

**Table S1. Characteristics of the study participants with different cutoff values of SARS-CoV-2 anti-spike antibody titers set at 0.6 OD450 value**

| Characteristic                        | Low antibody titer<br>(n = 99) | High antibody titer<br>(n = 128) | p value | SMD<br>(before IPW) | SMD<br>(after IPW) | Missing |
|---------------------------------------|--------------------------------|----------------------------------|---------|---------------------|--------------------|---------|
| Age (years), median [IQR]             | 43 [37-50]                     | 51 [44-56]                       | -       | 0.702               | 0.009              |         |
| Male sex                              | 35                             | 66                               | 0.015   | 0.319               | 0.107              |         |
| Obesity (BMI > 25 kg/m <sup>2</sup> ) | 31                             | 49                               | 0.276   | 0.107               | 0.123              |         |
| Smoking                               | 35                             | 38                               | 0.365   | 0.078               | 0.051              |         |
| Hypertension                          | 5                              | 30                               | < 0.001 | 0.566               | 0.039              |         |
| Diabetes                              | 5                              | 12                               | 0.220   | 0.160               | 0.065              |         |
| Dyslipidemia                          | 9                              | 21                               | 0.107   | 0.210               | 0.002              |         |
| Asthma                                | 13                             | 20                               | 0.597   | 0.057               | 0.047              |         |
| COPD                                  | 1                              | 0                                | 0.254   |                     |                    |         |
| Malignancy                            | 1                              | 3                                | 0.449   |                     |                    |         |
| Use of antivirals                     | 4                              | 36                               | < 0.001 | 0.303               | 0.038              | 13      |
| Use of steroids                       | 5                              | 21                               | 0.030   | 0.183               | 0.104              | 23      |
| Moderate severity                     | 4                              | 23                               | 0.002   | 0.452               | 0.070              | 7       |
| Fatigue                               | 64                             | 86                               | 0.628   |                     |                    | 1       |
| SoB                                   | 33                             | 48                               | 0.488   |                     |                    |         |
| Cough                                 | 47                             | 63                               | 0.794   |                     |                    |         |
| Dysosmia                              | 63                             | 55                               | 0.002   |                     |                    |         |
| Dysgeusia                             | 46                             | 51                               | 0.317   |                     |                    |         |
| Hair loss                             | 19                             | 31                               | 0.408   |                     |                    | 2       |
| Depressed mood                        | 22                             | 44                               | 0.042   |                     |                    | 1       |
| LoC                                   | 28                             | 42                               | 0.464   |                     |                    |         |
| MD                                    | 15                             | 31                               | 0.087   |                     |                    |         |

Abbreviations: BMI, body mass index; COPD, chronic obstructive pulmonary disease; IPW, inverse probability weighting; IQR, interquartile range; LoC, loss of concentration; MD, memory disturbance; SMD, standardized mean difference; SoB, shortness of breath.

**Table S2. Association between SARS-CoV-2 anti-spike antibody titers and the development of post-COVID conditions with different cutoff values of SARS-CoV-2 anti-spike antibody titers set at 0.6 OD450 value**

| Characteristic | Odds Ratio | 95% Confidence Interval | <i>p</i> value |
|----------------|------------|-------------------------|----------------|
| Fatigue        | 1.52       | 0.73–3.17               | 0.264          |
| Cough          | 1.35       | 0.71–2.58               | 0.362          |
| Dysosmia       | 0.72       | 0.36–1.44               | 0.354          |
| Dysgeusia      | 1.19       | 0.62–2.25               | 0.602          |
| SoB            | 1.33       | 0.68–2.60               | 0.404          |
| Hair loss      | 1.53       | 0.73–3.18               | 0.259          |
| Depressed mood | 2.70       | 1.35–5.38               | 0.005          |
| LoC            | 1.47       | 0.76–2.87               | 0.253          |
| MD             | 2.42       | 1.14–5.16               | 0.021          |

Abbreviations: LoC, loss of concentration; MD, memory disturbance; SoB, shortness of breath.

The odds ratio indicates the incidence rate ratio of each symptom in the group with higher SARS-CoV-2 anti-spike antibody titers compared to the group with lower antibody titers.

**Table S3. Characteristics of the study participants with different cutoff values of SARS-CoV-2 anti-spike antibody titers set at 0.9 OD450 value**

| Characteristic                        | Low antibody titer<br>(n = 127) | High antibody titer<br>(n = 100) | p value | SMD<br>(before IPW) | SMD<br>(after IPW) | Missing |
|---------------------------------------|---------------------------------|----------------------------------|---------|---------------------|--------------------|---------|
| Age (years), median [IQR]             | 44 [37–51]                      | 52 [45–57]                       | -       | 0.743               | 0.136              |         |
| Male sex                              | 50                              | 51                               | 0.080   | 0.235               | 0.119              |         |
| Obesity (BMI > 25 kg/m <sup>2</sup> ) | 39                              | 41                               | 0.107   | 0.170               | 0.007              |         |
| Smoking                               | 40                              | 33                               | 0.810   | 0.055               | 0.060              |         |
| Hypertension                          | 10                              | 25                               | < 0.001 | 0.524               | 0.073              |         |
| Diabetes                              | 7                               | 10                               | 0.202   | 0.159               | 0.117              |         |
| Dyslipidemia                          | 12                              | 18                               | 0.059   | 0.238               | 0.016              |         |
| Asthma                                | 17                              | 16                               | 0.579   | 0.059               | 0.012              |         |
| COPD                                  | 1                               | 0                                | 0.374   |                     |                    |         |
| Malignancy                            | 1                               | 3                                | 0.208   |                     |                    |         |
| Use of antivirals                     | 9                               | 31                               | < 0.001 | 0.316               | 0.034              | 13      |
| Use of steroids                       | 8                               | 18                               | 0.023   | 0.063               | 0.037              | 23      |
| Moderate severity                     | 5                               | 22                               | < 0.001 | 0.552               | 0.072              | 7       |
| Fatigue                               | 81                              | 69                               | 0.350   |                     |                    | 1       |
| SoB                                   | 40                              | 41                               | 0.123   |                     |                    | 1       |
| Cough                                 | 58                              | 52                               | 0.343   |                     |                    |         |
| Dysosmia                              | 76                              | 42                               | 0.008   |                     |                    |         |
| Dysgeusia                             | 56                              | 41                               | 0.640   |                     |                    |         |
| Hair loss                             | 23                              | 27                               | 0.123   |                     |                    | 2       |
| Depressed mood                        | 32                              | 34                               | 0.158   |                     |                    | 1       |
| LoC                                   | 34                              | 36                               | 0.135   |                     |                    |         |
| MD                                    | 22                              | 24                               | 0.196   |                     |                    | 3       |

Abbreviations: BMI, body mass index; COPD, chronic obstructive pulmonary disease; IPW, inverse probability weighting; IQR, interquartile range; LoC, loss of concentration; MD, memory disturbance; SMD, standardized mean difference; SoB, shortness of breath.

**Table S4. Association between SARS-CoV-2 anti-spike antibody titers and the development of post-COVID conditions with different cutoff values of SARS-CoV-2 anti-spike antibody titers set at 0.9 OD450 value. The odds ratio indicates the incidence rate ratio of each symptom in the group with higher SARS-CoV-2 anti-spike antibody titers compared to the group with lower antibody titers**

| Characteristic | Odds Ratio | 95% Confidence Interval | <i>p</i> value |
|----------------|------------|-------------------------|----------------|
| Fatigue        | 1.51       | 0.71–3.18               | 0.283          |
| Cough          | 1.47       | 0.76–2.83               | 0.253          |
| Dysosmia       | 0.77       | 0.39–1.51               | 0.443          |
| Dysgeusia      | 1.31       | 0.68–2.53               | 0.417          |
| SoB            | 1.55       | 0.78–3.10               | 0.213          |
| Hair loss      | 2.04       | 0.96–4.32               | 0.063          |
| Depressed mood | 1.85       | 0.93–3.68               | 0.081          |
| LoC            | 1.52       | 0.77–3.00               | 0.227          |
| MD             | 1.93       | 0.90–4.15               | 0.090          |

Abbreviations: LoC, loss of concentration; MD, memory disturbance; SoB, shortness of breath.