Table S1 Clinical characteristics of patients with all variables reported before multiple imputation with valid percentages

Variable	Missing data	Total patients (n=148)	Hospital survivors (n=102)	Hospital non-survivors (n=46)
Age (years)	0%	66.5±11.1	65.1±11.4	69.8±9.9
Sex (male)	0%	81 (54.7)	68 (66.7)	13 (28.3)
BMI (kg/m²)	15.5%	26.7±4.3	26.5±3.9	27.3±5.1
Diabetes mellitus	4.1%	17 (12.0)	15 (15.2)	2 (4.7)
COPD	0%	16 (10.8)	8 (7.8)	8 (17.4)
PVD	0%	8 (5.4)	6 (5.9)	2 (4.3)
Critical status	0%	93 (62.8)	54 (52.9)	39 (84.8)
Unstable angina	0%	19 (12.8)	12 (11.8)	7 (15.2)
Emergent surgery	4.7%	69 (48.9)	51 (52.6)	18 (40.9)
Salvage surgery	4.7%	59 (41.8)	35 (36.1)	24 (54.5)
LVEF (%)	11.5%	40.0 (40.0–55.0)	42.0 (40.0–55.0)	40.0 (39.5–55.0)
NYHA class IV	26.4%	47 (43.1)	28 (36.4)	19 (59.4)
Logistic EuroSCORE I (%)	4.7%	28.8 (14.8–48.6)	22.6 (11.8–39.7)	44.9 (31.0–62.0)
Previous CVA	25%	5 (4.5)	3 (4.2)	2 (5.0)
Previous PCI	3.4%	33 (23.1)	26 (26.5)	7 (15.6)
Previous CABG	2.7%	7 (4.9)	5 (5.1)	2 (4.4)
Concomitant VSR	0%	17 (11.5)	10 (9.8)	7 (15.2)
Use of CPB	22.3%	66 (57.4)	45 (57.0)	21 (58.3)
CPB time (min)	22.3%	108.5 (79.0–178.8)	106.0 (70.5–158.0)	153.0 (99.5–284.0)
ACC	23.6%	50 (44.2)	34 (43.6)	16 (45.7)
ACC time (min)	23.6%	62.5 (42.8–118.3)	55.0 (37.8–88.0)	89.5 (55.8–185.5)
Concomitant CABG	0%	19 (12.8)	13 (12.7)	6 (13.0)
Concomitant MVS	0%	7 (4.7)	3 (2.9)	4 (8.7)
Intra-operative IABP	31.1%	15 (14.7)	9 (13.0)	6 (18.2)
Intra-operative ECMO	0%	4 (2.7)	1 (1.0)	3 (6.5)

Data are shown as mean ± standard deviation or median (interquartile range), and number (%), as appropriate. ACC, aortic cross-clamp; BMI, body max index; CABG, coronary artery bypass grafting; COPD, chronic obstructive pulmonary disease; CPB, cardiopulmonary bypass; CVA, cerebrovascular accident; ECMO, extracorporeal membrane oxygenation; IABP, intra-aortic balloon pump; LVEF, left ventricular ejection fraction; MVS, mitral valve surgery; NYHA, New York Heart Association; PCI, percutaneous coronary intervention; PVD, peripheral vascular disease; VSR, ventricular septal rupture.

Table S2 Postoperative in-hospital outcomes of patients with all variables reported before multiple imputation with valid percentages

Variable	Missing data	Total patients (n=148)
In-hospital mortality	0%	46 (31.1)
Length of stay* (days)	3.9%	11.0 (6.8–20.0)
Perioperative MI	23.6%	11 (9.7)
Pneumonia	8.8%	9 (6.7)
ARDS	10.1%	6 (4.5)
Stroke	5.4%	3 (2.1)
AKI	6.1%	23 (16.5)
Arrhythmia	4.7%	29 (20.6)
GI complication	4.7%	5 (3.5)
Prolonged ventilation (>24 hours)	5.4%	28 (20.0)
Readmission to ICU	10.8%	9 (6.8)
Re-thoracotomy for bleeding within 30 days	27.0%	10 (9.3)

Data are shown as median (interquartile range) or number (%), as appropriate; *, for hospital survivors. AKI, acute kidney injury; ARDS, acute respiratory distress syndrome; GI, gastrointestinal; ICU, intensive care unit; MI, myocardial infarction.

Table S3 Detailed results of multivariable logistic regression analysis

Variable	Odds ratio	95% confidence interval	P value
Age	1.03	0.99–1.07	0.134
Female sex	5.49	2.24–13.46	<0.001*
COPD	2.49	0.61–10.18	0.205
Critical status	4.06	1.36–12.13	0.012*
Salvage surgery	1.32	0.53–3.30	0.556
NYHA class IV	1.43	0.55–3.69	0.461
CPB time	1.01	0.995–1.02	0.282
ACC time	0.997	0.98–1.02	0.764
Intra-operative ECMO	5.70	0.43–74.26	0.186

*, statistically significant (P<0.05). ACC, aortic cross-clamp; COPD, chronic obstructive pulmonary disease; CPB, cardio-pulmonary bypass; ECMO, extracorporeal membrane oxygenation; NYHA, New York Heart Association.