD: Coronary heart disease; COPD: Chronic obstructive pulmonary disease; CRP: C-reactive protein; ESR: Erythrocyte sedimentation rate; Hb: Hemoglobin; Pre-op: Preoperative. Including osteoarthritis and inflammatory arthritis.



Supplementary Figure 2: Dose-response relationship between Pre-op serum ALB level and risk of HAS use. ALB: Albumin; HAS: Human albumin solution; Pre-op: Preoperative.