

Supplemental Appendix 1. Detailed inclusion and exclusion criteria.

Inclusion criteria	Exclusion Criteria
<ul style="list-style-type: none"> • Age 18 to 89 years. • Documented baseline serum creatinine defined as the outpatient, non-emergency department test value nearest to the index hospitalization within 7 and 365 days prior to admission using an IDMS-traceable serum creatinine assay. • In the TRIBE-AKI consortium, pre-operative serum creatinine results from an IDMS-traceable assay obtained within 7 days before cardiac surgery could be used to define baseline kidney function for the subset of participants who were undergoing non-urgent cardiac surgery. 	<ul style="list-style-type: none"> • Inability to provide informed or surrogate consent. • Died before the three-month post-discharge baseline visit. • Incarcerated, institutionalized, or otherwise unable to participate in the study within a home, community, or clinical setting. • Enrolled in an active interventional study at the three-month in-person post-discharge baseline visit. • Actively pregnant or breastfeeding. • Chronic hemodialysis, peritoneal dialysis or estimated GFR <15 ml/min/1.73 m² not receiving renal replacement therapy before index hospitalization. • Prior solid organ or hematopoietic cell transplant. • Acute glomerulonephritis diagnosed clinically or by biopsy. • Clinically significant urinary tract obstruction confirmed by imaging. • Hospitalization involving acute nephrectomy. • History of multiple myeloma. • Hepatorenal syndrome. • Metastatic cancer or actively treated systemic cancer. • New York Heart Association Class IV heart failure before index admission. • Predicted survival of 12 months or less as determined by the participant's treating physician or study Principal Investigator. • AKI participants who remain hospitalized 90 or more days after the AKI episode. • Receiving renal replacement therapy at the time of the three-month post-discharge baseline visit. • Unable to provide at least 1.5 mL of plasma for adults at the Inpatient visit. • Unable to provide at least 3 mL of urine for adults at the Inpatient visit. • Unable to provide at least 10 mL of blood for adults at the three-month post-discharge baseline visit.

Supplemental Appendix 2. Severity of acute kidney injury and adverse clinical outcomes.

	Hazard Ratio (95% Confidence Interval) of AKI Severity* vs. No AKI							
	Incident CKD	Progressive CKD	Heart Failure		Major Atherosclerotic Cardiovascular Event		Death from Any Cause	
Nested Model	No Pre-existing CKD [†]	Pre-existing CKD	No Pre-existing CKD	Pre-existing CKD	No Pre-existing CKD	Pre-existing CKD	No Pre-existing CKD	Pre-existing CKD
Model 1: Matched [‡] cohort	2.02 (1.55-2.63)	2.26 (1.52-3.35)	1.59 (1.16-2.18)	1.16 (0.93-1.45)	0.84 (0.64-1.11)	0.94 (0.70-1.27)	1.32 (1.03-1.71)	1.76 (1.23-2.53)
Model 2: Model 1 + gender, race/ethnicity, sepsis during index admission, 3-month baseline visit smoking status, diabetes status and body mass index	2.37 (1.60-3.52)	2.44 (1.54-3.85)	1.51 (1.06-2.15)	1.07 (0.83-1.38)	0.79 (0.59-1.07)	0.92 (0.66-1.27)	1.19 (0.89-1.60)	1.86 (1.27-2.72)
Model 3: Model 2 + 3-month baseline visit estimated glomerular filtration rate, plasma cystatin C and urine protein-to-creatinine ratio	N/A	N/A	1.20 (0.89-1.61)	0.86 (0.64-1.16)	0.73 (0.54-0.99)	0.83 (0.57-1.20)	1.12 (0.79-1.58)	1.26 (0.82-1.94)

*AKI severity (KDIGO stage 1, 2 and 3) modeled as linear term.

[†]CKD denotes chronic kidney disease

[‡]Matching variables included Clinical Center, age, pre-index admission estimated glomerular filtration rate, pre-index admission diabetes status, prior cardiovascular disease, and intensive care unit stay during index admission.

Supplemental Appendix 3. Category of duration of acute kidney injury and adverse clinical outcomes.

Outcome*	Adjusted† Hazard Ratio (95% Confidence Interval) of AKI Duration vs. No AKI			
	AKI ≤1 day	AKI >1 day and ≤3 days	AKI >3 days and ≤6 days	AKI >6 days
Incident CKD‡	2.23 (1.46, 3.42)	8.58 (2.78, 26.5)	5.71 (2.11, 15.4)	3.70 (1.53, 8.98)
Progressive CKD	0.94 (0.38, 23.0)	7.08 (2.18, 23.0)	4.45 (1.03, 19.2)	3.70 (1.59, 8.51)
Death from any cause	1.66 (1.06, 2.61)	1.87 (0.98, 3.57)	2.98 (1.26, 7.02)	1.80 (0.88, 3.66)
Heart Failure	0.89 (0.50, 1.60)	2.58 (1.06, 6.26)	2.46 (0.93, 6.52)	4.80 (1.57, 14.6)

* There was no significant association between category of duration of AKI episode and major atherosclerotic cardiovascular events when modeling category of AKI duration as a linear term, so results of the model using AKI duration as a categorical term are not presented.

† Matching variables included Clinical Center, age, pre-index admission estimated glomerular filtration rate, pre-index admission diabetes status, prior cardiovascular disease, and intensive care unit stay during index admission; covariates included gender; race/ethnicity; sepsis during index admission; and 3-month baseline visit smoking status, diabetes status, body mass index, estimated glomerular filtration rate, plasma cystatin C and urine protein-to-creatinine ratio.

‡ CKD denotes chronic kidney disease

Supplemental Appendix 4. Acute kidney injury and adverse clinical outcomes in 1375 patients with and without AKI that were exactly matched on all matching criteria.

	Hazard Ratio (95% Confidence Interval) of AKI vs. No AKI							
	Incident CKD	Progressive CKD	Heart Failure		Major Atherosclerotic Cardiovascular Event		Death from Any Cause	
Nested Model	No Pre-existing CKD*	Pre-existing CKD	No Pre-existing CKD	Pre-existing CKD	No Pre-existing CKD	Pre-existing CKD	No Pre-existing CKD	Pre-existing CKD
Model 1: Matched [†] cohort	3.34 (2.40-4.67)	3.67 (2.04-6.59)	2.68 (1.64-4.37)	1.59 (1.06-2.36)	0.68 (0.39-1.18)	1.33 (0.85-2.09)	1.70 (1.14-2.53)	2.66 (1.77-4.01)
Model 2: Model 1 + gender, race/ethnicity, sepsis during index admission, 3-month baseline visit smoking status, diabetes status and body mass index	2.52 (1.82-3.50)	2.58 (1.50-4.44)	2.67 (1.58-4.51)	1.47 (0.95-2.28)	0.77 (0.44-1.34)	1.37 (0.86-2.17)	1.45 (0.95-2.20)	2.75 (1.81-4.18)
Model 3: Model 2 + 3-month baseline visit estimated glomerular filtration rate, plasma cystatin C and urine protein-to-creatinine ratio	N/A	N/A	2.06 (1.19-3.56)	1.01 (0.62-1.65)	0.71 (0.39-1.26)	1.18 (0.72-1.96)	1.45 (0.92-2.30)	1.88 (1.18-3.01)

*CKD denotes chronic kidney disease

[†]Matching variables included Clinical Center, age, pre-index admission estimated glomerular filtration rate, pre-index admission diabetes status, prior cardiovascular disease, and intensive care unit stay during index admission.