

Supplemental Table 1. Characteristics of the healthy control subjects and AKI cohort

Characteristic	Healthy control subjects (n = 267)	AKI (n = 214)	p value
Mean age, years	41.5±16.5	64.5±15.9	<0.001
Men, %	26%	54%	<0.001
White ethnicity, %	82%	91%	<0.001
Hypertension, %	13%	75%	<0.001
Diabetes mellitus, %	2%	44%	<0.001
Preexisting CKD, %	8%	73%	<0.001

Supplemental Table 2. Observed and expected distribution of *KLK-1* alleles in the polymorphic region among all subjects (n = 481)

Observed	F	G	H	I	K	Other	All
F	0.0	0.5	0.0	0.0	0.0	8.5	9
G	0.5	0.0	0.0	0.0	0.0	5.0	5.5
H	0.0	0.0	0.0	4.5	12.0	68.5	85
I	0.0	0.0	4.5	3.0	0.5	45.0	53
K	0.0	0.0	12.0	0.5	0.0	0.0	12.5
Other	8.5	5.0	68.5	45.0	0.0	189.0	316
All	9	5.5	85	53	12.5	316	481

Expected	F	G	H	I	K	Other	All
F	0.2	0.1	1.6	1.0	0.2	5.9	9
G	0.1	0.1	1.0	0.6	0.1	3.6	5.5
H	1.6	1.0	15.0	9.4	2.2	55.8	85
I	1.0	0.6	9.4	5.8	1.4	34.8	53
K	0.2	0.1	2.2	1.4	0.3	8.2	12.5
Other	5.9	3.6	55.8	34.8	8.2	207.6	316
All	9	5.5	85	53	12.5	316	481

Hardy-Weinberg equilibrium χ^2 p value = 0.15.

Supplemental Table 3. Association of *KLKI* alleles with development of AKI in white subjects (n = 413)

<i>KLKI</i> allele	OR (95% CI)	p value
Allele I (per allele copy ↑)		
Unadjusted	1.92 (1.20, 3.06)	0.006
Allele G (per allele copy ↑)		
Unadjusted	8.08 (0.99, 66.27)	0.052
<i>Risk-allele (per allele copy ↑)</i>		
Unadjusted	2.20 (1.39, 3.48)	0.001
Adjusted	<u>2.54 (1.13, 5.72)</u>	<u>0.024</u>
Allele F (per allele copy ↑)		
Unadjusted	0.15 (0.03, 0.68)	0.013
Allele H (per allele copy ↑)		
Unadjusted	0.34 (0.22, 0.52)	<0.001
Allele K (per allele copy ↑)		
Unadjusted	0.05 (0.01, 0.36)	0.003
<i>Protective-allele (per allele copy ↑)</i>		
Unadjusted	0.29 (0.20, 0.43)	<0.001
Adjusted	<u>0.26 (0.13, 0.52)</u>	<u><0.001</u>
<u>Analysis adjusted for age, sex, diabetes, hypertension and pre-existing CKD.</u>		

Supplemental Table 4. Association of the *KLKI* risk-allele (I or G) with adverse outcomes in white subjects with AKI (n = 195)

Outcome variable	OR (95% CI)	p value
≥ 2 -Fold increase in serum creatinine		
Unadjusted	1.428 (0.733, 2.784)	0.295
Adjusted	1.564 (0.758, 3.230)	0.226
Oliguria		
Unadjusted	1.522 (0.803, 2.884)	0.198
Adjusted	1.478 (0.748, 2.922)	0.261
Dialysis requirement		
Unadjusted	1.471 (0.829, 2.609)	0.187
Adjusted	1.583 (0.851, 2.944)	0.147
≥ 2 -Fold increase in serum creatinine, oliguria, or dialysis requirement		
Unadjusted	2.171 (0.924, 5.099)	0.075
Adjusted	2.675 (1.077, 6.645)	0.034
In-hospital death		
Unadjusted	1.232 (0.643, 2.362)	0.529
Adjusted	1.318 (0.583, 2.978)	0.507
≥ 2 -Fold increase in serum creatinine, oliguria, dialysis requirement, or in-hospital death		
Unadjusted	2.008 (0.853, 4.726)	0.110
Adjusted	2.438 (0.982, 6.055)	0.055

Adjustment variables were sex, preexisting CKD and the APACHE II score.