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| --- | --- | --- | --- |
|  | **aOR** | **95% CI** | **P-value** |
| Fully Vaccination status (vs. Partially) | 40.67 | 0.17 – 9647.17 | 0.18 |
| Sex (Male) | 0.36 | 0.01 – 18.53 | 0.61 |
| No supplemental oxygen (vs. oxygen supplementation) | 0.01 | 8.57e-11 – 1.36 | 0.56 |
| No clinical deterioration (vs. renal, hepatic, or neurological deterioration) | 0.01 | 1.26e-08 – 5.84 | 0.10 |
| Diastolic Blood Pressure (mmHg) | 1.23 | 0.96 – 1.59 | 0.09 |
| Heart Rate (beats/min) | 1.08 | 0.93 – 1.26 | 0.26 |
| Respiratory Rate (breaths/min) | 1.36 | 0.78 – 2.38 | 0.26 |
| SPO2 (%) | 1.22 | 0.86 – 1.71 | 0.25 |
| WBC (4.5 – 12.5 x 103/uL) | 1.34 | 0.81 – 2.26 | 0.25 |
| Platelets (150 – 450 x 103/uL) | 0.96 | 0.92 – 1.01 | 0.10 |
| D-dimer (0.19 – 0.50 mg/L)  | 0.91 | 0.72 – 1.13 | 0.39 |
| Aspartate Aminotransferase (35 – 37 U/L) | 0.92 | 0.82 – 1.02 | 0.12 |
| Albumin (3.5 – 5.5 g/dL) | 94.38 | 0.09 – 94467.64 | 0.19 |
| COPD | 0.01 | 2.22e-09 – 7.620 | 0.11 |
| Immunocompromised status | 258.07 | 0.17 – 389876.7 | 0.13 |

Suppl 2. Table S2: Logistic Regression Model-1 exploring factors associated with severe breakthrough COVID-19 infection. Area Under the Receiver Operating Curve (AUC) for the LR model 0.977, 95% CI 0.95 – 1.00. LR model controlled for:Fully vs. partially vaccinated status, Sex, No supplemental oxygen (vs. oxygen supplementation), No clinical deterioration (vs. renal, hepatic, or neurological deterioration), Diastolic Blood Pressure (mmHg), Heart Rate (beats/min), Respiratory Rate (breaths/min), COPD= Chronic Obstructive Pulmonary Disease SPO2= Oxygen Saturation, WBC= White Cell Count, Platelets, D-dimer, Aspartate Aminotransferase (U/L), Albumin (g/dL), COPD= Chronic Obstructive Pulmonary Disease, and Immunocompromised status.