

Supplementary Table 1 Univariate logistic regression analysis for PMV (n=618)

Variables	OR	95% CI	<i>P</i> value
Age, years	1.029	1.014-1.044	<0.001
Male	0.896	0.627-1.281	0.549
BMI, kg/m ²	1.038	0.995-1.082	0.082
Smoking	1.623	1.157-2.277	0.005
Diabetes mellitus	2.377	0.910-6.211	0.077
Hypertension	2.535	1.833-3.507	<0.001
Prior PCI	2.792	0.289-26.994	0.375
Cerebral malperfusion	1.678	0.889-3.169	0.110
Visceral malperfusion	0.957	0.545-1.681	0.879
Limb malperfusion	0.919	0.521-1.621	0.770
WBC, ×10 ⁹ /L	1.028	0.991-1.068	0.143
Neutrophils×10 ⁹ /L	1.033	0.990-1.077	0.133
Platelet, ×10 ⁹ /L	0.992	0.989-0.994	<0.001
Hemoglobin, g/L	0.991	0.984-0.997	0.007
Creatinine, mmol/L	1.013	1.009-1.017	<0.001
Uric acid, mmol/L	1.003	1.002-1.005	<0.001
Albumin, mg/L	0.920	0.893-0.948	<0.001
D-dimer, mg/L	1.039	0.996-1.084	0.077
LVEF, %	0.968	0.943-0.994	0.017
CPB time, min	1.007	1.003-1.010	<0.001
ACC time, min	1.013	1.008-1.018	<0.001
Root replacement	0.908	0.660-1.249	0.553
Hemiarch replacement	1.222	0.583-2.561	0.596
Total arch replacement	3.504	2.436-5.041	<0.001
Mitral valve surgery	2.810	0.563-14.030	0.208
CABG	2.355	1.066-5.200	0.034

PMV, prolonged mechanical ventilation; BMI, body mass index; PCI, percutaneous coronary intervention; WBC, white blood cell; LVEF, left ventricular ejection fraction; CPB, cardiopulmonary bypass; ACC, aortic cross clamping; CABG, coronary artery bypass grafting; OR, odds ratio; CI, confidence interval.

Supplementary Table 2 Univariate Cox regression analysis for in-hospital mortality in PMV patients (n=321)

Variables	HR	95% CI	P value
Age, years	1.012	0.985-1.039	0.389
Male	1.141	0.623-2.090	0.668
BMI, kg/m ²	0.974	0.907-1.045	0.460
Smoking	1.344	0.796-2.270	0.268
Diabetes mellitus	2.873	1.231-6.705	0.015
Hypertension	1.475	0.826-2.634	0.189
Prior PCI	2.375	0.329-17.170	0.391
Cerebral malperfusion	1.027	0.371-2.839	0.959
Visceral malperfusion	1.443	0.619-3.367	0.396
Limb malperfusion	0.839	0.116-6.063	0.862
WBC, ×10 ⁹ /L	1.030	0.973-1.091	0.302
Neutrophils×10 ⁹ /L	1.011	0.950-1.077	0.724
Platelet, ×10 ⁹ /L	0.991	0.985-0.997	0.003
Hemoglobin, g/L	0.994	0.982-1.005	0.294
Creatinine, mmol/L	1.004	1.002-1.006	<0.001
Uric acid, mmol/L	1.003	1.001-1.004	0.004
Albumin, mg/L	0.950	0.908-0.995	0.029
D-dimer, mg/L	1.042	0.990-1.097	0.112
LVEF, %	0.993	0.948-1.040	0.765
CPB time, min	1.008	1.004-1.013	<0.001
ACC time, min	1.004	0.997-1.011	0.231
Root replacement	0.806	0.469-1.385	0.436
Hemiarch replacement	0.304	0.042-2.198	0.238
Total arch replacement	4.323	1.351-13.836	0.014
Mitral valve surgery	2.479	0.774-7.938	0.126
CABG	1.771	0.759-4.129	0.186
RDW (continuous)	1.218	1.079-1.375	0.001
RDW (categorical)			
Q1	1.000 (reference)		
Q2	10.058	1.298-77.939	0.027
Q3	15.102	2.020-112.889	0.008
Q4	22.277	3.018-164.463	0.002

PMV, prolonged mechanical ventilation; BMI, body mass index; PCI, percutaneous coronary intervention; WBC, white blood cell; LVEF, left ventricular ejection fraction; CPB, cardiopulmonary bypass; ACC, aortic cross clamping; CABG, coronary artery bypass grafting; RDW, red blood cell distribution width; OR, odds ratio; CI, confidence interval.

Supplementary Table 3 Multivariate Cox regression analysis for in-hospital mortality in PMV patients (n=321)

Variables	HR	95% CI	<i>P</i> value
Diabetes mellitus	2.857	1.172-6.961	0.021
Creatinine, mmol/L	1.004	1.001-1.006	0.007
CPB time, min	1.008	1.003-1.014	0.002
TAR	3.890	1.178-12.848	0.026
RDW (categorical)			
Q1	1.000 (reference)		
Q2	7.948	1.018-62.058	0.048
Q3	10.646	1.400-80.952	0.022
Q4	15.410	2.058-115.373	0.008

PMV, prolonged mechanical ventilation; CPB, cardiopulmonary bypass; TAR, total arch replacement; RDW, red blood cell distribution width; HR, hazard ratio; CI, confidence interval.