SUPPLEMENTAL DATA

Supplemental Table 1. Urine biomarkers and microscopy by AKI classification

A. Urine Biomarkers		Prerenal (N=164)	ATN (N=51)	Other (N=34)	P *
NGAL (ng/mL)	Mean	604 ±2522	1935 ±4934	330 ±633	0.02
	Median	62 (5.8-1110)	215 (12-3766)	81 (23-896)	<0.001
KIM-1 (ng/mL)	Mean	4.5 ±6.3	7.9 ±11	3.5 ±4.1	0.009
	Median	2.8 (0.6-9.8)	4.2 (1.1-13)	2.0 (0.3-9.2)	0.003
IL-18 (pg/mL)	Mean	180 ±417	344 ±710	158 ±176	0.04
	Median	70 (0-437)	96 (0-589)	98 (0-437)	0.002
FeNa (%)	Mean	1.9 ±2.8	1.5 ±1.7	3.4 ±5.3	0.01
	Median	0.8 (0.1-4.2)	1.0 (0.1-4.3)	1.2 (0.1-6.8)	0.32
FeUrea (%)	Mean	19.0 ±53	13.8 ±11.2	59.8 ±230	0.06
	Median	12.6 (5.0-25.6)	10.0 (2.6-28)	18.2 (5.7-46.9)	0.006

B. Urine Microscopy		(N=115)	(N=35)	(N=15)	P †
Score	0	15 (13)	3 (9)	3 (20)	
	1	40 (35)	8 (23)	3 (20)	0.02
	2	51 (44)	15 (43)	8 (53)	
	≥3	9 (8)	9 (26)	1 (7)	

Values presented as mean ±SD, median (10th-90th percentile), or N (%). AKI, acute kidney injury; NGAL, neutrophil gelatinase-associated lipocalin; KIM-1, kidney injury molecule-1; IL-18, interleukin-18; FeNa, fractional excretion of sodium; FeUrea, fractional excretion of urea.

* P-value for t-test (means) or Wilcoxon test (medians) comparing prerenal with ATN only.

† P-value for Jonckheere-Terpstra trend test comparing prerenal with ATN only.

Supplemental Table 2. Subgroup analyses for biomarker associations with the primary outcome

Baseline Scr definition	Biomarker Quartile	NGAL Unadjusted RR (95% CI)	KIM-1 Unadjusted RR (95% CI)	IL-18 Unadjusted RR (95% CI)	Microscopy Score	Microscopy Unadjusted RR (95% CI)
Admission Scr	First	Ref	Ref	Ref	0	Ref
180 subjects for biomarkers	Second	2.0 (0.8-4.8)	1.6 (0.7-3.8)	1.3 (0.6-2.9)	1	3.4 (0.5-25)
117 subjects for microscopy	Third	1.4 (0.6-3.7)	1.4 (0.6-3.4)	1.7 (0.8-3.7)	2	5.1 (0.7-36)
	Fourth	4.4 (2.0-10)	3.0 (1.4-6.2)	2.8 (1.4-5.7)	≥3	9.8 (1.4-69)
Outpatient Scr	First	*Undefined*	*Undefined*	*Undefined*	0	Ref
52 subjects for biomarkers	Second	*because of no*	*because of no*	*because of no*	1	0.5 (0.1-2.2)
36 subjects for microscopy	Third	*occurrences in Ref*	*occurrences in Ref*	*occurrences in Ref*	2	0.4 (0.1-1.5)
	Fourth				≥3	0.8 (0.2-3.4)
Lowest Scr before enrollment	First	*Undefined*	Ref	Ref	0	*Undefined*
17 subjects for biomarkers	Second	*because of no*	1.8 (N/A) *	0.7 (0.1-4.0)	1	*because of no*
12 subjects for microscopy	Third	*occurrences in Ref*	0.9 (0.4-2.2)	1.0 (0.3-3.5)	2	*occurrences in Ref*
	Fourth		0.1 (N/A) †	1.0 (0.3-3.5)	≥3	

Enrollment Location

	Biomarker Quartile	NGAL Unadjusted RR (95% CI)	KIM-1 Unadjusted RR (95% CI)	IL-18 Unadjusted RR (95% CI)	Microscopy Score	Microscopy Unadjusted RR (95% CI)
ICU	First	Ref	Ref	Ref	0	Ref
120 subjects for biomarkers	Second	2.4 (0.9-6.2)	1.6 (0.8-3.4)	1.1 (0.5-2.4)	1	1.3 (0.3-5.4)
90 subjects for microscopy	Third	1.7 (0.6-4.8)	1.1 (0.5-2.5)	1.2 (0.6-2.4)	2	2.0 (0.5-7.3)
	Fourth	4.7 (2.1-11)	2.1 (1.1-4.3)	1.9 (1.1-3.5)	≥3	2.9 (0.8-11)
Floor	First	Ref	Ref	Ref	0	Ref
129 subjects for biomarkers	Second	4.5 (0.6-37)	1.1 (0.2-5.2)	5.6 (0.7-43)	1	2.2 (0.3-17)
75 subjects for microscopy	Third	7.7 (1.0-57)	3.1 (0.9-11)	5.3 (0.7-41)	2	2.6 (0.4-18)
	Fourth	8.9 (1.2-67)	4.1 (1.3-14)	9.4 (1.3-69)	≥3	4.4 (0.5-38)

Days between admission and enrollment

	Biomarker Quartile	NGAL Unadjusted RR (95% CI)	KIM-1 Unadjusted RR (95% CI)	IL-18 Unadjusted RR (95% CI)	Microscopy Score	Microscopy Unadjusted RR (95% CI)
Less than 3 days	First	Ref	Ref	Ref	0	Ref
107 subjects for biomarkers	Second	7.0 (0.9-53)	1.6 (0.3-8.5)	6.8 (0.9-50)	1	1.1 (0.3-4.7)
72 subjects for microscopy	Third	11 (1.5-80)	4.1 (1.0-17)	4.3 (0.6-33)	2	1.6 (0.4-6.0)
	Fourth	13 (1.8-92)	5.8 (1.4-23)	10 (1.4-72)	≥3	2.9 (0.7-12)
3 to 7 days	First	Ref	Ref	Ref	0	*Undefined*
78 subjects for biomarkers	Second	1.9 (0.5-7.0)	1.2 (0.3-5.1)	0.9 (0.2-3.8)	1	*because of no*
50 subjects for microscopy	Third	0.6 (0.1-3.5)	1.6 (0.4-6.3)	1.5 (0.4-5.7)	2	*occurrences in Ref*
	Fourth	2.8 (0.8-9.9)	2.6 (0.7-9.1)	2.0 (0.5-7.0)	≥3	
Greater than 7 days	First	Ref	Ref	Ref	0	Ref
64 subjects for biomarkers	Second	1.6 (0.3-7.1)	1.6 (0.7-3.5)	1.1 (0.4-2.7)	1	2.7 (0.4-17)
43 subjects for microscopy	Third	1.8 (0.4-7.8)	0.6 (0.2-2.2)	1.4 (0.6-3.2)	2	2.1 (0.3-13)
	Fourth	4.1 (1.2-15)	1.6 (0.7-3.6)	1.7 (0.8-3.4)	≥3	3.3 (0.5-23)

NGAL, neutrophil gelatinase-associated lipocalin; KIM-1, kidney injury molecule-1; IL-18, interleukin-18; Scr, serum creatinine; RR, relative risk from log-binomial regression; CI, confidence interval.

* 95% CI not applicable given the primary outcome occurred in all patients in this subgroup quartile of KIM-1.

[†] 95% CI not applicable given no occurrences for the primary outcome in this subgroup quartile of KIM-1.