

Supplemental Table 1: Multivariable analyses examining interactions between risk factors and risk group associated with the development of AKI

Outcome: AKI	χ^2 (df)	P-value^a
Risk Group*		
Age	4.7 (1)	0.03
Race	2.1 (2)	0.35
<i>Diabetes</i>	-	-
<i>Cardiac Disease</i>	-	-
<i>Chronic Renal Disease</i>	-	-
History of Hypertension	8.1 (1)	0.004
Multiple Comorbidities	21.4 (1)	<0.001
<i>Surgical Admission</i>	-	-
Reference eGFR	1.5 (2)	0.46
Severity of Hypotension^b	0.02 (1)	0.9
Suspected Sepsis	0.7 (1)	0.39
<i>ACE/ARB Inhibitor</i>	-	-
Vancomycin	0.01 (1)	0.93
Aminoglycoside	0.2 (1)	0.66
<i>Antibiotics</i>	-	-
Calcineurin Inhibitor	27.3 (1)	<0.001
<i>Non-Steroidal Drugs</i>	-	-
Diuretics	0.7 (1)	0.4
Other Nephrotoxic Drugs	16.9 (1)	<0.001

Italicized risk factors were considered for inclusion in the main effects model but had a p-value ≤ 0.05 and were ultimately left out. ^a Each p-value comes from a different multivariable logistic regression with risk group, 12 risk factors (in bold) and one interaction. ^b Area under the curve for severity and duration of hypotension (see methods).

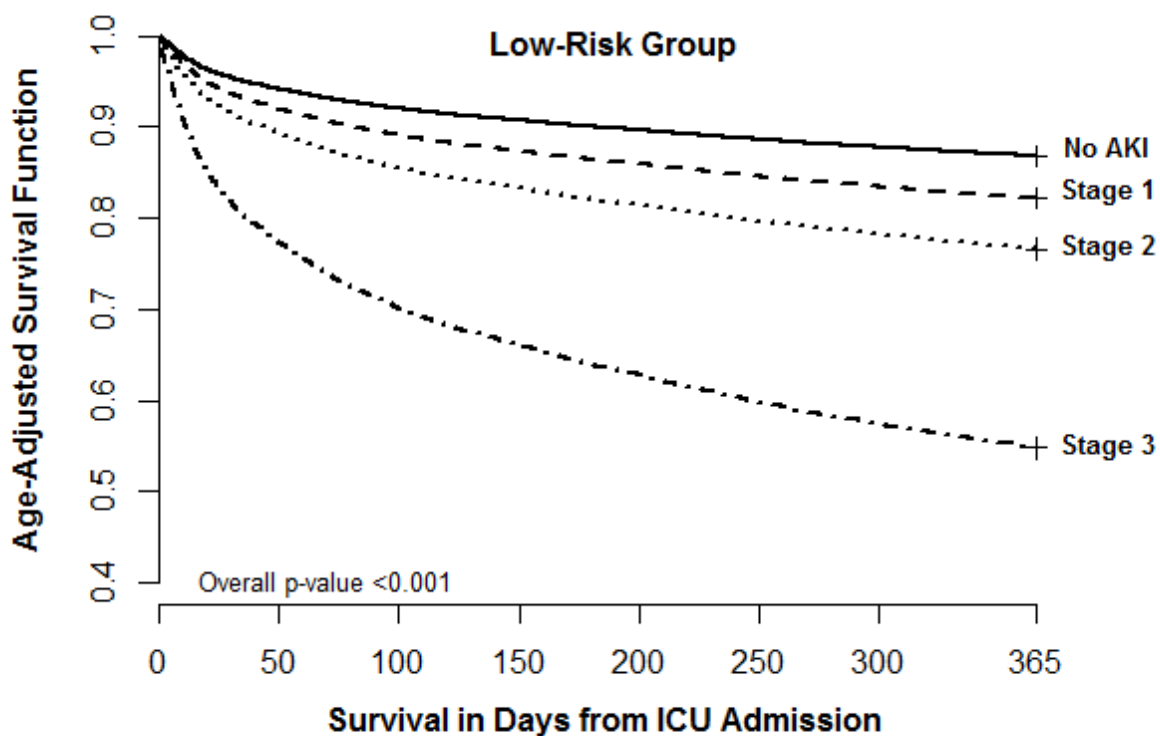
Supplemental Table 2: Characteristics of low risk patients developing AKI stratified by timing of mechanical ventilation or vasopressors

Characteristics*	AKI after MV or Vasopressors (N = 262)	AKI before* MV or Vasopressors (N = 4,375)	All (N = 4,637)	P Value**
Age				
18 to 44	17 (6.5)	512 (11.7)	529 (11.4)	
45 to < 65	94 (35.9)	1,487 (34)	1,581 (34.1)	0.001
65 to < 75	78 (29.8)	930 (21.3)	1,008 (21.7)	
≥ 75	73 (27.9)	1,446 (33.1)	1,519 (32.8)	
Males	166 (63.4)	2,350 (53.7)	2,516 (54.3)	0.002
Race				
White	210 (80.2)	3,386 (77.4)	3,596 (77.6)	
Black	15 (5.7)	352 (8)	367 (7.9)	0.38
Other	37 (14.1)	637 (14.6)	674 (14.5)	
BMI, Kg/m2, Median (Q1-Q3), (n=4,327)	27.6 (23.9-31.4)	28.1 (24.3-33.5)	28.1 (24.2-33.2)	0.03
Comorbid Condition				
Diabetes	31 (11.8)	356 (8.1)	387 (8.3)	0.04
Cardiac Disease	50 (19.1)	444 (10.1)	494 (10.7)	<0.001
Chronic Renal Disease	6 (2.3)	94 (2.1)	100 (2.2)	0.88
History of Hypertension	113 (43.1)	1,653 (37.8)	1,766 (38.1)	0.08
Multiple Comorbidity	110 (42)	1,541 (35.2)	1,651 (35.6)	0.03
Surgical Admission, (n=4,337)	182 (74)	1,952 (47.7)	2,134 (49.2)	<0.001
Creatinine, mg/dl, median (Q1-Q3)				
Baseline (n=1,703)	1.1 (0.8-1.5)	1 (0.7-1.3)	1 (0.7-1.3)	0.02
Admission (n=4,420)	1 (0.8-1.5)	1.1 (0.8-1.7)	1.1 (0.8-1.7)	0.007
Reference	0.9 (0.8-1.1)	0.9 (0.8-1.1)	0.9 (0.8-1.1)	0.05
Reference eGFR				
<30	7 (2.7)	137 (3.1)	144 (3.1)	
30-60	35 (13.4)	467 (10.7)	502 (10.8)	0.38
>60	220 (84)	3,771 (86.2)	3,991 (86.1)	
APS-III Score, Median (Q1-Q3), (n=4,616)^a	47 (35.8-58)	52 (40-66)	51 (40-65)	<0.001
Severity of Hypotension, Median(Q1-Q3)^{a,b}	0 (0-1)	0 (0-0)	0 (0-0)	0.04
Suspected Sepsis^a	18 (6.9)	457 (10.4)	475 (10.2)	0.06
Nephrotoxic Drugs				
ACEI/ARB	51 (19.5)	452 (10.3)	503 (10.8)	<0.001
Vancomycin	31 (11.8)	382 (8.7)	413 (8.9)	0.09

Aminoglycoside	5 (1.9)	95 (2.2)	100 (2.2)	0.78
Other Antibiotics	10 (3.8)	214 (4.9)	224 (4.8)	0.43
Calcineurin Inhibitor	6 (2.3)	117 (2.7)	123 (2.7)	0.71
Non-Steroidal	115 (43.9)	1,051 (24)	1,166 (25.1)	<0.001
Diuretics	92 (35.1)	985 (22.5)	1,077 (23.2)	<0.001
Other Nephrotoxins	3 (1.1)	120 (2.7)	123 (2.7)	0.12
RRT During Hospitalization	33 (12.6)	275 (6.3)	308 (6.6)	<0.001
Length of Stay, Days, Median (Q1,Q3)				
Hospital	16 (11-27)	11 (7-21)	12 (7-21)	<0.001
ICU	7 (4-11)	4 (3-7)	4 (3-7)	<0.001
Hospital Mortality	71 (27.1)	638 (14.6)	709 (15.3)	<0.001
30-day Mortality^c	67 (25.6)	672 (15.4)	739 (15.9)	<0.001
90-day Mortality^c	89 (34)	1,001 (22.9)	1,090 (23.5)	<0.001
365-day Mortality^c	112 (42.7)	1,460 (33.4)	1,572 (33.9)	0.002

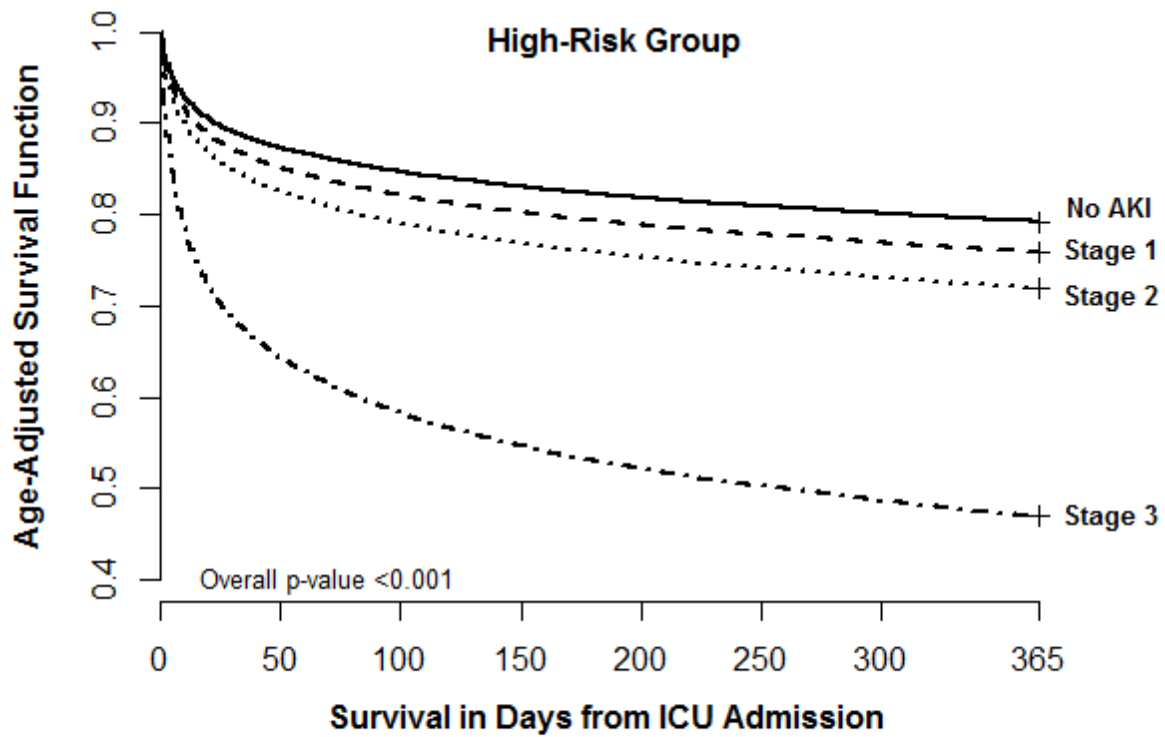
MV = Mechanical ventilation. *Includes patients that never received MV or Vasopressors **P-value for the comparison of Columns 1 and 2. ^a Measured within 24 hours following ICU admission. ^b Area under the curve for severity and duration of hypotension (see methods). APS-III Score = acute physiology score (see methods).

Supplemental Figure 1: Age-Adjusted 1-year Survival by Maximum KDIGO Stage Determined on ICU Day 7 within Each Group. **Top panel:** age was available in n = 18,011 patients. **Bottom panel:** age was available in n = 22,125 patients



No. at risk

No AKI	9892	9386	9148	9018	8889	8765	8663	8534
Stage 1	3482	3140	3011	2931	2881	2815	2771	2727
Stage 2	3557	3035	2856	2763	2680	2608	2554	2501
Stage 3	1080	713	660	627	605	593	579	564



No. at risk

No AKI	6391	5599	5466	5367	5304	5244	5195	5127
Stage 1	4283	3614	3479	3400	3324	3271	3222	3173
Stage 2	8086	6512	6174	5965	5808	5706	5606	5509
Stage 3	3365	1940	1748	1654	1595	1546	1513	1479