

Appendix

Supplemental Table 1. The association between pre-operative hemoglobin measurement and bleeding, transfusion and mortality.

	Overall Population (n=3050)	Preoperative Hemoglobin Measured (n=2722)	No Preoperative Hemoglobin Measured (n=328)	p-value
Outcomes:				
Hemorrhage	33 (1.1)	29 (1.1)	4 (1.2)	0.79
Transfusion	766 (25.0)	694 (25.3)	76 (23.2)	0.37
Death	111 (3.6)	95 (3.5)	16 (4.8)	0.20

Supplemental Table 2. Association between red blood cell transfusion and long term mortality stratified by severity of anemia, excluding patients with hemorrhage.

	Long Term Mortality, n (%)	Hazard Ratio (95% CI)	P value
Multivariate Analysis**			
Moderate/Severe Anemia			
Red Blood Cell Transfusion	25/102 (24.5%)	1.96 (0.61 – 5.05)	0.16
No Red Blood Cell Transfusion	3/31 (9.7%)		
Mild Anemia			
Red Blood Cell Transfusion	17/176 (9.7%)	2.29 (0.91 – 5.75)	0.08
No Red Blood Cell Transfusion	7/214 (3.3%)		
No Anemia			
Red Blood Cell Transfusion	18/390 (4.6%)	4.17 (2.05 – 8.48)	<0.001
No Red Blood Cell Transfusion	20/1781 (1.1%)		

Supplemental Table 3. Baseline characteristics of patients with and without perioperative RBCT, pre- and post-propensity score matching.

	Pre-Matching			Post-Matching		
	No RBCT (n=2284)	RBCT (n=766)	P-value	No RBCT (n=554)	RBCT (n=554)	P-value
Age (yr), mean	59.4 ± 12.8	65.3 ± 13.6	<0.001	64.1 ± 12.4	63.3 ± 13.4	0.26
Female	1280 (56.0)	526 (68.7)	<0.001	373 (67.3)	370 (66.8)	0.85
Race						
White	1470 (64.4)	516 (67.4)		370 (66.8)	373 (67.3)	
Black	327 (14.3)	106 (13.8)	0.03	72 (13.0)	83 (15.0)	0.12
Hispanic	336 (14.7)	78 (10.2)		74 (13.4)	47 (8.5)	
Other	151 (6.6)	66 (8.6)		38 (6.9)	51 (9.2)	
Admission Type						
Elective	2206 (96.6)	670 (87.5)	<0.001	511 (92.2)	506 (91.3)	0.58
Emergency or Urgent Surgery	78 (3.4)	96 (12.5)		43 (7.8)	48 (8.7)	
Procedure						
Spine	908 (39.8)	236 (30.8)		169 (30.5)	189 (34.1)	
Knee	757 (33.1)	325 (30.7)	<0.001	194 (35.0)	171 (30.9)	0.27
Hip	619 (27.1)	295 (38.5)		191 (34.5)	194 (35.0)	
RCRI Score						
Coronary artery disease	182 (8.0%)	144 (18.8)	<0.001	84 (15.2)	85 (15.3)	0.93
Heart failure	35 (1.5)	51 (6.7)	<0.001	20 (3.6)	21 (3.8)	0.87
Stroke/Transient Ischemic Attack	6 (0.3)	12 (1.6)	<0.001	4 (0.7)	5 (0.9)	0.74
Creatinine > 2 mg/dL	4 (0.2)	11 (1.6)	<0.001	4 (0.7)	3 (0.5)	0.71
Diabetes Mellitus	300 (13.1)	145 (18.9)	<0.001	90 (16.2)	92 (16.6)	0.87
Anemia	247 (12.2)	290 (42.0)	<0.001	152 (27.4)	176 (31.8)	0.11
Perioperative Hemorrhage	7 (0.3)	26 (3.4)	<0.001	5 (0.9)	9 (1.6)	0.28

Supplemental Figure 1. Red blood cell transfusion and long-term mortality following surgery in the propensity matched cohort.

