**Supplementary data**

Logistic regression of measures of new infection with SARS-CoV-2 and association with SARS-CoV-2 seropositivity, body mass index, types and doses of Covid-19 vaccines, age, and household members among healthcare personnel.

**Suupl. Table 1.** qRT-PCR positivity after the 2nd vaccine dose.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **qRT-PCR positivity after the 2nd vaccine dose** | Odds Ratio | Std. Err. | z | P>z | [95% Conf. | Interval] |
| Asterazeneca  | 0.720441 | 0.420527 | -0.56 | **0.574** | 0.22948 | 2.261784 |
| Sinopharm | 1 |  |  |  |  |  |

Suppl. Table 1 legend: Sputnik vaccine was considered as reference.

**Suppl. Table 2.** qRT-PCR positivity after the 1st vaccine dose.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **qRT-PCR positivity after the 1st vaccine dose** | Odds Ratio | Std. Err. | z | P>z | [95% Conf. | Interval] |
| Asterazeneca | 0.77474 | 0.448516 | -0.44 | **0.659** | 0.249101 | 2.409556 |
| Sinopharm | 0.567247 | 0.654885 | -0.49 | **0.623** | 0.059029 | 5.451075 |
| PCR positivity before vaccination | 0.920058 | 0.160207 | -0.48 | 0.632 | 0.65403 | 1.294294 |
| Seropositivity before vaccination | 0.70399 | 0.107651 | -2.3 | **0.022** | 0.52168 | 0.950011 |
| Age | 0.981222 | 0.02497 | -0.74 | 0.456 | 0.933482 | 1.031404 |
| Household members | 0.888669 | 0.182637 | -0.57 | 0.566 | 0.594023 | 1.329466 |
| Family history of Covid-19 | 0.910999 | 0.47604 | -0.18 | 0.858 | 0.327133 | 2.536947 |
| BMI | 1.034259 | 0.059531 | 0.59 | 0.558 | 0.923921 | 1.157775 |

Suppl. Table 2 legend: Sputnik vaccine was considered as reference.

**Suppl. Table 3.** Seropositivity after the 1st vaccine dose based on the ELISA results.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Seropositivity after 1st vaccine dose** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| Sputnik | -12.4115 | 9.370756 | -1.32 | 0.186 | -30.8573 | 6.034262 |
| Sinopharm | -15.4488 | 19.53596 | -0.79 | 0.430 | -53.9042 | 23.00657 |
| Anti SARS-CoV-2 antibody before 1st dose of vaccine | 4.115629 | 1.918116 | 2.15 | **0.033** | 0.33993 | 7.891329 |

Suppl. Table 3 legend: AstraZeneca vaccine was considered as reference.

**Suppl. Table 4.** Seropositivity after the 1st vaccine dose based on the ELISA results.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Seropositivity after 2nd vaccine dose** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| Body Mass Index | 0.101887 | 0.093452 | 1.09 | 0.284 | -0.08847 | 0.292242 |
| Anti SARS-CoV-2 antibody after 1st dose of vaccine | 0.59821 | 0.10924 | 5.48 | **0.000** | 0.375697 | 0.820724 |
| Asterazeneca | 1.805849 | 1.51543 | 1.19 | 0.242 | -1.28098 | 4.892679 |
| Sinopharm | 0 | (omitted) |  |  |  |  |

Suppl. Table 4 legend: Sputnik vaccine was considered as reference.

**Suppl. Table 5.** Covid-19 seropositivity after the 2nd dose of vaccination in compare to the 1st dose and its correlation with body mass index.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Seropositivity after 2nd vaccine dose** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| BMI | 0.015197 | 0.09757 | 0.16 | 0.877 | -0.1825 | 0.212892 |
| **Seropositivity after 1st vaccine dose** | 0.537971 | 0.113781 | 4.73 | **0.000** | 0.30743 | 0.768512 |

**Suppl. Table 6.** Correlation of Covid-19 seropositivity with body mass index before vaccination and after receiving the 2nd dose.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Seropositivity after 2nd vaccine dose** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| BMI | 0.098071 | 0.054328 | 1.81 | 0.07 | -0.00998 | 0.206126 |
| \_cons | 3.259842 | 1.384407 | 2.35 | 0.02 | 0.506313 | 6.013371 |
| **Seropositivity before vaccination** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| BMI | 0.025751 | 0.022101 | 1.17 | 0.24 | -0.01766 | 0.069157 |
| \_cons | 1.726304 | 0.562561 | 3.07 | 0.002 | 0.621446 | 2.831162 |

**Suppl. Table 7:** Correlation of seropositivity, body mass index and the previous infection with SARS-CoV-2.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Seropositivity after 2nd vaccine dose** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| PCR positivity before vaccination | 0.429692 | 0.238167 | 1.8 | 0.07 | -0.04822 | 0.907608 |
| BMI | 0.133791 | 0.067877 | 1.97 | **0.05** | -0.00241 | 0.269997 |
| Seropositivity before vaccination | 0.093404 | 0.101368 | 0.92 | 0.36 | -0.11001 | 0.296814 |
| \_cons | 1.560779 | 1.693011 | 0.92 | 0.36 | -1.8365 | 4.958054 |

**Suppl. Table 8:** Correlation of vaccine types and PCR positivity for SARS-CoV-2 after the 1st and 2nd vaccine doses.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PCR positivity after 1st vaccine** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| Asterazeneca | -52.7397 | 12.62428 | -4.18 | **0.000** | -77.9245 | -27.555 |
| Sinopharm | -80.4731 | 20.1682 | -3.99 | **0.000** | -120.708 | -40.2386 |
| \_cons | 112.6731 | 5.973305 | 18.86 | 0.000 | 100.7567 | 124.5895 |
| **PCR positivity after 2nd vaccine** | Coef. | Std. Err. | t | P>t | [95% Conf. | Interval] |
| Asterazeneca | -37.4275 | 10.8896 | -3.44 | **0.001** | -59.1692 | -15.6857 |
| Sinopharm | -47.2941 | 22.0253 | -2.15 | **0.035** | -91.2691 | -3.31918 |
| \_cons | 85.29412 | 5.191414 | 16.43 | 0.000 | 74.92913 | 95.65911 |

Suppl. Table 8 legend: The Sputnik vaccine was considered as reference.