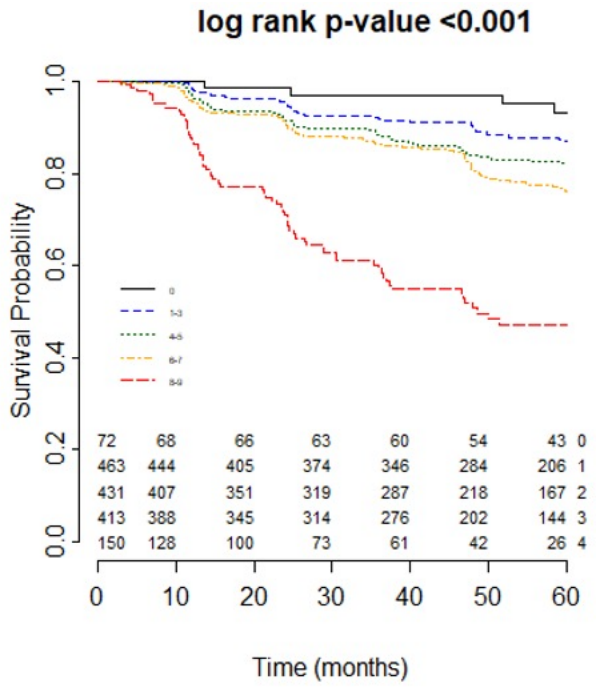
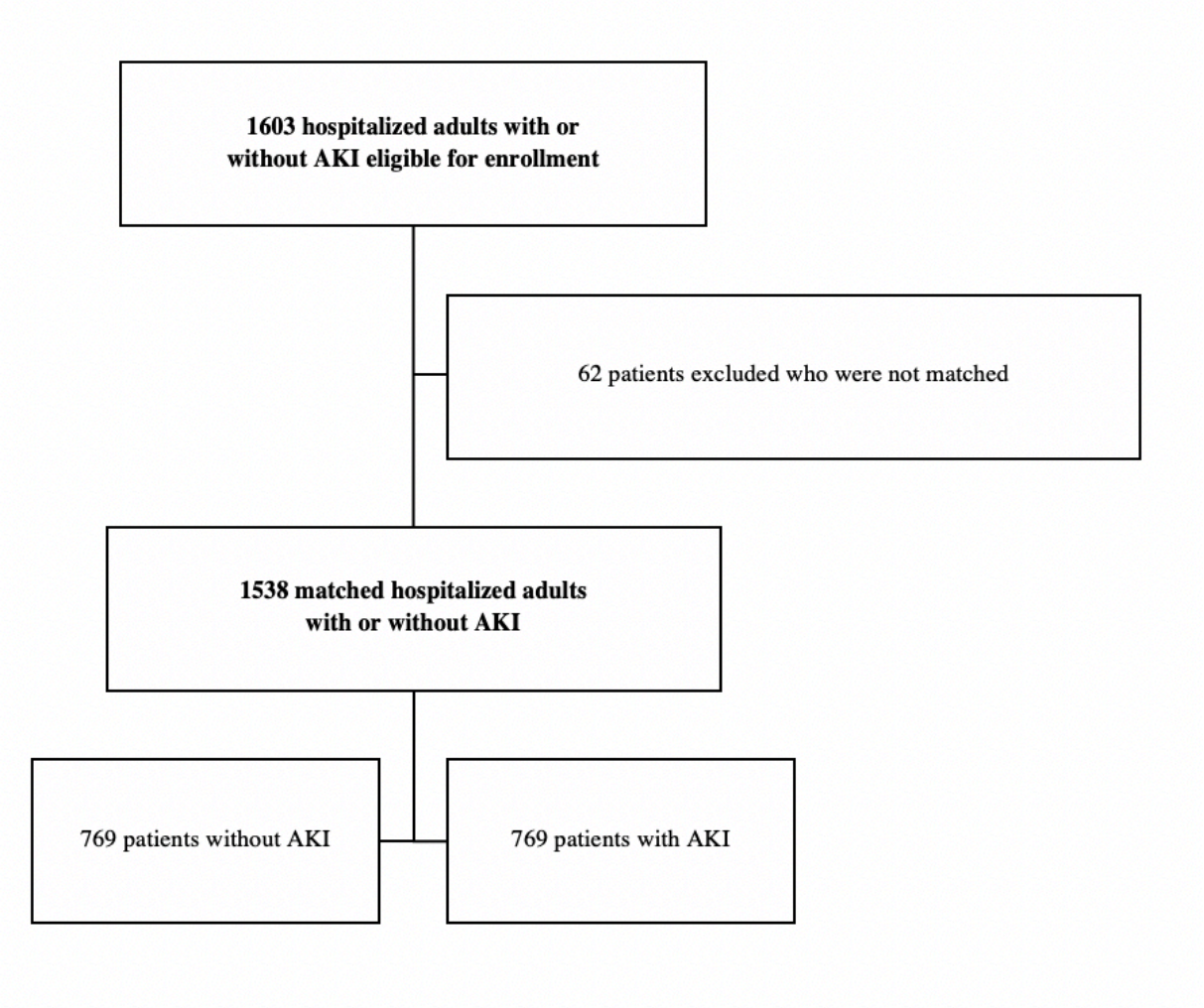
Supplemental Figure 1: Kaplan-Meier Curves of the Proportion of Patients Reaching the Composite Kidney Outcome Relative to Time from Baseline by Biomarker Score



Supplemental Figure 2: Enrollment of patients into the study cohort



Supplemental Table 1: Pearson Correlation Coefficients for Biomarker Concentrations

	MCP-1	YKL-40	UMOD
MCP-1		0.62	-0.01
YKL-40	0.62		-0.03
UMOD	-0.01	-0.03	

Supplemental Table 2: Interaction between Urine Biomarkers and AKI

Event	Biomarker	p-value (interaction)
Composite Renal Outcome	**MCP-1**	0.053
	UMOD	0.497
	YKL-40	0.054
Death	**MCP-1**	0.460
	UMOD	0.450
	YKL-40	0.976

Supplemental Table 3: Change in eGFR at 48 months by Biomarker Quartile

	% Change in eGFR (95% CI) at 48 Months[1]				p-value (biomarker quartiles x follow-up time)
	Q1	**Q2**	**Q3**	**Q4**	
MCP-1	-8.02 (-7.08, -8.96)	-14.78 (-13.85, -15.72)	-14.40 (-13.42, -15.38)	-17.76 (-16.74, -18.78)	< 0.001
UMOD	-19.82 (-18.81, -20.84)	-13.92 (-12.96, -14.88)	-11.28 (-10.30, -12.26)	-9.94 (-9.01, -10.86)	< 0.001
YKL-40	-7.92 (-6.99, -8.85)	-11.71 (-10.8, -12.62)	-15.22 (-14.24, -16.20)	-21.65 (-20.59, -22.71)	< 0.001

[1]Adjusted for AKI and CKD status at index hospitalization, gender, black race, Hispanic ethnicity, smoking status, diabetes, sepsis during index hospitalization, body mass index, log base 2-transformed urine creatinine and albumin at the 3 month in-person visit, eGFR determined at 3 month in-person visit

Supplemental Table 4: Associations Between Urine MCP-1 and YKL-40 with the Composite Kidney Outcome, Stratified by AKI Status

Biomarker (Log_2 transformed)	No AKI		AKI	
	HR (95% CI)[1]		HR (95% CI)[1]	
	Unadjusted	Adjusted[2]	Unadjusted	Adjusted[2]
MCP-1	1.16 (1.04,1.29)	1.46 (1.19,1.80)	1.28 (1.16,1.41)	1.28 (1.11,1.47)
YKL-40	1.19 (1.07,1.31)	1.16 (1.03,1.32)	1.29 (1.21,1.38)	1.15 (1.07,1.24)

HR, hazard ratio; MCP-1, monocyte chemoattractant protein-1

[1] Per unit increase in log base 2-transformed urine biomarker concentrations

[2] Adjusted for CKD status at index hospitalization, gender, black race, Hispanic ethnicity, smoking status, diabetes, sepsis during index hospitalization, body mass index at 3 month in-person visit, log base 2-transformed urine creatinine and albumin at the 3 month in-person visit, eGFR determined at 3 month in-person visit

Supplemental Table 5: Biomarker Risk Score

	Integer Score
MCP-1	
Quartile 1	0
Quartile 2	1
Quartile 3	2
Quartile 4	3
YKL-40	
Quartile 1	0
Quartile 2	1
Quartile 3	2
Quartile 4	3
UMOD	
Quartile 1	3
Quartile 2	2
Quartile 3	1
Quartile 4	0
Maximum Score[1]	9

MCP-1, monocyte chemoattractant protein-1; UMOD, uromodulin

[1] Biomarker risk score represents the sum of the three individual biomarker levels for each patient

Supplemental Table 6: Association Between Biomarker Score and Composite Kidney Outcome

Biomarker Score	Composite Kidney Outcome		
	Mean (95% CI) event rates per 1000 patient-years	**Unadjusted HR (95% CI)**	**Adjusted HR[1] (95% CI)**
0	21.3 (10.6, 42.5)	1.0 (ref)	1.0 (ref)
1-3	31.4 (24.6, 40.0)	1.44 (0.67, 3.08)	1.38 (0.63, 3.00)
4-5	46.3 (19.8, 107.9)	2.00 (0.94, 4.25)	1.90 (0.86, 4.21)
6-7	68.3 (14.3, 327.0)	2.39 (1.13, 5.06)	2.53 (1.12, 5.74)
8-9	100.8 (10.2, 1000.0)	7.83 (3.60, 17.03)	4.31 (1.83, 10.15)

HR, hazard ratio

[1] Adjusted for AKI and CKD status at index hospitalization, gender, black race, Hispanic ethnicity, smoking status, diabetes, sepsis during index hospitalization, body mass index at 3 month in-person visit, log base 2-transformed urine creatinine and albumin at the 3 month in-person visit, eGFR determined at 3 month in-person visit

Supplemental Table 7: Clinical Trial Enrichment by Biomarker Score

Biomarker Score Enrollment Criteria	Event Rate in Control Group	Sample Size	Total Screened
All patients	0.116	8027	8027
1-3, 4-5, 6-7, 8-9	0.121	7719	8041
4-5, 6-7, 8-9	0.145	6403	9851
6-7, 8-9	0.180	5174	13984
8-9	0.352	2605	26051

Supplemental Table 8: Two-way ANOVA for Biomarker and Fibrosis Expression

	Time Factor	Model Factor	Interaction
Ccl2	F (4, 90) = 65.95 p<0.0001	F (1, 90) = 61.96 p<0.0001	F (4, 90) = 7.242 p<0.0001
Chi3l1	F (4, 90) = 21.02 p<0.0001	F (1, 90) = 17.44 p<0.0001	F (4, 90) = 5.171 P=0.0009
Umod	F (4, 83) = 19.24 p<0.0001	F (1, 83) = 5.939 p=0.0169	F (4, 83) = 0.3321 p=0.3321
Col1a1	F (4, 90) = 73.16 p<0.0001	F (4, 90) = 35.51 p<0.0001	F (4, 90) = 4.455 p=0.0025
Col3a1	F (4, 90) = 71.07 p<0.0001	F (4, 90) = 34.33 p<0.0001	F (4, 90) = 3.785 p=0.0068
Fn1	F (4, 90) = 81.93 p<0.0001	F (4, 90) = 22.62 p<0.0001	F (4, 90) = 3.911 p=0.0057
Pdgfrb	F (4, 90) = 41.59 p<0.0001	F (4, 90) = 59.74 p<0.0001	F (4, 90) = 8.445 p<0.0001

Supplemental Table 9: Pearson Correlation Coefficients for Biomarker and Fibrosis Expression

	Atrophy Model							**Repair Model**				
	Chi3l1	***Umod***	***Col1a1***	***Col3a1***	***Fn1***	***Pdgfrb***	***Chi3l1***	***Umod***	***Col1a1***	***Col3a1***	***Fn1***	***Pdgfrb***
Ccl2	0.45	0.35	0.91	0.85	0.90	0.77	0.45	0.28	0.84	0.81	0.85	0.72
Chi3l1		0.26	0.41	0.50	0.45	0.15		0.42	0.64	0.57	0.51	0.59
Umod			0.33	0.22	0.29	0.44			0.17	0.17	0.22	0.15
Col1a1				0.93	0.96	0.87				0.97	0.96	0.92
Col3a1					0.95	0.81					0.97	0.91
Fn1						0.86						0.85