

SUPPLEMENTARY RESULTS

Supplementary Table 1: Peak urine and plasma biomarker correlations.

		Urine Biomarkers				
		ALB	IL-18	KIM-1	L-FABP	NGAL
Plasma Biomarkers	CKMB	0.09	0.16	0.07	0.31	0.26
	Pro-BNP	0.13	0.11	0.07	0.12	0.16
	TNTHS	0.08	0.04	0.03	0.27	0.17
	TNI	0.07	0.05	0.02	0.26	0.17
	HFABP	0.14	0.17	0.09	0.28	0.24

Darker shaded cells indicate a larger Spearman Correlation between Plasma and Urine Biomarkers. Statistically significant correlations are indicated in bold font.

Supplementary Table 2: Hazard ratios for AKI stage, AKI duration, urinary injury biomarkers, cardiac injury biomarkers with the primary composite outcome of CV events or mortality.

Exposure		Unadjusted Hazard Ratio (95% CI)	Adjusted Hazard Ratio (95% CI)
AKI stage	No AKI	1.00 (referent)	1.00 (referent)
	Stage 1	2.14 (1.61, 2.83)	1.99 (1.46, 2.71)
	Stage 2 or 3	3.96 (2.48, 6.33)	3.52 (2.17, 5.71)
AKI duration	No AKI	1.00 (referent)	1.00 (referent)
	1-2 days	1.91 (1.39, 2.61)	1.97 (1.40, 2.77)
	3-6 days	2.38 (1.62, 3.52)	1.88 (1.23, 2.87)
	7+ days	5.72 (3.52, 9.30)	4.63 (2.76, 7.76)
Log-Transformed Urine Biomarkers			
Albumin		1.19 (1.04, 1.36)	1.10 (0.94, 1.28)
IL-18		1.01 (0.90, 1.14)	1.04 (0.89, 1.21)
KIM-1		1.05 (0.89, 1.25)	1.19 (0.99, 1.43)
L-FABP		1.11 (1.01, 1.22)	1.06 (0.95, 1.17)
NGAL		1.04 (0.96, 1.13)	1.01 (0.92, 1.12)
Log-Transformed Plasma Biomarkers			
CK-MB		1.20 (0.99, 1.46)	1.11 (0.88, 1.42)
NT-proBNP		1.93 (1.64, 2.26)	1.78 (1.49, 2.13)
hs-cTnT		1.39 (1.18, 1.64)	1.34 (1.09, 1.64)
cTnI		1.26 (1.10, 1.43)	1.20 (1.02, 1.41)
H-FABP		1.58 (1.28, 1.95)	1.44 (1.12, 1.86)

Adjusted for STS Score, sex, cardiopulmonary bypass time > 120 minutes, non-elective surgery, hypertension, congestive heart failure, preoperative urine albumin-to-creatinine ratio and cardiac catheterization in the 72 hours before surgery

Supplementary Table 3: Adjusted HRs for AKI stage, AKI duration, urinary injury biomarkers, cardiac injury biomarkers with the outcome of CV events only.

Exposure		Adjusted Hazard Ratio (95% CI)
AKI stage	No AKI	1.00 (referent)
	Stage 1	2.00 (1.35, 2.96)
	Stage 2 or 3	3.48 (1.86, 6.49)
AKI duration	No AKI	1.00 (referent)
	1-2 days	1.89 (1.21, 2.93)
	3-6 days	2.01 (1.19, 3.40)
	7+ days	5.01 (2.61, 9.62)
Log-Transformed Urine Biomarkers		
Albumin		1.08 (0.89, 1.32)
IL-18		0.99 (0.83, 1.19)
KIM-1		1.13 (0.90, 1.42)
L-FABP		1.09 (0.95, 1.25)
NGAL		0.99 (0.87, 1.12)
Log-Transformed Plasma Biomarkers		
CK-MB		1.27 (0.94, 1.72)
NT-proBNP		1.59 (1.27, 1.99)
hs-cTnT		1.32 (1.02, 1.72)
cTnI		1.22 (0.99, 1.49)
H-FABP		1.48 (1.08, 2.04)

Adjusted for STS Score, sex, cardiopulmonary bypass time > 120 minutes, non-elective surgery, hypertension, congestive heart failure, preoperative urine albumin-to-creatinine ratio and cardiac catheterization in the 72 hours before surgery

Supplementary Table 4: Validation of ICD codes for cardiovascular outcomes in the US and Canada.

Outcome	United States		Canada	
	Codes	Validity	Codes	Validity
Death	Vital Statistics	Sensitivity 87-97.9% ²⁷⁻²⁹	Vital Status Field	Sensitivity:94% ²¹ Positive Predictive value 100% ²¹
Acute Coronary Syndrome	ICD-9 Dx 411.0, 411.1, 411.81-.89	Sensitivity 76.5% ³⁰ Specificity 93.9% ³⁰	OHIP DxCode 410	
Acute Myocardial Infarction	ICD-9 Dx 410.x	Positive Predictive Value 94.1% ³¹	ICD-10-CA I21, I22	Sensitivity: 89% ³² Positive Predictive value:87% ³²
Congestive Heart Failure	ICD-9 Dx 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.73, 428.xx	Sensitivity = 76% Specificity = 97% PPV = 97% NPV = 74% ³³	ICD-10-CA I50	
Coronary Artery or Angioplasty or Coronary Artery Bypass Graft Surgery	ICD-9 Pr 36.10, 36.11, 36.12,36.13,36.14,36.15, 36.16	Sensitivity 95.7% Specificity 100% ³⁴	CCI 1IJ76 OHIP Fee Z434	Sensitivity 99-100% ³² Positive Predictive value 97-100% ³²
PCI	ICD-9 Pr 36.01, 36.02, 36.05, 36.06, 36.07, 00.66	Positive Predictive Value 70-100% ³⁵	CCI 1IJ50, 1IJ57GQ	

