**Supplementary Table 4: Multivariable analyses of the relationship between sociodemographic, health and vaccine-related variables on viral neutralization six months following the third vaccine dose.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Immunogenicity outcomea** | **Variable** | **SARS-CoV-2 Variant** | | | | | |
| **Wild-typec** | | | **Omicron BA.1c** | | |
| **Estimate c** | **95% CI c** | **p-value** | **Odds Ratio c** | **95% CIc** | **p-value** |
| **Log2 viral neutralizationb** | HIV infection | 0.96 | -0.36 to 2.3 | 0.15 | 4.9 | 0.67 to 51 | 0.14 |
|  | Age (per year) | -0.0014 | -0.026 to 0.023 | 0.91 | 0.96 | 0.91 to 1 | **0.045** |
|  | Male sex | -0.52 | -1.3 to 0.27 | 0.2 | 0.28 | 0.052 to 1.2 | 0.1 |
|  | White ethnicity | -0.54 | -1.2 to 0.14 | 0.12 | 1.3 | 0.39 to 4.3 | 0.69 |
|  | # Chronic conditions (per additional) | -0.46 | -0.88 to -0.047 | **0.029** | 0.77 | 0.31 to 1.8 | 0.55 |
|  | Dual ChAdOx1 as initial regimen | 0.72 | -0.46 to 1.9 | 0.23 | 3 | 0.52 to 18 | 0.21 |
|  | mRNA-1273 as 3rd dose | 0.36 | -0.32 to 1 | 0.29 | 0.93 | 0.28 to 3.3 | 0.91 |
|  | Interval btw 2nd and 3rd doses (per day) | -0.0019 | -0.012 to 0.0084 | 0.71 | 0.99 | 0.98 to 1 | 0.55 |
|  | EDTA as anticoagulantd | 0.27 | -1.2 to 1.7 | 0.71 | 0.7 | 0.057 to 7.1 | 0.77 |

aAnalysis was restricted to participants who remained COVID-19 naïve six months post-third vaccine dose

breciprocal plasma dilutions were log2 transformed prior to multivariable analysis.

cMultivariable analysis for wild-type neutralization was performed using linear regression. Multivariable analysis for Omicron BA.1 neutralization was performed using logistic regression due to a high proportion of measurements below the limit of quantification (BLOQ) at this time point.

dNeutralization assays were performed using plasma (not serum as in other analyses), so the models additionally correct for the anticoagulant.