

Table S1 OR and 95% CI of different variables

| Variables | SCR (per 10 mmol/L) | | Δ SCR (per 10 mmol/L) | | eGFR | | Δ eGFR | |
|---|----------------------|---------|------------------------------|---------|----------------------|---------|----------------------|---------|
| | OR (95% CI) | P value | OR (95% CI) | P value | OR (95% CI) | P value | OR (95% CI) | P value |
| Crude | 1.122 (1.076, 1.170) | <0.001 | 1.142 (1.087, 1.200) | <0.001 | 0.960 (0.944, 0.976) | <0.001 | 0.966 (0.952, 0.981) | <0.001 |
| Included one covariate in a separate logistic regression model | | | | | | | | |
| +Age | 1.130 (1.081–1.180) | <0.001 | 1.147 (1.091–1.206) | <0.001 | 0.956 (0.939–0.973) | <0.001 | 0.966 (0.952–0.981) | <0.001 |
| +Sex | 1.124 (1.077–1.173) | <0.001 | 1.146 (1.089–1.206) | <0.001 | 0.958 (0.942–0.975) | <0.001 | 0.966 (0.952–0.981) | <0.001 |
| +BMI | 1.128 (1.080–1.178) | <0.001 | 1.144 (1.088–1.203) | <0.001 | 0.959 (0.943–0.976) | <0.001 | 0.966 (0.952–0.981) | <0.001 |
| +NYHA functional classification | 1.128 (1.080–1.178) | <0.001 | 1.148 (1.091–1.208) | <0.001 | 0.958 (0.942–0.975) | <0.001 | 0.965 (0.950–0.980) | <0.001 |
| +Aortic surgery | 1.123 (1.076–1.173) | <0.001 | 1.142 (1.086–1.200) | <0.001 | 0.959 (0.943–0.976) | <0.001 | 0.964 (0.950–0.979) | <0.001 |
| +Euro score | 1.120 (1.073–1.169) | <0.001 | 1.139 (1.084–1.198) | <0.001 | 0.961 (0.945–0.978) | <0.001 | 0.966 (0.952–0.981) | <0.001 |
| +APACHE II | 1.111 (1.061–1.164) | <0.001 | 1.128 (1.069–1.190) | <0.001 | 0.963 (0.944–0.982) | <0.001 | 0.971 (0.955–0.987) | 0.001 |
| +AST | 1.121 (1.075–1.169) | <0.001 | 1.140 (1.085–1.198) | <0.001 | 0.961 (0.944–0.977) | <0.001 | 0.967 (0.952–0.982) | <0.001 |
| +ALT | 1.120 (1.074–1.168) | <0.001 | 1.139 (1.084–1.197) | <0.001 | 0.961 (0.945–0.977) | <0.001 | 0.967 (0.953–0.982) | <0.001 |
| +Lactic acid | 1.115 (1.067–1.166) | <0.001 | 1.126 (1.069–1.185) | <0.001 | 0.964 (0.947–0.982) | <0.001 | 0.974 (0.959–0.990) | 0.001 |
| +Infection | 1.107 (1.060–1.157) | <0.001 | 1.125 (1.068–1.185) | <0.001 | 0.965 (0.949–0.982) | <0.001 | 0.972 (0.957–0.987) | <0.001 |
| Included two covariates in a separate logistic regression model | | | | | | | | |
| +Lactic acid + APACHE II | 1.113 (1.059–1.169) | <0.001 | 1.118 (1.057–1.182) | <0.001 | 0.964 (0.945–0.985) | 0.001 | 0.978 (0.961–0.995) | 0.011 |
| +APACHE II + infection | 1.102 (1.051–1.156) | <0.001 | 1.116 (1.055–1.180) | <0.001 | 0.965 (0.946–0.984) | <0.001 | 0.974 (0.958–0.991) | 0.002 |
| +Lactic acid + infection | 1.100 (1.049–1.153) | <0.001 | 1.107 (1.047–1.171) | <0.001 | 0.970 (0.952–0.988) | 0.001 | 0.978 (0.962–0.993) | 0.005 |

OR, odds ratio; CI, confidence interval; SCR, serum creatinine; eGFR, estimated glomerular filtration rate; APACHE II, Acute Physiology and Chronic Health Evaluation II; AST, aspartate aminotransferase; ALT, alanine aminotransferase.

Table S2 Relationship between creatinine and death by Poisson regression and logistic regression

| Variables | Logistic regression | | Poisson regression | |
|----------------------------|---------------------|---------|--------------------|---------|
| | OR (95% CI) | P value | IRR (95% CI) | P value |
| Creatinine, per 10 mmol/L | 1.14 (1.07–1.25) | 0.001 | 1.09 (1.06–1.11) | <0.001 |
| ΔCreatinine, per 10 mmol/L | 1.12 (1.04–1.21) | 0.002 | 1.09 (1.07–1.11) | <0.001 |
| GFR, mL/min | 0.95 (0.93–0.98) | 0.001 | 0.96 (0.95–0.98) | <0.001 |
| ΔGFR, mL/min | 0.97 (0.95–0.99) | 0.005 | 0.97 (0.96–0.98) | <0.001 |

Adjusted for age, sex, BMI, NYHA functional classification, aortic surgery, Euro score, APACHE II, AST, ALT, lactic acid, and infection. OR, odds ratio; CI, confidence interval; IRR, incidence rate ratio; GFR, glomerular filtration rate; BMI, body mass index; NYHA, New York Heart Association; APACHE II, Acute Physiology and Chronic Health Evaluation II; AST, aspartate aminotransferase; ALT, alanine aminotransferase.