Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

in the short term. The level of T-cell immunity to SARS-CoV-2 in peripheral blood required for protection is still not established, although peripheral T cells induced by BNT162b2 apparently react well against the omicron variant.[8] As for our cohort, our data show two important aspects of a third compared with a second dose—namely, peak virus-specific T-cell frequencies were not further increased by a third dose, and average per-cell production of IFNγ remained unaltered and was still remarkably lower than in recovered donors of a similar age. Thus, at least in older adults, the durability and quality of vaccine-induced immunity should be considered in the recommendation of booster vaccinations, in addition to the severity of breakthrough SARS-CoV-2 infections caused by current and future viral mutants.

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Antibody durability at 1 year after Sputnik V vaccination

Antibody waning against SARS-CoV-2 over time after vaccination, together with the emergence of new viral variants, pose great challenges for ending the pandemic. To our knowledge, no previous work has assessed the long-term prevalence of anti-SARS-CoV-2 antibodies in individuals vaccinated with Sputnik V (Gam-COVID-Vac).[1] We assessed the persistence of anti-spike IgG antibodies and their neutralising capacity against the original SARS-CoV-2 lineage (B.1) and a local isolate of the BA.1 lineage of the omicron (B.1.1.529) variant in a longitudinal cohort during 1 year after Sputnik V vaccination in Argentina.

We used 400 paired serum samples (100 samples at each timepoint, including at baseline before vaccination) from 100 volunteers who received two doses of Sputnik V that were obtained between Jan 1, 2021, and Jan 15, 2022. Participants with current or previous SARS-CoV-2 infection, determined by assessing seropositivity to nucleocapsid protein, were excluded from the analysis. The geometric mean (GM) of international units of IgG anti-spike antibodies[2] per mL (IU/mL) were 994 (95% CI 769–1285) at 42 days, 80 (60–106) at 180 days, and 36 (27–47) at 360 days after completion of the two-dose vaccination scheme (figure A; appendix p 2). Overall, a 27-fold reduction in IgG was observed 1 year after Sputnik V vaccination.

We assessed the GM half-maximal neutralising titre (GMT, IC_{50}) using a pseudotyped vescicular stomatitis virus carrying the spike of a viral isolate from Wuhan at the early stage of the pandemic (appendix p 4). The GMT at 42 days after vaccination was 133 (95% CI 92–193), at 180 days was 28 (19–39), and at 360 days was 11 (8–16; figure B).

Considering previous studies indicating that antibody responses undergo a maturation process,[3,4] we analysed the serum neutralising activity over time against the omicron variant. To this aim, we assessed the neutralising activity elicited by the Sputnik V vaccine[5] using the original B.1 isolate and a local isolate of BA.1 omicron. For this analysis, we used 60 samples (20 samples per timepoint) with the highest neutralising GMT for the original B.1 virus. For all timepoints analysed, we found a substantial decrease in the serum neutralising capacity against the omicron variant compared with the B.1 lineage (64-fold reduction at 42 days, 32-fold reduction at 180 days, and 28-fold reduction at 360 days after vaccination; appendix p 2). Six (30%) of the 20 immunised individuals remained positive for neutralising antibodies against omicron at 42 days after vaccination. This proportion increased to 45% (nine of 20) at 360 days. Similar results have been obtained using other vaccines

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See **Online** for appendix

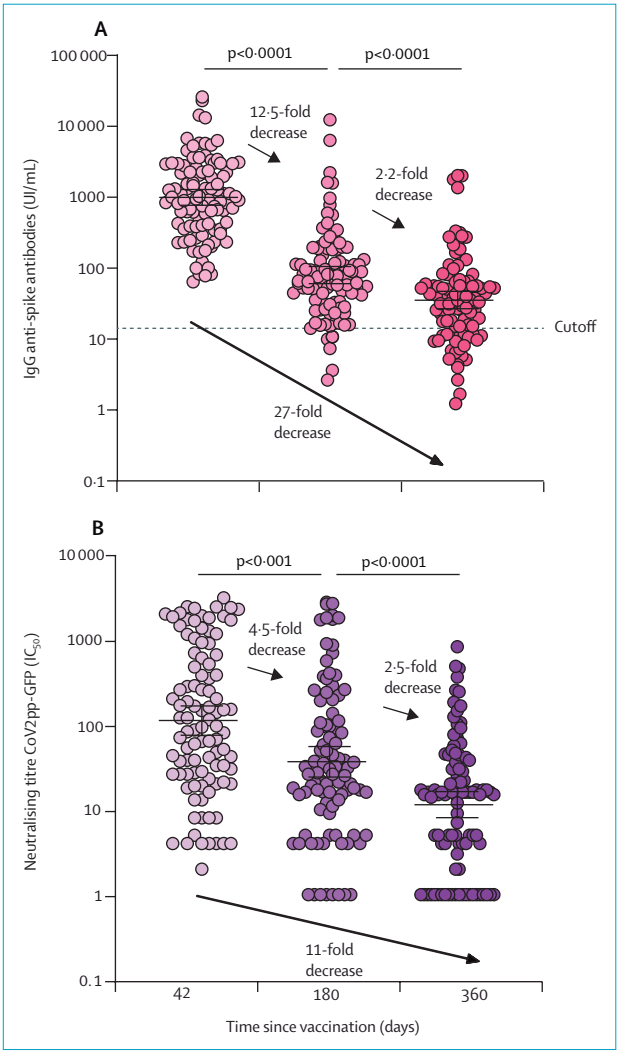

***Figure*: Longitudinal analysis of humoral response up to 1 year after two doses of Sputnik V vaccine**

(A) IgG anti-spike antibody concentrations quantified according to the WHO International Standard. Antibodies were measured at 42 (n=100), 180 (n=100), and 360 (n=100) days after completion of the two-dose vacination schedule. (B) Neutralising titres measured at 50% inhibition against the pseudotyped virus (CoV2pp GFP) for the same cohort as in panel A. Each datapoint indicates one volunteer, the horizontal lines at each timepoint show the mean titre, with error bars showing 95% CIs. Wilcoxon matched-pair test was used.

against SARS-CoV-2. Studies in individuals vaccinated with mRNA vaccines reported a similar decrease at 6 months after vaccination in both the concentration of IgG antibodies directed to the spike protein and the serum neutralising capacity against the original B.1 variant.[6,7] A substantial reduction in neutralising capacity against the omicron variant was also reported with mRNA vaccines.[8]

Overall, our data suggest that maturation of the antibody response observed over time after standard Sputnik V vaccination is unable to overcome the ability of omicron to escape the humoral response induced by the vaccine, emphasising the need to administer a booster dose urgently. Booster vaccination combining other vaccine platforms would be an option to further increase neutralising antibody levels against the omicron variant.

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GRADE misuse in systematic reviews

Saartje Uyttebroek and colleagues[1] published a systematic review on the safety and efficacy of phage therapy in difficult-to-treat infections. They provided an overview of trials and case studies on the use of phage therapy in several medical disciplines and concluded that phage therapy could potentially be beneficial for difficult-to-treat bacterial infections. The authors assessed the level of evidence using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.[2] However, the GRADE approach does not appear to have been correctly applied in this systematic review.

Uyttebroek and colleagues[1] rated the quality (certainty) of the observational studies included in their systematic review as low-to-moderate. However, according to the *GRADE Handbook*,[3] observational studies should initially be classified as low-quality, with quality being further reduced if there are any considerable issues with risk of bias, imprecision, inconsistency, indirectness, and publication bias. Any decision to rate up (eg, for large effect sizes) should only rarely be made if serious limitations are present in any of the factors that reduced the quality of evidence. Thus, for the body of evidence from observational studies on adverse events (as well as complete clinical improvement and bacterial eradication), the quality of evidence should be rated as very low due to the risk of bias among the included studies, which lowers the quality of the body of evidence from the initial