



Figure S1 Impact of bleeding on long-term survival including all patients.

Table S1 Correlates of long-term survival: univariate analysis

Clinical data	Patients, n=3,689	HR	P value
Female, n (%)	1,632 (44.3)		
Before 5 years post-surgery		1.015	0.864
After 5 years post-surgery		1.453	<0.001
Age, years (ref <60)	67.3±12.9 [16–95]		
<60 y old, n (%)	887 (24.1)	–	–
60–70 y old, n (%)	917 (24.9)	1.500	<0.001
70–80 y old, n (%)	1,310 (35.5)	3.347	<0.001
>80 y old, n (%)	574 (15.6)	5.312	<0.001
Smoker, n (%)	1,792 (54.6)	1.347	<0.001
Hypertension, n (%)	1,929 (53.3)	1.422	<0.001
BSA, m ²	1.89±0.2 [1.2–2.8]	0.530	<0.001
BMI, m ² (ref =20–25)	27.0±5.2 [15.1–79.6]		
<20, n (%)	183 (5.1)	1.638	<0.001
20–25, n (%)	1,172 (32.4)	–	–
25–30, n (%)	1,440 (39.8)	1.012	0.863
30–40, n (%)	743 (20.6)	1.159	0.071
>40, n (%)	76 (2.1)	1.410	0.070
CPD (ref = none)			
No pulmonary disease, n (%)	3,156 (86.2)	–	–
COPD, n (%)	276 (7.5)	1.706	<0.001
Asthma, n (%)	230 (6.3)	1.275	0.035
Diabetes (ref = not diabetic)			
Not diabetic, n (%)	3,327 (90.2)	–	–
Diet, n (%)	27 (0.7)	2.510	0.002
Oral therapy, n (%)	256 (6.9)	2.035	<0.001
Insulin, n (%)	78 (2.1)	1.736	0.001
Creatinine clearance, mL/min (ref >60)	71.2±28.6 [17–269]		
<30, n (%)	133 (3.8)	2.575	<0.001
30–60, n (%)	1,222 (34.6)	1.908	<0.001
>60, n (%)	2,177 (61.6)	–	–
Left ventricular function (ref = good)			
Good LV, n (%)	2,420 (68.6)	–	–
Moderate LV, n (%)	900 (25.5)	1.288	<0.001
Poor LV, n (%)	207 (5.9)	1.278	0.034

Table S1 (continued)

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Clinical data	Patients, n=3,689	HR	P value
Priority (ref = urgent or emergency)			
Elective, n (%)	3,293 (89.3)	0.663	<0.001
Urgent, n (%)	370 (10.0)	–	–
Emergency, n (%)	25 (0.7)	–	–
Logistic EuroSCORE, %	7.4±7.4 [0.88–70.42]	1.04	<0.001
Preoperative Hb (ref >120)	121±16 [80–179]		
80–100, n (%)	350 (9.5)	2.603	<0.001
100–120, n (%)	1,265 (34.3)	1.904	<0.001
>120, n (%)	2,073 (56.2)	–	–
Surgery			
CPB time, min	88±38 [28–545]	1.000	0.737
Cross clamp time, min	17±28 [13–253]	0.999	0.521
Return to theatre, n (%)	209 (5.7)	1.028	0.820
Blood loss in the first 12 hours (ref <500)			
<500 mL, n (%)	2,858 (77.7)	–	–
500–1,000 mL, n (%)	581 (15.8)	1.203	<0.001
>1,000 mL, n (%)	240 (6.5)	1.515	<0.001
Blood transfusion (red cells) (ref = none)			
None, n (%)	1,893 (51.3)	–	–
1 to 2 unit(s), n (%)	878 (23.8)	0.861	0.039
>2 unit(s), n (%)	917 (24.9)	1.008	0.910

BSA, body surface area; BMI, body mass index; CPD, chronic pulmonary disease; COPD, chronic obstructive pulmonary disease; LV, left ventricle; Hb, haemoglobin; CPB, cardiopulmonary bypass.

Table S2 Multivariable Cox model analysis of long-term survival

Clinical data	HR (95% CI)	P value
Age, years (ref <60)		
<60 y old, n (%)	–	–
60–70 y old, n (%)	1.420 (1.130–1.785)	–
70–80 y old, n (%)	2.848 (2.326–3.487)	0.003
>80 y old, n (%)	4.090 (3.270–5.115)	<0.001
Female		
Before 5 years post-surgery	0.774 (0.639–0.937)	0.009
After 5 years post-surgery	1.043 (0.878–1.241)	0.629
Smoker	1.229 (1.078–1.400)	0.002
BMI \geq 30	1.184 (1.021–1.371)	0.025
CPD (ref = no pulmonary disease)		
No pulmonary disease	–	–
COPD	1.439 (1.184–1.750)	<0.001
Asthma	1.439 (1.184–1.750)	0.008
Diabetes	1.497 (1.258–1.781)	<0.001
Left ventricular function (ref = good)		
Good LV	–	–
Moderate LV	1.267 (1.106–1.452)	<0.001
Poor LV	1.038 (0.806–1.336)	0.774
Preoperative Hb (ref >120)		
80–100	2.017 (1.660–2.452)	<0.001
100–120	1.384 (1.371–1.808)	<0.001
>120	–	–
Blood loss in the first 12 hours (ref <500)		
<500 mL	–	–
500–1,000 mL	1.039 (0.883–1.223)	0.646
>1,000 mL	1.203 (0.951–1.523)	0.123

CI, confidence interval; BMI, body mass index; CPD, chronic pulmonary disease; COPD, chronic obstructive pulmonary disease; LV, left ventricle; Hb, haemoglobin.