

Suppl. Table 4 Association of abnormal liver test results with severity of the COVID-19 infection adjusted for gender and Charlson comorbidity index

| | ICU admission | | | COVID-19-related death | | | Composite endpoint of severe outcome ¹ | | |
|---|---------------|--------------|------------------|------------------------|------------|----------------|---|--------------|------------------|
| | OR | 95 % CI | p | OR | 95 % CI | p | OR | 95 % CI | p |
| Liver biochemistry abnormality² | 3.12 | 1.66-5.85 | < 0.001 * | 1.14 | 0.49-2.64 | 0.76 | 2.43 | 1.34-4.41 | 0.003 * |
| AST elevation | 3.44 | 1.83-6.47 | < 0.001 * | 0.86 | 0.37-2.00 | 0.72 | 2.50 | 1.37-4.55 | 0.003 * |
| ALT elevation | 2.54 | 1.34-4.83 | 0.004 * | 0.69 | 0.26-1.87 | 0.47 | 1.79 | 0.96-3.33 | 0.069 |
| TBIL elevation | 0.80 | 0.20-3.28 | 0.76 | 4.22 | 1.06-16.79 | 0.041 * | 1.44 | 0.39-5.25 | 0.58 |
| GGT elevation | 2.13 | 1.17-3.89 | 0.014 * | 1.22 | 0.51-2.90 | 0.66 | 1.53 | 0.86-2.74 | 0.15 |
| Hypoalbuminemia | 12.09 | 5.59-26.17 | < 0.001 * | 2.69 | 1.05-6.90 | 0.040 * | 10.75 | 5.00-23.11 | < 0.001 * |
| Hypoalbuminemia and any liver biochemistry abnormality | 21.08 | 8.26-53.76 | < 0.001 * | 2.82 | 1.12-7.10 | 0.028 * | 19.81 | 7.59-51.69 | < 0.001 * |
| Hypoalbuminemia and AST elevation | 38.90 | 12.03-125.80 | < 0.001 * | 2.34 | 0.95-5.75 | 0.06 | 40.06 | 11.09-144.76 | < 0.001 * |
| Hypoalbuminemia and ALT elevation | 17.05 | 4.70-61.88 | < 0.001 * | 1.55 | 0.50-4.84 | 0.45 | 13.24 | 3.68-47.60 | < 0.001 * |
| Hypoalbuminemia and TBIL elevation | 2.38 | 0.36-15.68 | 0.37 | 10.61 | 1.58-71.40 | 0.015 * | 5.22 | 0.54-50.41 | 0.15 |
| Hypoalbuminemia and GGT elevation | 41.83 | 9.13-191.63 | < 0.001 * | 2.76 | 1.00-7.67 | 0.051 | 29.22 | 6.55-130.37 | < 0.001 * |

Stated are the odds ratios (OR) for liver biochemistry parameters at admission (adjustment for gender and Charlson comorbidity index).

¹ The composite endpoint is comprised of ICU admission and/or COVID-19-related death. ² Liver biochemistry abnormalities included ALT, AST, GGT, ALP and TBIL but not albumin. Abbreviations: ALP: Alkaline phosphatase; ALT: Alanine aminotransferase; AST: Aspartate aminotransferase; CI: Confidence interval; COVID-19: Coronavirus Disease 2019; GGT: Gamma-glutamyltransferase; TBIL: Total bilirubin. * shows a statistical significance (p<0.05).