## Supplemental Data

Supplemental Table 1. Table of baseline characteristics with patients dichotomized by CCL14 concentrations above and at or below $1.3 \mathrm{ng} / \mathrm{mL}$.

|  | All patients | $\leq 1.3 \mathrm{ng} / \mathrm{mL}$ | > $1.3 \mathrm{ng} / \mathrm{mL}$ | p value |
| :---: | :---: | :---: | :---: | :---: |
| Patients | 335 | 124 | 211 |  |
| Male | 209 (62.4\%) | 81 (65.3\%) | 128 (60.7\%) | 0.416 |
| Age $^{1}$ (years) | $64(55-73)$ | 63 (55-71) | $64(55-73)$ | 0.473 |
| $\mathrm{BMI}^{\mathbf{1}}$ (kg/m ${ }^{\mathbf{2}}$ ) | 29 (25-35) | 30 (26-36) | 28 (25-35) | 0.131 |
| Race <br> Black or African American Other/Unknown White or Caucasian | $\begin{gathered} 35(10.4 \%) \\ 17(5.1 \%) \\ 283 \text { (84.5\%) } \end{gathered}$ | $\begin{gathered} 17(13.7 \%) \\ 2(1.6 \%) \\ 105(84.7 \%) \end{gathered}$ | $\begin{gathered} 18(8.5 \%) \\ 15(7.1 \%) \\ 178 \text { (84.4\%) } \end{gathered}$ | 0.030 |
| Chronic comorbidities |  |  |  |  |
| CKD | 59 (17.6\%) | 17 (13.7\%) | 42 (20.0\%) | 0.181 |
| Diabetes | 110 (32.8\%) | 42 (34.1\%) | 68 (32.5\%) | 0.810 |
| CHF | 73 (21.8\%) | 32 (26.4\%) | 41 (19.4\%) | 0.168 |
| CAD | 118 (35.2\%) | 56 (45.5\%) | 62 (29.8\%) | 0.004 |
| Hypertension | 228 (68.1\%) | 88 (71.5\%) | 140 (66.4\%) | 0.333 |
| COPD | 54 (16.1\%) | 16 (13.0\%) | 38 (18.1\%) | 0.281 |
| Cancer | 85 (25.4\%) | 23 (18.5\%) | 62 (29.5\%) | 0.028 |
| Reason for ICU admission |  |  |  |  |
| Respiratory | 96 (28.7\%) | 24 (19.4\%) | 72 (34.1\%) | 0.004 |
| Surgery | 105 (31.3\%) | 41 (33.1\%) | 64 (30.3\%) | 0.627 |
| Cardiovascular | 149 (44.5\%) | 54 (43.5\%) | 95 (45.0\%) | 0.821 |
| Sepsis | 75 (22.4\%) | 19 (15.3\%) | 56 (26.5\%) | 0.021 |
| Neurological | 17 (5.1\%) | 8 (6.5\%) | 9 (4.3\%) | 0.442 |
| Trauma | 7 (2.1\%) | 3 (2.4\%) | 4 (1.9\%) | 0.713 |
| Other | 109 (32.5\%) | 39 (31.5\%) | 70 (33.2\%) | 0.809 |
| Vasopressors ${ }^{2}$ | 213 (63.6\%) | 81 (65.3\%) | 132 (62.6\%) | 0.640 |
| Diuretics ${ }^{2}$ | 181 (54.0\%) | 76 (61.3\%) | 105 (49.8\%) | 0.042 |
| Fluid balance over the $\mathbf{7 2}$ hours prior to enrollment ${ }^{1,3}(\mathrm{~mL})$ | $\begin{array}{\|c\|} \hline 3271(1285- \\ 6422) \\ \hline \end{array}$ | $\begin{gathered} 2267(365- \\ 4219) \\ \hline \end{gathered}$ | $\begin{gathered} 4244(1851- \\ 7430) \\ \hline \end{gathered}$ | <0.001 |
| Days from ICU admission to enrollment ${ }^{1}$ | 1.1 (0.7-2.2) | $1.4(0.8-2.8)$ | 1.1 (0.7-1.9) | 0.037 |
| Mechanical ventilation | 187 (55.8\%) | 65 (52.4\%) | 122 (57.8\%) | 0.363 |
| Baseline serum creatinine ${ }^{\mathbf{1}}$ (mg/dL) | 1.0 (0.8-1.2) | 1.0 (0.7-1.2) | 1.0 (0.8-1.3) | 0.036 |
| Enrollment serum creatinine ${ }^{1}$ (mg/dL) | 2.4 (1.7-3.3) | 1.7 (1.3-2.5) | 2.8 (2.1-3.6) | <0.001 |
| Enrollment KDIGO Stage |  |  |  |  |
| No AKI | 18 (5.4\%) | 16 (12.9\%) | 2 (0.9\%) |  |
| Stage 1 | 37 (11.0\%) | 23 (18.5\%) | 14 (6.6\%) | $<0.001$ |
| Stage 2 | 169 (50.4\%) | 67 (54.0\%) | 102 (48.3\%) |  |
| Stage 3 | 111 (33.1\%) | 18 (14.5\%) | 93 (44.1\%) |  |
| Enrollment non-renal APACHE III score $^{1}$ | $54(43-71)$ | 48 (37-64) | $57(45-74)$ | <0.001 |

${ }^{1}$ Median (interquartile range)
${ }^{2}$ Vasopressors and diuretics are defined as any use from 3 days before through Day 1 (day of study enrollment).
${ }^{3}$ Fluid balance is cumulative from the day prior to through the day of enrollment.

Supplemental Table 2A - Comparison of the AUCs for Pre-Enrollment Urine Output (UO) with Urine CCL14 Concentration for the development of Persistent Severe AKI

| Predictor* $^{*}$ | ROC AUC | P-value for AUC Difference |
| :---: | :---: | :---: |
| UCCL14 concentration | $0.82(0.77-0.87)$ | $<0.0001$ |
| Mean pre-enrollment weight-adjusted hourly UO** | $0.63(0.57-0.70)^{* * *}$ |  |

* Two patients in the analysis cohort did not have pre-enrollment UO data and were excluded from analysis ( $\mathrm{N}=333$ )
** pre-enrollment includes a maximum of 24 hours of UO data
*** to facilitate comparison, $A \cup C$ is reported as 1 - (actual $A U C$ ) since a lower mean UO is associated with the presence of PS-AKI

Supplemental Table 2B - Urine output and Urine CCL14 Concentration in a Logistic Regression Model for the Development of Persistent Severe AKI

| Variable | Odds Ratio | P-value |
| :--- | :---: | :---: |
| Mean pre-enrollment weight-adjusted hourly UO | $0.76(0.57-1.00)$ | 0.053 |
| Urine CCL14 $>1.3$ and $\leq 13$ | $5.91(2.91-13.07)$ | $<0.001$ |
| Urine CCL14 $>13$ | $23.70(9.98-61.16)$ | $<0.001$ |

Supplemental Table 3. Operating characteristics for CCL14 concentration cutoffs from 0.2 to 30 $\mathrm{ng} / \mathrm{mL}$ for the primary endpoint, persistent severe AKI.

| Cutoff ( $\mathrm{ng} / \mathrm{mL}$ ) | $\begin{gathered} \% \\ \text { below } \end{gathered}$ | \% above | Sensitivity | Specificity | Negative Predictive Value | Positive <br> Predictive Value | Negative <br> Likelihood Ratio | Positive Likelihood Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.2 | 3.6 | 96.4 | $\begin{gathered} 99 \% \\ 95 \%-100 \% \end{gathered}$ | $\begin{gathered} 5 \% \\ 2 \%-9 \% \\ \hline \end{gathered}$ | $\begin{gathered} 92 \% \\ 62 \%-100 \% \end{gathered}$ | $\begin{gathered} 34 \% \\ 29 \%-39 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.19 \\ 0.02-1.42 \end{gathered}$ | $\begin{gathered} \hline 1.04 \\ 1.01-1.08 \\ \hline \end{gathered}$ |
| 0.3 | 6.3 | 93.7 | $\begin{gathered} 99 \% \\ 95 \%-100 \% \end{gathered}$ | $\begin{gathered} 9 \% \\ 6 \%-13 \% \end{gathered}$ | $\begin{gathered} 95 \% \\ 76 \%-100 \% \end{gathered}$ | $\begin{gathered} 35 \% \\ 29 \%-40 \% \end{gathered}$ | $\begin{gathered} 0.10 \\ 0.01-0.75 \end{gathered}$ | $\begin{gathered} \hline 1.09 \\ 1.04-1.14 \end{gathered}$ |
| 0.4 | 10.1 | 89.9 | $\begin{gathered} 99 \% \\ 95 \%-100 \% \end{gathered}$ | $\begin{gathered} 15 \% \\ 10 \%-20 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 85 \%-100 \% \end{gathered}$ | $\begin{gathered} 36 \% \\ 31 \%-42 \% \end{gathered}$ | $\begin{gathered} 0.06 \\ 0.01-0.45 \end{gathered}$ | $\begin{gathered} \hline 1.16 \\ 1.10-1.23 \end{gathered}$ |
| 0.5 | 13.4 | 86.6 | $\begin{gathered} 98 \% \\ 94 \%-100 \% \end{gathered}$ | $\begin{gathered} 19 \% \\ 14 \%-25 \% \end{gathered}$ | $\begin{gathered} 96 \% \\ 85 \%-99 \% \end{gathered}$ | $\begin{gathered} 37 \% \\ 32 \%-43 \% \end{gathered}$ | $\begin{gathered} 0.10 \\ 0.02-0.39 \end{gathered}$ | $\begin{gathered} 1.21 \\ 1.13-1.30 \end{gathered}$ |
| 0.6 | 18.2 | 81.8 | $\begin{gathered} 95 \% \\ 90 \%-99 \% \\ \hline \end{gathered}$ | $\begin{gathered} 25 \% \\ 19 \%-31 \% \end{gathered}$ | $\begin{gathered} 92 \% \\ 82 \%-97 \% \\ \hline \end{gathered}$ | $\begin{gathered} 38 \% \\ 33 \%-44 \% \end{gathered}$ | $\begin{gathered} \hline 0.18 \\ 0.08-0.44 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.27 \\ 1.17-1.38 \\ \hline \end{gathered}$ |
| 0.7 | 21.2 | 78.8 | $\begin{gathered} 94 \% \\ 87 \%-97 \% \\ \hline \end{gathered}$ | $\begin{gathered} 28 \% \\ 23 \%-35 \% \end{gathered}$ | $\begin{gathered} 90 \% \\ 81 \%-96 \% \end{gathered}$ | $\begin{gathered} 39 \% \\ 33 \%-45 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.22 \\ 0.11-0.47 \\ \hline \end{gathered}$ | $\begin{gathered} 1.31 \\ 1.19-1.44 \\ \hline \end{gathered}$ |
| 0.8 | 24.8 | 75.2 | $\begin{gathered} 93 \% \\ 86 \%-97 \% \\ \hline \end{gathered}$ | $\begin{gathered} 33 \% \\ 27 \%-40 \% \\ \hline \end{gathered}$ | $\begin{gathered} 90 \% \\ 82 \%-96 \% \\ \hline \end{gathered}$ | $\begin{gathered} 40 \% \\ 34 \%-47 \% \end{gathered}$ | $\begin{gathered} \hline 0.22 \\ 0.11-0.44 \\ \hline \end{gathered}$ | $\begin{gathered} 1.39 \\ 1.25-1.55 \end{gathered}$ |
| 0.9 | 27.5 | 72.5 | $\begin{gathered} 93 \% \\ 86 \%-97 \% \end{gathered}$ | $\begin{gathered} 37 \% \\ 31 \%-44 \% \\ \hline \end{gathered}$ | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 42 \% \\ 36 \%-48 \% \end{gathered}$ | $\begin{gathered} \hline 0.19 \\ 0.10-0.39 \end{gathered}$ | $\begin{gathered} \hline 1.48 \\ 1.32-1.66 \end{gathered}$ |
| 1 | 31.0 | 69.0 | $\begin{gathered} 92 \% \\ 85 \%-96 \% \end{gathered}$ | $\begin{gathered} 42 \% \\ 36 \%-49 \% \end{gathered}$ | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 44 \% \\ 37 \%-50 \% \end{gathered}$ | $\begin{gathered} 0.19 \\ 0.10-0.37 \end{gathered}$ | $\begin{gathered} \hline 1.59 \\ 1.40-1.80 \end{gathered}$ |
| 1.1 | 33.7 | 66.3 | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 46 \% \\ 39 \%-53 \% \end{gathered}$ | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 45 \% \\ 38 \%-52 \% \end{gathered}$ | $\begin{gathered} 0.20 \\ 0.11-0.36 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.68 \\ 1.47-1.92 \end{gathered}$ |
| 1.2 | 35.8 | 64.2 | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 49 \% \\ 42 \%-56 \% \end{gathered}$ | $\begin{gathered} 92 \% \\ 85 \%-96 \% \end{gathered}$ | $\begin{gathered} 47 \% \\ 40 \%-53 \% \end{gathered}$ | $\begin{gathered} 0.19 \\ 0.10-0.34 \end{gathered}$ | $\begin{gathered} 1.78 \\ 1.55-2.05 \\ \hline \end{gathered}$ |
| 1.3 | 37.0 | 63.0 | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 51 \% \\ 44 \%-57 \% \end{gathered}$ | $\begin{gathered} 92 \% \\ 86 \%-96 \% \end{gathered}$ | $\begin{gathered} 47 \% \\ 40 \%-54 \% \end{gathered}$ | $\begin{gathered} 0.18 \\ 0.10-0.33 \end{gathered}$ | $\begin{gathered} 1.84 \\ 1.59-2.13 \end{gathered}$ |
| 1.4 | 40.3 | 59.7 | $\begin{gathered} 88 \% \\ 81 \%-94 \% \end{gathered}$ | $\begin{gathered} 54 \% \\ 47 \%-61 \% \end{gathered}$ | $\begin{gathered} 90 \% \\ 84 \%-95 \% \end{gathered}$ | $\begin{gathered} 49 \% \\ 41 \%-56 \% \end{gathered}$ | $\begin{gathered} 0.22 \\ 0.13-0.37 \end{gathered}$ | $\begin{gathered} 1.93 \\ 1.65-2.26 \end{gathered}$ |
| 1.5 | 41.2 | 58.8 | $\begin{gathered} 88 \% \\ 81 \%-94 \% \end{gathered}$ | $\begin{gathered} 56 \% \\ 49 \%-62 \% \end{gathered}$ | $\begin{gathered} 91 \% \\ 84 \%-95 \% \end{gathered}$ | $\begin{gathered} 49 \% \\ 42 \%-56 \% \end{gathered}$ | $\begin{gathered} 0.21 \\ 0.13-0.36 \end{gathered}$ | $\begin{gathered} 1.98 \\ 1.69-2.33 \end{gathered}$ |
| 1.6 | 42.7 | 57.3 | $\begin{gathered} 87 \% \\ 80 \%-93 \% \\ \hline \end{gathered}$ | $\begin{gathered} 57 \% \\ 51 \%-64 \% \end{gathered}$ | $\begin{gathered} 90 \% \\ 84 \%-95 \% \end{gathered}$ | $\begin{gathered} 50 \% \\ 43 \%-57 \% \end{gathered}$ | $\begin{gathered} \hline 0.22 \\ 0.13-0.37 \\ \hline \end{gathered}$ | $\begin{gathered} 2.05 \\ 1.73-2.42 \end{gathered}$ |
| 1.7 | 43.6 | 56.4 | $\begin{gathered} 86 \% \\ 79 \%-92 \% \end{gathered}$ | $\begin{gathered} 58 \% \\ 51 \%-65 \% \\ \hline \end{gathered}$ | $\begin{gathered} 90 \% \\ 84 \%-94 \% \\ \hline \end{gathered}$ | $\begin{gathered} 50 \% \\ 43 \%-58 \% \end{gathered}$ | $\begin{gathered} 0.23 \\ 0.14-0.38 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 2.07 \\ 1.74-2.45 \end{gathered}$ |
| 1.8 | 46.0 | 54.0 | $\begin{gathered} 85 \% \\ 77 \%-91 \% \end{gathered}$ | $\begin{gathered} 61 \% \\ 55 \%-68 \% \end{gathered}$ | $\begin{gathered} 90 \% \\ 84 \%-94 \% \end{gathered}$ | $\begin{gathered} 52 \% \\ 44 \%-59 \% \end{gathered}$ | $\begin{gathered} 0.24 \\ 0.15-0.38 \end{gathered}$ | $\begin{gathered} 2.21 \\ 1.84-2.65 \end{gathered}$ |
| 1.9 | 47.5 | 52.5 | $\begin{gathered} 85 \% \\ 76 \%-91 \% \end{gathered}$ | $\begin{gathered} 63 \% \\ 56 \%-69 \% \end{gathered}$ | $\begin{gathered} 89 \% \\ 83 \%-94 \% \end{gathered}$ | $\begin{gathered} 53 \% \\ 45 \%-60 \% \end{gathered}$ | $\begin{gathered} \hline 0.24 \\ 0.16-0.38 \end{gathered}$ | $\begin{gathered} \hline 2.29 \\ 1.90-2.77 \end{gathered}$ |
| 2 | 48.4 | 51.6 | $\begin{gathered} 84 \% \\ 75 \%-90 \% \end{gathered}$ | $\begin{gathered} 64 \% \\ 57 \%-70 \% \end{gathered}$ | $\begin{gathered} 89 \% \\ 83 \%-93 \% \end{gathered}$ | $\begin{gathered} 53 \% \\ 45 \%-61 \% \end{gathered}$ | $\begin{gathered} 0.26 \\ 0.17-0.39 \end{gathered}$ | $\begin{gathered} \hline 2.32 \\ 1.92-2.82 \end{gathered}$ |
| 2.1 | 48.4 | 51.6 | $\begin{gathered} 84 \% \\ 75 \%-90 \% \\ \hline \end{gathered}$ | $\begin{gathered} 64 \% \\ 57 \%-70 \% \end{gathered}$ | $\begin{gathered} 89 \% \\ 83 \%-93 \% \\ \hline \end{gathered}$ | $\begin{gathered} 53 \% \\ 45 \%-61 \% \end{gathered}$ | $\begin{gathered} \hline 0.26 \\ 0.17-0.39 \\ \hline \end{gathered}$ | $\begin{gathered} 2.32 \\ 1.92-2.82 \\ \hline \end{gathered}$ |
| 2.2 | 49.6 | 50.4 | $\begin{gathered} 83 \% \\ 74 \%-89 \% \end{gathered}$ | $\begin{gathered} 65 \% \\ 59 \%-72 \% \\ \hline \end{gathered}$ | $\begin{gathered} 89 \% \\ 83 \%-93 \% \\ \hline \end{gathered}$ | $\begin{gathered} 54 \% \\ 46 \%-62 \% \end{gathered}$ | $\begin{gathered} \hline 0.26 \\ 0.17-0.40 \\ \hline \end{gathered}$ | $\begin{gathered} 2.39 \\ 1.96-2.91 \end{gathered}$ |
| 2.3 | 50.1 | 49.9 | $\begin{gathered} \hline 83 \% \\ 74 \%-89 \% \\ \hline \end{gathered}$ | $\begin{gathered} 66 \% \\ 60 \%-72 \% \\ \hline \end{gathered}$ | $\begin{gathered} 89 \% \\ 83 \%-93 \% \\ \hline \end{gathered}$ | $\begin{gathered} 54 \% \\ 47 \%-62 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.26 \\ 0.17-0.40 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 2.45 \\ 2.0-3.0 \\ \hline \end{gathered}$ |
| 2.4 | 50.7 | 49.3 | $\begin{gathered} 83 \% \\ 74 \%-89 \% \end{gathered}$ | $\begin{gathered} 67 \% \\ 61 \%-73 \% \end{gathered}$ | $\begin{gathered} 89 \% \\ 83 \%-93 \% \end{gathered}$ | $\begin{gathered} 55 \% \\ 47 \%-63 \% \end{gathered}$ | $\begin{gathered} \hline 0.26 \\ 0.17-0.39 \end{gathered}$ | $\begin{gathered} \hline 2.52 \\ 2.05-3.09 \end{gathered}$ |
| 2.5 | 52.2 | 47.8 | $\begin{gathered} 81 \% \\ 72 \%-88 \% \end{gathered}$ | $\begin{gathered} 68 \% \\ 62 \%-74 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 82 \%-92 \% \\ \hline \end{gathered}$ | $\begin{gathered} 56 \% \\ 48 \%-63 \% \end{gathered}$ | $\begin{gathered} 0.28 \\ 0.19-0.41 \end{gathered}$ | $\begin{gathered} 2.56 \\ 2.07-3.17 \end{gathered}$ |
| 2.6 | 53.7 | 46.3 | $\begin{gathered} 80 \% \\ 71 \%-87 \% \end{gathered}$ | $\begin{gathered} 70 \% \\ 64 \%-76 \% \\ \hline \end{gathered}$ | $\begin{gathered} 88 \% \\ 82 \%-92 \% \end{gathered}$ | $\begin{gathered} 57 \% \\ 49 \%-65 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.28 \\ 0.19-0.42 \end{gathered}$ | $\begin{gathered} 2.69 \\ 2.15-3.35 \end{gathered}$ |
| 2.7 | 54.6 | 45.4 | $\begin{gathered} 80 \% \\ 71 \%-87 \% \end{gathered}$ | $\begin{gathered} 72 \% \\ 65 \%-77 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 82 \%-92 \% \end{gathered}$ | $\begin{gathered} 58 \% \\ 50 \%-66 \% \end{gathered}$ | $\begin{gathered} 0.28 \\ 0.19-0.41 \end{gathered}$ | $\begin{gathered} 2.81 \\ 2.24-3.53 \end{gathered}$ |
| 2.8 | 55.5 | 44.5 | $\begin{gathered} 80 \% \\ 71 \%-87 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 67 \%-79 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 83 \%-92 \% \end{gathered}$ | $\begin{gathered} 59 \% \\ 51 \%-67 \% \end{gathered}$ | $\begin{gathered} 0.27 \\ 0.19-0.40 \end{gathered}$ | $\begin{gathered} 2.95 \\ 2.34-3.73 \end{gathered}$ |
| 2.9 | 56.1 | 43.9 | $\begin{gathered} 80 \% \\ 71 \%-87 \% \end{gathered}$ | $\begin{gathered} 74 \% \\ 68 \%-79 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 83 \%-93 \% \end{gathered}$ | $\begin{gathered} 60 \% \\ 51 \%-68 \% \end{gathered}$ | $\begin{gathered} 0.27 \\ 0.19-0.40 \end{gathered}$ | $\begin{gathered} 3.05 \\ 2.40-3.87 \end{gathered}$ |
| 3 | 56.7 | 43.3 | $\begin{gathered} 80 \% \\ 71 \%-87 \% \end{gathered}$ | $\begin{gathered} 75 \% \\ 68 \%-80 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 83 \%-93 \% \end{gathered}$ | $\begin{gathered} 61 \% \\ 52 \%-69 \% \end{gathered}$ | $\begin{gathered} 0.27 \\ 0.18-0.39 \end{gathered}$ | $\begin{gathered} 3.16 \\ 2.48-4.03 \end{gathered}$ |
| 3.5 | 59.7 | 40.3 | $\begin{gathered} 77 \% \\ 68 \%-85 \% \end{gathered}$ | $\begin{gathered} 78 \% \\ 72 \%-83 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 82 \%-92 \% \\ \hline \end{gathered}$ | $\begin{gathered} 63 \% \\ 54 \%-71 \% \end{gathered}$ | $\begin{gathered} 0.29 \\ 0.21-0.42 \end{gathered}$ | $\begin{gathered} 3.48 \\ 2.67-4.53 \end{gathered}$ |
| 4 | 61.8 | 38.2 | $\begin{gathered} 75 \% \\ 66 \%-83 \% \\ \hline \end{gathered}$ | $\begin{gathered} 80 \% \\ 74 \%-85 \% \\ \hline \end{gathered}$ | $\begin{gathered} 87 \% \\ 82 \%-91 \% \\ \hline \end{gathered}$ | $\begin{gathered} 65 \% \\ 56 \%-73 \% \end{gathered}$ | $\begin{gathered} 0.31 \\ 0.22-0.43 \end{gathered}$ | $\begin{gathered} 3.77 \\ 2.85-5.0 \\ \hline \end{gathered}$ |


| Cutoff <br> (ng/mL) | \% below | $\begin{gathered} \text { \% } \\ \text { above } \end{gathered}$ | Sensitivity | Specificity | Negative Predictive Value | Positive Predictive Value | Negative Likelihood Ratio | Positive Likelihood Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4.5 | 64.5 | 35.5 | $\begin{gathered} 71 \% \\ 61 \%-79 \% \\ \hline \end{gathered}$ | $\begin{gathered} 82 \% \\ 76 \%-87 \% \end{gathered}$ | $\begin{gathered} \hline 85 \% \\ 80 \%-90 \% \\ \hline \end{gathered}$ | $\begin{gathered} 66 \% \\ 56 \%-74 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.36 \\ 0.26-0.48 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 3.89 \\ 2.88-5.26 \\ \hline \end{gathered}$ |
| 5 | 66.9 | 33.1 | $\begin{gathered} 68 \% \\ 59 \%-77 \% \end{gathered}$ | $\begin{gathered} 84 \% \\ 79 \%-89 \% \end{gathered}$ | $\begin{gathered} 84 \% \\ 79 \%-89 \% \\ \hline \end{gathered}$ | $\begin{gathered} 68 \% \\ 58 \%-76 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.38 \\ 0.29-0.50 \end{gathered}$ | $\begin{gathered} \hline 4.26 \\ 3.08-5.90 \\ \hline \end{gathered}$ |
| 5.5 | 69.3 | 30.7 | $\begin{gathered} 65 \% \\ 55 \%-73 \% \end{gathered}$ | $\begin{gathered} 86 \% \\ 81 \%-90 \% \end{gathered}$ | $\begin{gathered} \hline 83 \% \\ 78 \%-88 \% \end{gathered}$ | $\begin{gathered} 69 \% \\ 59 \%-78 \% \end{gathered}$ | $\begin{gathered} 0.41 \\ 0.32-0.53 \end{gathered}$ | $\begin{gathered} 4.54 \\ 3.20-6.44 \end{gathered}$ |
| 6 | 70.7 | 29.3 | $\begin{gathered} 61 \% \\ 51 \%-70 \% \\ \hline \end{gathered}$ | $\begin{gathered} 86 \% \\ 81 \%-90 \% \end{gathered}$ | $\begin{gathered} \hline 82 \% \\ 76 \%-87 \% \\ \hline \end{gathered}$ | $\begin{gathered} 68 \% \\ 58 \%-77 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.45 \\ 0.36-0.58 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 4.42 \\ 3.09-6.33 \\ \hline \end{gathered}$ |
| 6.5 | 71.6 | 28.4 | $\begin{gathered} 58 \% \\ 48 \%-68 \% \\ \hline \end{gathered}$ | $\begin{gathered} 86 \% \\ 81 \%-90 \% \\ \hline \end{gathered}$ | $\begin{gathered} 81 \% \\ 75 \%-86 \% \\ \hline \end{gathered}$ | $\begin{gathered} 67 \% \\ 57 \%-77 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.49 \\ 0.39-0.61 \\ \hline \end{gathered}$ | $\begin{gathered} 4.22 \\ 2.94-6.07 \\ \hline \end{gathered}$ |
| 7 | 73.4 | 26.6 | $\begin{gathered} 55 \% \\ 45 \%-64 \% \\ \hline \end{gathered}$ | $\begin{gathered} 87 \% \\ 82 \%-91 \% \end{gathered}$ | $\begin{gathered} \hline 80 \% \\ 74 \%-85 \% \end{gathered}$ | $\begin{gathered} 67 \% \\ 57 \%-77 \% \end{gathered}$ | $\begin{gathered} \hline 0.52 \\ 0.42-0.64 \end{gathered}$ | $\begin{gathered} \hline 4.23 \\ 2.89-6.19 \\ \hline \end{gathered}$ |
| 7.5 | 75.8 | 24.2 | $\begin{gathered} 49 \% \\ 39 \%-59 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 83 \%-92 \% \end{gathered}$ | $\begin{gathered} 78 \% \\ 72 \%-83 \% \end{gathered}$ | $\begin{gathered} 67 \% \\ 55 \%-77 \% \end{gathered}$ | $\begin{gathered} 0.58 \\ 0.48-0.70 \end{gathered}$ | $\begin{gathered} 4.09 \\ 2.74-6.11 \end{gathered}$ |
| 8 | 77.0 | 23.0 | $\begin{gathered} \hline 46 \% \\ 37 \%-56 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 84 \%-92 \% \end{gathered}$ | $\begin{gathered} \hline 77 \% \\ 72 \%-82 \% \end{gathered}$ | $\begin{gathered} 66 \% \\ 55 \%-77 \% \end{gathered}$ | $\begin{gathered} 0.61 \\ 0.51-0.73 \end{gathered}$ | $\begin{gathered} \hline 4.01 \\ 2.65-6.07 \end{gathered}$ |
| 8.5 | 77.9 | 22.1 | $\begin{gathered} \hline 46 \% \\ 37 \%-56 \% \\ \hline \end{gathered}$ | $\begin{gathered} 90 \% \\ 85 \%-93 \% \end{gathered}$ | $\begin{gathered} 77 \% \\ 72 \%-82 \% \\ \hline \end{gathered}$ | $\begin{gathered} 69 \% \\ 57 \%-79 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.60 \\ 0.50-0.71 \end{gathered}$ | $\begin{gathered} \hline 4.54 \\ 2.93-7.02 \\ \hline \end{gathered}$ |
| 9 | 78.5 | 21.5 | $\begin{gathered} 45 \% \\ 35 \%-54 \% \\ \hline \end{gathered}$ | $\begin{gathered} 90 \% \\ 85 \%-93 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 77 \% \\ 71 \%-82 \% \\ \hline \end{gathered}$ | $\begin{gathered} 68 \% \\ 56 \%-79 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.62 \\ 0.52-0.73 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 4.36 \\ 2.81-6.76 \\ \hline \end{gathered}$ |
| 9.5 | 78.8 | 21.2 | $\begin{gathered} \hline 45 \% \\ 35 \%-54 \% \end{gathered}$ | $\begin{gathered} 90 \% \\ 86 \%-94 \% \end{gathered}$ | $\begin{gathered} 77 \% \\ 71 \%-82 \% \end{gathered}$ | $\begin{gathered} 69 \% \\ 57 \%-79 \% \end{gathered}$ | $\begin{gathered} \hline 0.61 \\ 0.52-0.73 \end{gathered}$ | $\begin{gathered} \hline 4.56 \\ 2.91-7.13 \\ \hline \end{gathered}$ |
| 10 | 78.8 | 21.2 | $\begin{gathered} \hline 45 \% \\ 35 \%-54 \% \end{gathered}$ | $\begin{gathered} 90 \% \\ 86 \%-94 \% \\ \hline \end{gathered}$ | $\begin{gathered} 77 \% \\ 71 \%-82 \% \\ \hline \end{gathered}$ | $\begin{gathered} 69 \% \\ 57 \%-79 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.61 \\ 0.52-0.73 \end{gathered}$ | $\begin{gathered} \hline 4.56 \\ 2.91-7.13 \end{gathered}$ |
| 11 | 81.2 | 18.8 | $\begin{gathered} \hline 41 \% \\ 32 \%-51 \% \end{gathered}$ | $\begin{gathered} 92 \% \\ 88 \%-95 \% \end{gathered}$ | $\begin{gathered} \hline 76 \% \\ 71 \%-81 \% \\ \hline \end{gathered}$ | $\begin{gathered} 71 \% \\ 59 \%-82 \% \end{gathered}$ | $\begin{gathered} 0.64 \\ 0.55-0.75 \end{gathered}$ | $\begin{gathered} \hline 5.11 \\ 3.11-8.40 \end{gathered}$ |
| 12 | 82.1 | 17.9 | $\begin{gathered} \hline 38 \% \\ 29 \%-48 \% \\ \hline \end{gathered}$ | $\begin{gathered} 92 \% \\ 88 \%-95 \% \end{gathered}$ | $\begin{gathered} 75 \% \\ 70 \%-80 \% \\ \hline \end{gathered}$ | $\begin{gathered} 70 \% \\ 57 \%-81 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.67 \\ 0.58-0.78 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 4.77 \\ 2.89-7.89 \\ \hline \end{gathered}$ |
| 13 | 83.9 | 16.1 | $\begin{gathered} 35 \% \\ 27 \%-45 \% \\ \hline \end{gathered}$ | $\begin{gathered} 93 \% \\ 89 \%-96 \% \\ \hline \end{gathered}$ | $\begin{gathered} 75 \% \\ 69 \%-80 \% \\ \hline \end{gathered}$ | $\begin{gathered} 72 \% \\ 58 \%-84 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.69 \\ 0.60-0.80 \\ \hline \end{gathered}$ | $\begin{gathered} 5.32 \\ 3.07-9.22 \\ \hline \end{gathered}$ |
| 14 | 85.7 | 14.3 | $\begin{gathered} 33 \% \\ 24 \%-42 \% \end{gathered}$ | $\begin{gathered} 95 \% \\ 91 \%-97 \% \end{gathered}$ | $\begin{gathered} 74 \% \\ 69 \%-79 \% \end{gathered}$ | $\begin{gathered} 75 \% \\ 60 \%-86 \% \end{gathered}$ | $\begin{gathered} 0.71 \\ 0.62-0.81 \end{gathered}$ | $\begin{gathered} 6.14 \\ 3.33-11.3 \end{gathered}$ |
| 15 | 87.2 | 12.8 | $\begin{gathered} \hline 30 \% \\ 22 \%-39 \% \end{gathered}$ | $\begin{gathered} 96 \% \\ 92 \%-98 \% \end{gathered}$ | $\begin{gathered} 74 \% \\ 68 \%-79 \% \end{gathered}$ | $\begin{gathered} 77 \% \\ 61 \%-88 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.73 \\ 0.65-0.83 \\ \hline \end{gathered}$ | $\begin{gathered} 6.75 \\ 3.45-13.2 \\ \hline \end{gathered}$ |
| 16 | 87.8 | 12.2 | $\begin{gathered} \hline 28 \% \\ 20 \%-38 \% \end{gathered}$ | $\begin{gathered} 96 \% \\ 92 \%-98 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 68 \%-78 \% \end{gathered}$ | $\begin{gathered} 76 \% \\ 60 \%-88 \% \end{gathered}$ | $\begin{gathered} \hline 0.75 \\ 0.67-0.85 \end{gathered}$ | $\begin{gathered} 6.34 \\ 3.23-12.5 \end{gathered}$ |
| 17 | 87.8 | 12.2 | $\begin{gathered} \hline 28 \% \\ 20 \%-38 \% \\ \hline \end{gathered}$ | $\begin{gathered} 96 \% \\ 92 \%-98 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 68 \%-78 \% \\ \hline \end{gathered}$ | $\begin{gathered} 76 \% \\ 60 \%-88 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.75 \\ 0.67-0.85 \\ \hline \end{gathered}$ | $\begin{gathered} 6.34 \\ 3.23-12.5 \\ \hline \end{gathered}$ |
| 18 | 88.4 | 11.6 | $\begin{gathered} 27 \% \\ 19 \%-37 \% \end{gathered}$ | $\begin{gathered} 96 \% \\ 93 \%-98 \% \\ \hline \end{gathered}$ | $\begin{gathered} 73 \% \\ 68 \%-78 \% \\ \hline \end{gathered}$ | $\begin{gathered} 77 \% \\ 61 \%-89 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.76 \\ 0.67-0.85 \\ \hline \end{gathered}$ | $\begin{gathered} 6.82 \\ 3.35-13.9 \\ \hline \end{gathered}$ |
| 19 | 88.7 | 11.3 | $\begin{gathered} 27 \% \\ 19 \%-37 \% \end{gathered}$ | $\begin{gathered} 96 \% \\ 93 \%-98 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 68 \%-78 \% \end{gathered}$ | $\begin{gathered} 79 \% \\ 63 \%-90 \% \end{gathered}$ | $\begin{gathered} 0.75 \\ 0.67-0.85 \end{gathered}$ | $\begin{gathered} 7.67 \\ 3.64-16.2 \end{gathered}$ |
| 20 | 89.3 | 10.7 | $\begin{gathered} 26 \% \\ 18 \%-36 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 67 \%-78 \% \end{gathered}$ | $\begin{gathered} 81 \% \\ 64 \%-92 \% \end{gathered}$ | $\begin{gathered} 0.76 \\ 0.68-0.85 \end{gathered}$ | $\begin{gathered} \hline 8.47 \\ 3.83-18.7 \end{gathered}$ |
| 21 | 89.6 | 10.4 | $\begin{gathered} 25 \% \\ 18 \%-35 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 67 \%-78 \% \end{gathered}$ | $\begin{gathered} 80 \% \\ 63 \%-92 \% \end{gathered}$ | $\begin{gathered} 0.77 \\ 0.69-0.86 \end{gathered}$ | $\begin{gathered} \hline 8.18 \\ 3.69-18.1 \end{gathered}$ |
| 22 | 89.6 | 10.4 | $\begin{gathered} \hline 25 \% \\ 18 \%-35 \% \\ \hline \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 73 \% \\ 67 \%-78 \% \\ \hline \end{gathered}$ | $\begin{gathered} 80 \% \\ 63 \%-92 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.77 \\ 0.69-0.86 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 8.18 \\ 3.69-18.1 \\ \hline \end{gathered}$ |
| 23 | 90.1 | 9.9 | $\begin{gathered} 24 \% \\ 16 \%-33 \% \\ \hline \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \\ \hline \end{gathered}$ | $\begin{gathered} 72 \% \\ 67 \%-77 \% \\ \hline \end{gathered}$ | $\begin{gathered} 79 \% \\ 61 \%-91 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.79 \\ 0.71-0.88 \\ \hline \end{gathered}$ | $\begin{gathered} 7.60 \\ 3.40-17.0 \\ \hline \end{gathered}$ |
| 24 | 90.7 | 9.3 | $\begin{gathered} 22 \% \\ 15 \%-31 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 72 \% \\ 66 \%-77 \% \end{gathered}$ | $\begin{gathered} 77 \% \\ 59 \%-90 \% \end{gathered}$ | $\begin{gathered} \hline 0.81 \\ 0.73-0.89 \\ \hline \end{gathered}$ | $\begin{gathered} 7.01 \\ 3.12-15.8 \end{gathered}$ |
| 25 | 91.0 | 9.0 | $\begin{gathered} \hline 21 \% \\ 14 \%-30 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 71 \% \\ 66 \%-76 \% \end{gathered}$ | $\begin{gathered} 77 \% \\ 58 \%-90 \% \end{gathered}$ | $\begin{gathered} \hline 0.82 \\ 0.74-0.90 \end{gathered}$ | $\begin{gathered} \hline 6.72 \\ 2.98-15.2 \end{gathered}$ |
| 26 | 91.3 | 8.7 | $\begin{gathered} \hline 20 \% \\ 13 \%-29 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \\ \hline \end{gathered}$ | $\begin{gathered} 71 \% \\ 66 \%-76 \% \\ \hline \end{gathered}$ | $\begin{gathered} 76 \% \\ 56 \%-90 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.83 \\ 0.75-0.91 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.43 \\ 2.83-14.6 \\ \hline \end{gathered}$ |
| 27 | 91.6 | 8.4 | $\begin{gathered} \hline 19 \% \\ 12 \%-28 \% \\ \hline \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 71 \% \\ 66 \%-76 \% \\ \hline \end{gathered}$ | $\begin{gathered} 75 \% \\ 55 \%-89 \% \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.84 \\ 0.76-0.92 \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.14 \\ 2.69-14.0 \\ \hline \end{gathered}$ |
| 28 | 91.6 | 8.4 | $\begin{gathered} 19 \% \\ 12 \%-28 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 71 \% \\ 66 \%-76 \% \end{gathered}$ | $\begin{gathered} 75 \% \\ 55 \%-89 \% \end{gathered}$ | $\begin{gathered} \hline 0.84 \\ 0.76-0.92 \end{gathered}$ | $\begin{gathered} 6.14 \\ 2.69-14.0 \end{gathered}$ |
| 29 | 91.6 | 8.4 | $\begin{gathered} 19 \% \\ 12 \%-28 \% \end{gathered}$ | $\begin{gathered} 97 \% \\ 94 \%-99 \% \end{gathered}$ | $\begin{gathered} 71 \% \\ 66 \%-76 \% \end{gathered}$ | $\begin{gathered} 75 \% \\ 55 \%-89 \% \\ \hline \end{gathered}$ | $\begin{gathered} 0.84 \\ 0.76-0.92 \end{gathered}$ | $\begin{gathered} 6.14 \\ 2.69-14.0 \\ \hline \end{gathered}$ |
| 30 | 100.0 | 0.0 | $\begin{gathered} 0 \% \\ 0 \%-0 \% \end{gathered}$ | $\begin{gathered} 100 \% \\ 100 \%-100 \% \end{gathered}$ | $\begin{gathered} 67 \% \\ 62 \%-72 \% \end{gathered}$ | na | $\begin{gathered} 1.0 \\ 1.0-1.0 \end{gathered}$ | na |

Supplemental Table 4. Time to Secondary Outcomes (KRT and Death)

| Secondary Endpoint | Median (IQR) in days from enrollment |
| :---: | :---: |
| KRT | $2.8(1.7-7.2)$ |
| Death | $15.5(5.4-30.1)$ |
| KRT or death | $4.3(2.0-14.0)$ |

Supplemental Table 5. NRI and IDI analysis of the addition of urinary CCL14 stratified by two cutoffs at 1.3 and $13 \mathrm{ng} / \mathrm{mL}$ to the clinical model in Table 3. Event = persistent severe AKI; nonevent $=$ not persistent severe AKI.

|  | Value | $\mathbf{9 5 \%}$ CI | P-value |
| :--- | :---: | :---: | :---: |
| IDI | 0.06 | $0.03-0.09$ | $<0.001$ |
| IDI_event | 0.04 | $0.02-0.07$ | 0.001 |
| IDI_non_event | 0.02 | $0.01-0.04$ | 0.003 |
| cfNRI | 0.53 | $0.30-0.77$ | $<0.001$ |
| cfNRI_event | 0.39 | $0.20-0.58$ | $<0.001$ |
| cfNRI_non_event | 0.14 | $0.00-0.28$ | 0.044 |
| AUC_ref_model | 0.86 | $0.82-0.90$ | $<0.001$ |
| AUC_new_model | 0.88 | $0.85-0.92$ | $<0.001$ |
| AUC difference | 0.03 | $0.01-0.05$ | 0.018 |

Clinical variables in the reference model are body mass index, non-renal APACHE III score, serum creatinine trajectory, KDIGO stage at enrollment, and diabetes.

Supplemental Table 6. Multivariable logistic regression model using clinical variables for prediction of persistent severe AKI without (Reference Model) and with (New Model) urinary CCL14 as a categorical variable with three levels stratified by two cutoffs at 1.3 and $13 \mathrm{ng} / \mathrm{mL}$. and excluding those found to not have Stage 2 or 3 AKI at enrollment

|  | Reference Model |  |  | New Model with Urine CCL14 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Variable | Odds Ratio | P-value |  | Odds Ratio | P-value |
| Body mass index | $0.78(0.53-1.12)$ | 0.194 |  | $0.81(0.54-1.17)$ | 0.281 |
| Non-renal APACHE III score | $1.47(1.10-2.00)$ | 0.011 |  | $1.37(1.00-1.90)$ | 0.052 |
| Serum creatinine trajectory $\dagger$ | $1.52(1.14-2.09)$ | 0.006 |  | $1.44(1.06-2.01)$ | 0.023 |
| KDIGO stage at enrollment | $7.02(3.92-12.96)$ | $<0.001$ |  | $5.32(2.86-10.2)$ | $<0.001$ |
| Diabetes | $0.58(0.29-1.11)$ | 0.105 |  | $0.50(0.24-1.02)$ | 0.058 |
| Urine CCL14 $>1.3$ and $\leq 13$ | Not Included | NA |  | $3.77(1.71-8.97)$ | 0.002 |
| Urine CCL14 $>13$ | Not Included | NA |  | $10.6(3.96-30.8)$ | $<0.001$ |

$\dagger$ Change in serum creatinine concentration over the prior day as determined using two serum creatinine results with mean $( \pm$ SD $)$ collection times at $19( \pm 9)$ h and $7( \pm 4) \mathrm{h}$ prior to enrollment For the categorical CCL14 variable, CCL14 $\leq 1.3 \mathrm{ng} / \mathrm{mL}$ was the reference level All numeric variables were standardized by subtracting the mean and dividing by the standard deviation; $\mathrm{N}=260$ ( $40 \%$ Persistent). The clinical variables in the reference model were selected based on association with persistent severe AKI as described previously. ${ }^{9}$

Supplemental Figure 1 - Risk of persistent severe AKI stratified by CCL14 level below and above $1.3 \mathrm{ng} / \mathrm{mL}$. Within each CCL14 stratum the individual components of the composite endpoint are displayed. The relative risk ( $95 \% \mathrm{CI}$ ) of persistent severe AKI for those patients with CCL14 level above $1.3 \mathrm{ng} / \mathrm{mL}$ to those with CCL14 level below $1.3 \mathrm{ng} / \mathrm{mL}$ is $5.9(3.2-11)$.


Supplemental Figure 2 -Cumulative incidence of KRT, death and KRT or death within 90 days of enrollment in the Ruby study stratified by CCL14 concentrations below and above $1.3 \mathrm{ng} / \mathrm{mL}$. The number of patients with CCL14 concentrations below and above $1.3 \mathrm{ng} / \mathrm{mL}$ are 124 and 211, respectively. The $\log$ rank test was used to compute the p -value for the differences between the strata.




Supplemental Figure 3 : Comparison of CCL14 concentrations in 4 populations: healthy (378), chronic conditions without acute illness (366), Ruby Intention-to-Diagnose (ITD) Full cohort (335, 225 of whom did not develop persistent severe AKI), and those adjudicated to have Stage 2 or 3 at enrollment (280, 170 of whom did not develop persistent severe AKI). Bottom and top whiskers represent the $10^{\text {th }}$ and $90^{\text {th }}$ percentiles of the CCL14 concentrations in that group, respectively. Bottom and top boxes represent the $1^{\text {st }}$ and $3^{\text {rd }}$ quartiles, respectively. Middle bar is the median. The horizontal dashed lines correspond to the 1.3 and $13 \mathrm{ng} / \mathrm{mL}$ cutoffs. P -value computed using the Kruskal-Wallis test $<0.0001$.


Operating Characteristics for ITD cohort:

| Endpoint | Cutoff ( $\mathrm{ng} / \mathrm{mL}$ ) | $\begin{gathered} \% \\ \text { below } \end{gathered}$ | $\begin{gathered} \% \\ \text { above } \end{gathered}$ | Sensitivity | Specificity | Negative Predictive Value | Positive Predictive Value | Negative Likelihood Ratio | Positive Likelihood Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Persistent severe AKI | 1.3 | 37.0 | 63.0 | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 51 \% \\ 44 \%-57 \% \end{gathered}$ | $\begin{gathered} 92 \% \\ 86 \%-96 \% \end{gathered}$ | $\begin{gathered} 47 \% \\ 40 \%-54 \% \end{gathered}$ | $\begin{gathered} 0.18 \\ 0.10-0.33 \end{gathered}$ | $\begin{gathered} 1.84 \\ 1.59-2.13 \end{gathered}$ |
|  | 13 | 83.9 | 16.1 | $\begin{gathered} 35 \% \\ 27 \%-45 \% \end{gathered}$ | $\begin{gathered} 93 \% \\ 89 \%-96 \% \end{gathered}$ | $\begin{gathered} 75 \% \\ 69 \%-80 \% \end{gathered}$ | $\begin{gathered} 72 \% \\ 58 \%-84 \% \end{gathered}$ | $\begin{gathered} 0.69 \\ 0.60-0.80 \end{gathered}$ | $\begin{gathered} 5.32 \\ 3.07-9.22 \end{gathered}$ |

Operating Characteristics for AKI Stage 2 or 3 cohort:

| Endpoint | Cutoff ( $\mathrm{ng} / \mathrm{mL}$ ) | \% below | $\begin{gathered} \% \\ \text { above } \end{gathered}$ | Sensitivity | Specificity | Negative Predictive Value | Positive Predictive Value | Negative <br> Likelihood Ratio | Positive Likelihood Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Persistent severe AKI | 1.3 | 30.4 | 69.6 | $\begin{gathered} 91 \% \\ 84 \%-96 \% \end{gathered}$ | $\begin{gathered} 44 \% \\ 37 \%-52 \% \end{gathered}$ | $\begin{gathered} 88 \% \\ 79 \%-94 \% \end{gathered}$ | $\begin{gathered} 51 \% \\ 44 \%-58 \% \end{gathered}$ | $\begin{gathered} 0.21 \\ 0.11-0.38 \end{gathered}$ | $\begin{gathered} 1.63 \\ 1.41-1.88 \end{gathered}$ |
|  | 13 | 81.8 | 18.2 | $\begin{gathered} 35 \% \\ 27 \%-45 \% \end{gathered}$ | $\begin{gathered} 93 \% \\ 88 \%-96 \% \\ \hline \end{gathered}$ | $\begin{gathered} 69 \% \\ 63 \%-75 \% \end{gathered}$ | $\begin{gathered} 76 \% \\ 63 \%-87 \% \end{gathered}$ | $\begin{gathered} 0.69 \\ 0.60-0.80 \\ \hline \end{gathered}$ | $\begin{gathered} 5.02 \\ 2.75-9.16 \\ \hline \end{gathered}$ |

