### Supplementary Table 6. Characteristics at admission of the derivation and validation cohorts

| Variable                  | Derivation cohort (n=287)       | Validation cohort (n=119)       | P-value |
|---------------------------|---------------------------------|---------------------------------|---------|
| Mortality (%)             | 25.4                            | 42.9                            | <0.001  |
| Age (years)               | 47.80±12.74                     | 47.10±11.56                     | 0.593   |
| Gender, female/male       | 56/231                          | 22/97                           | 0.811   |
| Cirrhosis                 | 172 (59.9)                      | 80 (67.2)                       | 0.168   |
| CRP (mg/L)                | 10.50 (7.31–15.45)              | 9.53 (7.05–17.10)               | 0.500   |
| WBC (×10^9/L)             | 6.70 (5.10–8.90)                | 6.56 (5.10–9.15)                | 0.850   |
| Neutrophil (×10^9/L)      | 4.50 (3.20–6.10)                | 3.70 (2.26–5.95)                | 0.007   |
| RBC (×10^12/L)            | 4.05±0.74                       | 3.83±0.78                       | 0.012   |
| Platelet (×10^9/L)        | 112.18±55.60                    | 99.56±54.83                     | 0.037   |
| Total protein (g/L)       | 58.67±8.15                      | 59.75±7.76                      | 0.246   |
| Albumin (g/L)             | 31.43±4.45                      | 31.87±4.63                      | 0.364   |
| ALT (U/L)                 | 249.00 (90.00–603.00)           | 309.20 (84.00–705.30)           | 0.693   |
| AST (U/L)                 | 190.00 (91.00–391.00)           | 195.00 (96.00–561.00)           | 0.380   |
| Serum bilirubin (mg/dL)   | 17.31 (11.75–23.45)             | 18.54 (14.33–24.76)             | 0.075   |
| Creatinine (mg/dL)        | 0.72 (0.63–0.84)                | 0.83 (0.67–1.13)                | <0.001  |
| Potassium (mmol/L)        | 4.25±0.60                       | 3.81±0.52                       | <0.001  |
| Sodium (mmol/L)           | 137.30±4.27                     | 137.68±3.64                     | 0.467   |
| PT-INR                    | 1.99 (1.71–2.55)                | 2.17 (1.77–2.88)                | 0.023   |
| Log_{10} (DNA)            | 4.95 (3.61–6.55)                | 4.36 (2.70–5.98)                | 0.005   |
| Log_{10} (HBsAg)          | 2.98 (1.99–3.63)                | 3.60 (3.00–17.81)               | <0.001  |
| VDBP (µg/mL)              | 46.58 (31.25–64.58)             | 40.22 (25.77–55.29)             | 0.012   |

Values are presented as mean±standard deviation or numbers (interquartile range or %) unless otherwise indicated.
HE, hepatic encephalopathy; CRP, C-reactive protein; WBC, white blood cell; RBC, red blood cell; ALT, alanine aminotransferase; AST, aspartate aminotransferase; PT-INR, prothrombin time-international normalized ratio; VDBP, vitamin D-binding protein.