SUPPLEMENTARY MATERIAL

Table S1: Odds for survival at 90 days. *Legends:* OR = Odds Ratio, CI = Confidence Interval, CND = Chronic Neurological Disease, CVD = Cardiovascular Disease, DM = Diabetes Mellitus, CPD = Chronic Pulmonary Disease, ACEi = Angiotensin-Converting Enzyme-inhibitor, ARB = Angiotensin II Receptor Blocker, ACF = Acute Circulatory Failure, ARF = Acute Respiratory Failure, AKI = Acute Kidney Injury, ICU = Intensive Care Unit.

| Table S1: Odds for survival at 90 days. | | | | | | | |
|---|------|--------------|---------|-----------------------------------|--------------|-----------------|--|
| Univariate logistic regression | | | | Multivariable logistic regression | | | |
| Variable | OR | 95% CI | p-value | OR | 95% CI | <i>p</i> -value | |
| Immunocompromised | 0.21 | 0.01 - 1.07 | 0.135 | | | | |
| Liver disease | 1.67 | 0.08 - 17.65 | 0.678 | | | | |
| Cancer | 2.32 | 0.75 - 6.64 | 0.123 | | | | |
| CND | 0.32 | 0.02 - 1.73 | 0.285 | | | | |
| Current smoker | 0.95 | 0.14 - 4.02 | 0.947 | | | | |
| Gender | 1.15 | 0.66 - 1.99 | 0.611 | | | | |
| Age | 1.08 | 1.06 - 1.11 | < 0.000 | 1.08 | 1.04 - 1.11 | < 0.000 | |
| CVD | 2.25 | 1.35 - 3.79 | 0.002 | 0.72 | 0.33 - 1.53 | 0.396 | |
| DM | 0.97 | 0.50 - 1.81 | 0.928 | | | | |
| Asthma | 0.76 | 0.35 - 1.54 | 0.468 | | | | |
| CPD | 3.26 | 1.57 - 6.71 | 0.001 | 2.03 | 0.79 - 5.23 | 0.139 | |
| ACEi/ARB | 2.54 | 1.45 - 4.45 | 0.001 | 1.94 | 0.88 - 4.32 | 0.102 | |
| ACF | 1.78 | 1.53 - 2.10 | < 0.000 | 1.72 | 1.46 - 2.06 | < 0.000 | |
| ARF | 1.31 | 0.96 - 2.00 | 0.133 | | | | |
| AKI at ICU-admission | 3.90 | 2.31 - 6.67 | < 0.000 | 3.14 | 1.66 - 6.00 | 0.001 | |
| (Intercept) | | | | 0.00 | 0.00 - 0.002 | < 0.000 | |

OR = Odds Ratio, CI = Confidence Interval, CND = Chronic Neurological Disease, CVD = Cardiovascular Disease, DM = Diabetes

Mellitus, CPD = Chronic Pulmonary Disease, ACEi = Angiotensin-Converting Enzyme-inhibitor, ARB = Angiotensin II Receptor Blocker,

ACF = Acute Circulatory Failure, ARF = Acute Respiratory Failure, AKI = Acute Kidney Injury, ICU = Intensive Care Unit.

Table S2: Hazard ratio for survival at 30 days. *Legends:* HR = Hazard Ratio, CI = Confidence Interval, CND = Chronic Neurological Disease, CVD = Cardiovascular Disease, DM = Diabetes Mellitus, CPD = Chronic Pulmonary Disease, ACEi = Angiotensin-Converting Enzyme-inhibitor, ARB = Angiotensin II Receptor Blocker, ACF = Acute Circulatory Failure, ARF = Acute Respiratory Failure, AKI = Acute Kidney Injury, ICU = Intensive Care Unit.

| Table S2: Hazard ratio for survival at 30 days. | | | | | | | |
|---|-------|--------------|-----------------|------------------------------|-------------|-----------------|--|
| Univariable Cox regression | | | | Multivariable Cox regression | | | |
| Variable | HR | 95% CI | <i>p</i> -value | HR | 95% CI | <i>p</i> -value | |
| Immunocompromised | 0.32 | 0.05 - 2.30 | 0.261 | | | | |
| Liver disease | 0.85 | 0.33 - 17.00 | 0.398 | | | | |
| Cancer | 0.97 | 1.10 - 6.20 | 0.023 | 2.65 | 1.11 - 6.36 | 0.029 | |
| CND | -0.73 | 0.07 - 3.50 | 0.468 | | | | |
| Current smoker | 0.15 | 0.29 - 4.80 | 0.830 | | | | |
| Gender | 0.41 | 0.90 - 2.60 | 0.121 | | | | |
| Age | 0.07 | 1.00 - 1.10 | < 0.000 | 1.05 | 1.03 - 1.08 | < 0.000 | |
| CVD | 0.77 | 1.30 - 3.60 | 0.004 | 0.96 | 0.52 - 1.76 | 0.886 | |
| DM | 0.12 | 0.61 - 2.10 | 0.695 | | | | |
| Asthma | 0.08 | 0.55 - 2.10 | 0.807 | | | | |
| CPD | 1.30 | 2.00 - 6.40 | < 0.000 | 2.31 | 1.25 - 4.25 | 0.008 | |
| ACEi/ARB | 0.63 | 1.10 - 3.20 | 0.019 | 1.37 | 0.75 - 2.50 | 0.311 | |
| ACF | 0.52 | 1.40 - 2.00 | < 0.000 | 1.56 | 1.32 - 1.85 | < 0.000 | |
| ARF | 0.15 | 0.83 - 1.60 | 0.379 | | | | |
| AKI at ICU admission | 1.30 | 2.30 - 6.30 | < 0.000 | 2.92 | 1.74 - 4.90 | < 0.000 | |

HR = Hazard Ratio, CI = Confidence Interval, CND = Chronic Neurological Disease, CVD = Cardiovascular Disease, DM = Diabetes

Mellitus, CPD = Chronic Pulmonary Disease, ACEi = Angiotensin-Converting Enzyme-inhibitor, ARB = Angiotensin II Receptor Blocker,

ACF = Acute Circulatory Failure, ARF = Acute Respiratory Failure, AKI = Acute Kidney Injury, ICU = Intensive Care Unit.

Table S3: Hazard ratio for survival at 90 days. *Legends:* HR = Hazard Ratio, CI = Confidence Interval, CND = Chronic Neurological Disease, CVD = Cardiovascular Disease, DM = Diabetes Mellitus, CPD = Chronic Pulmonary Disease, ACEi = Angiotensin-Converting Enzyme-inhibitor, ARB = Angiotensin II Receptor Blocker, ACF = Acute Circulatory Failure, ARF = Acute Respiratory Failure, AKI = Acute Kidney Injury, ICU = Intensive Care Unit.

| Table S3: Hazard ratio for survival at 90 days. | | | | | | | |
|---|------|--------------|-----------------|------------------------------|-------------|-----------------|--|
| Univariable Cox regression | | | | Multivariable Cox regression | | | |
| Variable | HR | 95% CI | <i>p</i> -value | HR | 95% CI | <i>p</i> -value | |
| Immunocompromised | 0.24 | 0.03 - 1.70 | 0.160 | | | | |
| Liver disease | 1.80 | 0.25 - 13.00 | 0.557 | | | | |
| Cancer | 2.10 | 0.90 - 4.80 | 0.086 | 2.07 | 0.88 - 4.88 | 0.095 | |
| CND | 0.37 | 0.05 - 2.60 | 0.317 | | | | |
| Current smoker | 0.92 | 0.22 - 3.70 | 0.902 | | | | |
| Gender | 1.20 | 0.74 - 1.90 | 0.472 | | | | |
| Age | 1.10 | 1.00 - 1.10 | < 0.000 | 1.05 | 1.03 - 1.08 | < 0.000 | |
| CVD | 2.10 | 1.30 - 3.20 | 0.002 | 0.85 | 0.50 - 1.46 | 0.558 | |
| DM | 0.99 | 0.56 - 1.70 | 0.964 | | | | |
| Asthma | 0.81 | 0.42 - 1.60 | 0.527 | | | | |
| CPD | 2.90 | 1.70 - 5.10 | < 0.000 | 2.09 | 1.18 - 3.70 | 0.012 | |
| ACEi/ARB | 2.20 | 1.40 - 3.50 | < 0.000 | 1.78 | 1.05 - 3.01 | 0.032 | |
| ACF | 1.70 | 1.40 - 1.90 | < 0.000 | 1.56 | 1.35 - 1.80 | < 0.000 | |
| ARF | 1.30 | 0.91 - 1.80 | 0.159 | | | | |
| AKI at ICU admission | 3.40 | 2.20 - 5.30 | < 0.000 | 2.66 | 1.69 - 4.19 | < 0.000 | |

HR = Hazard Ratio, CI = Confidence Interval, CND = Chronic Neurological Disease, CVD = Cardiovascular Disease, DM = Diabetes

Mellitus, CPD = Chronic Pulmonary Disease, ACEi = Angiotensin-Converting Enzyme-inhibitor, ARB = Angiotensin II Receptor Blocker,

ACF = Acute Circulatory Failure, ARF = Acute Respiratory Failure, AKI = Acute Kidney Injury, ICU = Intensive Care Unit.

Table S4: Comparison of AKI definitions and staging criteria. *Legends:* AKI = Acute Kidney Injury, KDIGO = Kidney Disease: Improving Global Outcomes, RIFLE = Risk, Injury, Failure, Loss, End-stage kidney disease, SAPS II = Simplified Acute Physiology Score II, SCr = Serum Creatinine, GFR = Glomerular Filtration Rate, UO = Urine Output, BUN = Blood Urea Nitrogen, RRT = Renal Replacement Therapy, h = hours.

| | KDIGO | RIFLE | | | Renal SAPS II | | |
|-------|--|---------|--|---|---------------|---------------------|-------------------|
| Stage | SCr ^a | Class | SCr or GFR | UO ^b | Score 0 | UO/24 h >1000 ml | BUN <10 mmol/L |
| 1 | 1.5-1.9x baseline or >26.5 μmol/L increase | Risk | SCr increase 1.5x baseline or eGFR decrease ≥25% | <0.5ml/kg/h for 6 h | | | |
| 2 | 2.0-2.9x baseline | Injury | SCr increase 2.0x baseline or eGFR decrease ≥50% | <0.5 ml/kg/h for 12 h (<840 ml/24 h°) | 6 | 500-999 ml | 10-29.9 mmol/L |
| 3 | ≥3.0x baseline or | Failure | SCr increase ≥3.0x baseline or | <0.3 ml/kg/h for 24 h | 10 | | >30 mmol/L |
| | ≥4 mg/dl (= 353.7 μmol/L) increase or initiation of RRT | | ≥4 mg/dl (= 353.7 µmol/L) or GFR decrease ≥75% | (<504 ml/24 h°) or anuria for 12 hours. | 11 | <500 ml | |

aSCr-increase within 48 hours.

AKI = Acute Kidney Injury, KDIGO: Kidney Disease: Improving Global Outcomes, RIFLE: Risk, Injury, Failure, Loss, End-stage kidney disease, SAPS II = Simplified Acute Physiology Score II, SCr = Serum Creatinine, GFR = Glomerular Filtration Rate, UO = Urine Output,

^bUO criteria are shared by KDIGO and RIFLE.

^cStandardized for a patient with a weight of 70 kg.