

Supplementary material

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Table S1. Outcomes definitions

Outcome	Definition
Acute congestive heart failure	Presence of one of the new clinical and radiographic findings: elevated jugular venous pressure, respiratory rales/crackles, crepitations, vascular redistribution, interstitial pulmonary edema, or frank alveolar pulmonary edema.
Perioperative atrial fibrillation	A new atrial fibrillation that results in angina, congestive heart failure, symptomatic hypotension, or that requires treatment with a rate controlling drug, antiarrhythmic drug, or electrical cardioversion.

Stroke	A new focal neurologic deficit thought to be vascular in origin.
Nonfatal cardiac arrest	successful resuscitation from either documented or presumed ventricular fibrillation, sustained ventricular tachycardia, asystole, or pulseless electrical activity requiring cardiopulmonary resuscitation, pharmacological therapy, or cardiac defibrillation.
Pneumonia	<p>1. Rales or dullness to percussion on physical examinations of chest AND any of the following:</p> <ul style="list-style-type: none"> A. New onset of purulent sputum or change in character of sputum B. Isolation of organism from blood culture C. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy <p>2. Chest radiography showing new or progressive infiltrate, consolidation, cavitation, or</p>

	<p>pleural effusion AND any of the following:</p> <p>A. New onset of purulent sputum or change in character of sputum</p> <p>B. Isolation of organism from blood culture</p> <p>C. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy</p> <p>D. Isolation of virus or detection of viral antigen in respiratory secretions</p>
Sepsis	<p>A life-threatening organ dysfunction due to a dysregulated host response to infection, manifested by the presence of at least two of the following three: increased breathing rate, change in the level of consciousness, and low blood pressure</p>
Pulmonary embolism	<p>Any one of the following:</p> <p>1. An intraluminal filling defect of segmental or larger artery on a helical CT scan</p>

	<p>2. An intraluminal filling defect on pulmonary angiography</p> <p>3. A positive diagnostic test for DVT (e.g., positive compression ultrasound) and non-diagnostic (i.e., subsegmental defects or technically inadequate study) helical CT scan</p>
<p>Deep vein thrombosis</p>	<p>Any one of the following:</p> <p>1. A persistent intraluminal filling defect on contrast venography</p> <p>2. Noncompressibility of one or more venous segments on B mode compression ultrasonography</p> <p>3. A clearly defined intraluminal filling defect on contrast enhanced computed tomography</p>
<p>Intestine ischemia</p>	<p>a sudden decrease in intestine perfusion due to arterial occlusion, requiring therapeutic surgical intervention</p>
<p>Acute limb ischemia</p>	<p>a sudden decrease in limb perfusion due to arterial occlusion, threatening limb</p>

	viability, requiring therapeutic dose of heparin and/or surgical intervention
Gastrointestinal tract bleeding	All forms of bleeding in the upper or lower gastrointestinal tract manifested by: hematemesis or hematochezia resulting in dropping hemoglobin concentration may or may not requiring blood transfusion
Multiorgan failure	The presence of altered organ function in acutely ill patients such that homeostasis cannot be maintained without intervention, involves two or more organ systems

Table S2. Details on surgery and anesthesia type

Feature	Total cohort (n=553)	MINS (n=242)	Non-MINS (n=311)	p-value
Type of surgery				
OAR with a tube prosthetic graft, n (%)	252 (45.6)	113 (46.7)	139 (44.7)*	0.92
ABF	114 (20.6)	51 (21.1)	63 (20.3)	
AF	16 (2.9)	6 (2.5)	10 (3.2)	
AI	3 (0.5)	2 (0.8)	1 (0.3)	
ABI	2 (0.4)	0 (0.0)	2 (0.6)	
OAR with a bifurcated prosthetic graft (ABF), n (%)	53 (9.6)	23 (9.5)**	30 (9.6)***	
OAR with a bifurcated prosthetic graft (AF), n (%)	17 (3.1)	9 (3.7)	8 (2.6)	
OAR with a bifurcated prosthetic graft (AI), n (%)	5 (0.9)	2 (0.8)	3 (1.0)	
OAR with a bifurcated prosthetic graft (ABI), n (%)	68 (12.3)	28 (11.6)	40 (12.9)**	
AF + AI, n (%)	1 (0.2)	0 (0.0)	1 (0.3)	
OAR with a bifurcated prosthetic graft (AF + AI), n (%)	21 (3.8)	8 (3.3)	13 (4.2)	

OAR with a bifurcated prosthetic graft (AF + ABI), n (%)	1 (0.2)	0 (0.0)	1 (0.3)	
Type of anesthesia				
General, n (%)	335 (60.6)	178 (73.6)	157 (50.5)	<0.001
General + epidural, n (%)	214 (38.7)	60 (24.8)	154 (49.5)	
General + local, n (%)	4 (0.7)	4 (1.7)	0 (0.0)	
<p>Footnote: MINS, myocardial injury after noncardiac surgery; OAR, open aneurysm repair; ABF, aorto-bifemoral bypass; AF, aorto-femoral bypass; ABI, aorto-biiliac bypass; AI, aorto-iiliac bypass</p> <p>*two patients required reimplantation of the mesenteric inferior artery to the prosthesis</p> <p>** one patient required reimplantation of the mesenteric inferior artery to the prosthesis</p> <p>***one patient required reimplantation of the mesenteric inferior artery to the prosthesis and two - reimplantation of the accessory renal artery</p>				

Table S3. Comparison of patients based on the main reason for surgery

Characteristic	Infrarenal aortic aneurysm (n=417)	Aortoiliac occlusive disease (n=136)	p-value
BASELINE CHARACTERISTICS			
Male sex, n (%)	351 (84.2)	105 (77.2)	0.08
Age, median (IQR) [years]	69.0 (65.0 - 75.0)	62.0 (56.8 - 67.3)	<0.001
Peripheral artery disease, n (%)	221 (53.0)	136 (100.0)	<0.001
History of smoking (current or in the past), n (%)	339 (81.3)	130 (95.6)	<0.001
Hypertension, n (%)	332 (79.6)	85 (63.0)	<0.001
Coronary artery disease, n (%)	156 (37.4)	43 (31.9)	0.29
High-risk coronary artery disease*, n (%)	3 (0.7)	2 (1.5)	0.77
History of myocardial infarction, n (%)	86 (20.6)	17 (12.6)	0.051
Aortic stenosis, n (%)			0.16
None	400 (96.4)	131 (97.0)	
Mild	15 (3.6)	3 (2.2)	
Artificial valve	0 (0.0)	1 (0.7)	

Mechanical prosthesis			
History of cerebrovascular event, n (%)	31 (7.5)	10 (7.4)	1.000
Congestive heart failure, n (%)	32 (7.7)	9 (6.7)	0.84
Diabetes mellitus, n (%)	86 (20.6)	23 (16.9)	0.41
Chronic obstructive pulmonary disease, n (%)	139 (33.3)	28 (20.7)	0.008
The RCRI index, median (IQR)	1.0 (1.0 - 2.0)	1.0 (1.0 - 2.0)	0.49
Baseline eGFR, median (IQR) [ml/min/1.73m ²]	82.5 (65.4 - 99.6)	95.1 (79.3 - 117.8)	<0.001
Baseline hemoglobin, median (IQR) [g/dl]	14.50 (13.5 - 15.3)	14.5 (13.1 - 15.6)	0.81
COMPLICATIONS RATE			
MINS, n (%)	180 (43.2)	62 (45.6)	0.69
AKI, n (%)	80 (19.2)	15 (11.0)	0.04
AKI requiring dialysis, n (%)	15 (3.6)	5 (3.7)	1.00
BIMS, n (%)	193 (46.3)	60 (44.1)	0.73
In-hospital death, n (%)	33 (7.9)	5 (3.7)	0.13
30-day mortality, n (%)	30 (7.2)	6 (4.4)	0.35
30-day rehospitalization, n (%)	4 (1.0)	1 (0.7)	1.00

ICU LOS, median (IQR) [days]	3.0 (2.0 - 4.0)	3.0 (2.0 - 3.0)	0.33
Hospital LOS, median (IQR) [days]	11.0 (9.0 - 14.0)	12.0 (9.0 - 16.0)	0.002
Myocardial infarction, n (%)	31 (7.4)	8 (5.9)	0.67
Gastrointestinal tract bleeding, n (%)	4 (1.0)	1 (0.7)	1.00
Requirement for transfusion after surgery, n (%)	150 (36.0)	47 (34.6)	0.85
Acute congestive heart failure , n (%)	12 (2.9)	5 (3.7)	0.86
Perioperative atrial fibrillation, n (%)	31 (7.4)	8 (5.9)	0.67
Stroke, n (%)	2 (0.5)	0 (0.0)	-
Nonfatal cardiac arrest, n (%)	7 (1.7)	0 (0.0)	-
Pneumonia, n (%)	32 (7.7)	11 (8.1)	1.00
Sepsis, n (%)	21 (5.0)	6 (4.4)	0.95
Pulmonary embolism, n (%)	0 (0.0)	0 (0.0))	-
Deep vein thrombosis, n (%)	1 (0.2)	0 (0.0)	-
Intestine ischemia, n (%)	4 (1.0)	3 (2.2)	0.49
Acute limb ischemia, n (%)	22 (5.3)	10 (7.4)	0.49
Multiorgan failure, n (%)	26 (6.2)	5 (3.7)	0.36
In-hospital reoperation, n (%)	31 (7.4)	15 (11.0)	0.25
Footnote:			

IQR, interquartile range; RCRI, Revised Cardiac Risk Index; eGFR, estimated glomerular filtration rate; MINS, myocardial injury after noncardiac surgery; AKI, acute kidney injury; BIMS, bleeding independently associated with mortality; LOS, length of stay; ICU, intensive care unit;

Table S4. Comparison of patients who did and did not develop AKI and BIMS

	No AKI (n=458)	AKI (n=95)	p-value	No BIMS (n=300)	BIMS (n=253)	p-value
Male sex, n (%)	377 (82.3)	79 (83.2)	0.96	260 (86.7)	196 (77.5)	0.01
Age, median (IQR)	67.0 (62.0 - 73.0)	71.0 (66.0 - 75.5)	<0.001	66.0 (60.8 - 72.0)	70.0 (64.0 - 75.0)	<0.001
Peripheral artery disease, n (%)	294 (64.2)	63 (66.3)	0.78	191 (63.7)	166 (65.6)	0.70
History of smoking (current or in the past), n (%)	402 (87.8)	67 (70.5)	<0.001	267 (89.0)	202 (79.8)	0.01
Hypertension, n (%)	334 (73.1)	83 (87.4)	0.005	221 (73.7)	196 (77.8)	0.31
Coronary artery disease, n (%)	153 (33.5)	46 (48.4)	0.008	101 (33.7)	98 (38.9)	0.24

High-risk coronary artery disease*, n (%)	5 (1.1)	0 (0.0)	0.67	4 (1.3)	1 (0.4)	0.48
History of myocardial infarction, n (%)	80 (17.5)	23 (24.2)	0.17	49 (16.3)	54 (21.4)	0.16
Aortic stenosis, n (%)						
None	441 (96.5)	90 (96.8)		291 (97.0)	240 (96.0)	
Mild	15 (3.3)	3 (3.2)	0.90	8 (2.7)	10 (4.0)	0.45
Artificial valve Mechanical prosthesis	1 (0.2)	0 (0.0)		1 (0.3)	0 (0.0)	
History of cerebrovascular event, n (%)	30 (6.6)	11 (12.0)	0.12	19 (6.3)	22 (8.8)	0.34

Congestive heart failure, n (%)	30 (6.6)	11 (11.6)	0.14	21 (7.0)	20 (7.9)	0.80
Diabetes mellitus, n (%)	88 (19.2)	21 (22.1)	0.62	58 (19.3)	51 (20.2)	0.89
Chronic obstructive pulmonary disease, n (%)	135 (29.5)	32 (33.7)	0.50	81 (27.0)	86 (34.1)	0.09
The RCRI index, median (IQR)	1.0 (1.0 - 2.0)	2.0 (1.0 - 2.0)	<0.001	1.0 (1.0 - 2.0)	1.0 (1.0 - 2.0)	0.10
Baseline eGFR, median (IQR) [ml/min/1.73m ²]	86.9 (72.1 - 108.7)	67.8 (50.5 - 90.6)	<0.001	87.9 (73.0 - 110.4)	81.3 (62.0 - 100.1)	<0.001
Baseline hemoglobin, median (IQR) [g/dl]	14.5 (13.7 - 15.5)	13.5 (11.3 - 14.8)	<0.001	14.9 (14.2 - 15.6)	13.7 (12.2 - 14.7)	<0.001

Footnote: IQR, interquartile range; RCRI, Revised Cardiac Risk Index; eGFR, estimated glomerular filtration rate; MINS, myocardial injury after noncardiac surgery; AKI, acute kidney injury; BIMS, bleeding independently associated with mortality; LOS, length of stay; ICU, intensive care unit;

Table S5. Summary of logistic regression models

Variable	MINS		AKI		BIMS	
	aOR	95% CI	aOR	95% CI	aOR	95% CI
Age	1.02	0.998-1.044	1.022	0.985-1.062	1.048	1.021-1.077
Sex (male)	0.804	0.507-1.276	1.246	0.656-2.479	0.716	0.424-1.204
Hypertension	0.891	0.585-1.359	1.831	0.925-3.919	1.261	0.781-2.053
Coronary artery disease	1.185	0.652-2.156	1.02	0.446-2.308	1.102	0.556-2.183
Surgery duration	1.006	0.823-1.232	1.924	1.449-2.594	2.914	2.208-3.916

Chronic obstructive pulmonary disease	1.827	1.243-2.695	0.866	0.493-1.489	1.321	0.851-2.054
Peripheral arterial disease	1.956	1.33-2.897	1.024	0.593-1.793	0.873	0.566-1.344
RCRI index	1.465	0.994-2.174	1.336	0.803-2.198	0.931	0.596-1.452
eGFR at admission	Not included		0.973	0.961-0.984	Not included	
Urine output/hour during surgery	Not included		0.998	0.995-1.000	Not included	
Hemoglobin at admission	Not included		Not included		0.582	0.502-0.668
<p>Footnote: MINS, myocardial injury after noncardiac surgery; AKI, acute kidney injury; BIMS, bleeding independently associated with mortality; RCRI, Revised Cardiac Risk Index; eGFR, estimated glomerular filtration rate;</p>						

