

Supplementary Material

Supplementary Tables

Table S1. STROBE checklist.

	Item No	Recommendation	Page No
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	1 1
Introduction			
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	1-2
Objectives	3	State specific objectives, including any prespecified hypotheses	2
Methods			
Study design	4	Present key elements of study design early in the paper	2-3
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	2
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up (b) For matched studies, give matching criteria and number of exposed and unexposed	2 NA
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	2-3
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	2
Bias	9	Describe any efforts to address potential sources of bias	2-3
Study size	10	Explain how the study size was arrived at	2
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	2-3
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) If applicable, explain how loss to follow-up was addressed (e) Describe any sensitivity analyses	3 3 3 NA 3
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram	3-7 3-7 NA
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) Summarize follow-up time (eg, average and total amount)	3, Table 1 Table 1 Table 1
Outcome data	15*	Report numbers of outcome events or summary measures over time	3-7
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	3-7 4-7 NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	3-7
Discussion			

Key results	18	Summarize key results with reference to study objectives	7
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	9
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	7-9
Generalizability	21	Discuss the generalizability (external validity) of the study results	7-9
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	9

Table S2. Seroprevalences in all participants (principal analysis), in participants with repeated donations since July 2017, and in all participants with age and sex standardization across the total population of Tyrol, Austria.

Month	% Seropositive (95% confidence interval)		
	All participants (n = 22,607)	Participants who had already donated blood leading up to the study* (n = 17,764)	All participants (n = 22,607) with age and sex standardization across the total population of Tyrol [†]
October 2021	84.9 (83.8–86.0)	87.0 (85.8–88.1)	85.3 (84.2–86.4)
November 2021	88.7 (87.6–89.6)	90.2 (89.1–91.2)	88.6 (87.6–89.7)
December 2021	91.3 (90.3–92.3)	91.3 (90.2–92.3)	91.3 (90.3–92.3)
January 2022	93.5 (92.8–94.2)	94.1 (93.3–94.9)	93.4 (92.6–94.2)
February 2022	95.3 (94.5–96.0)	95.7 (94.9–96.5)	95.2 (94.3–96.0)
March 2022	95.9 (95.2–96.5)	96.2 (95.5–96.9)	95.9 (95.2–96.5)
April 2022	95.8 (94.9–96.4)	95.7 (94.8–96.5)	95.9 (95.1–96.6)

*To define this subgroup of the study population, the period from July 2017 to study baseline was considered.

[†]Direct age and sex standardization was applied by using age (categories 18-30, >30-40, >40-50, >50-60, >60-70 years) and sex structured data of the population of the Federal State of Tyrol in Austria as standard population as of 1 January 2022 from the Statistik Austria.

Supplementary Figures

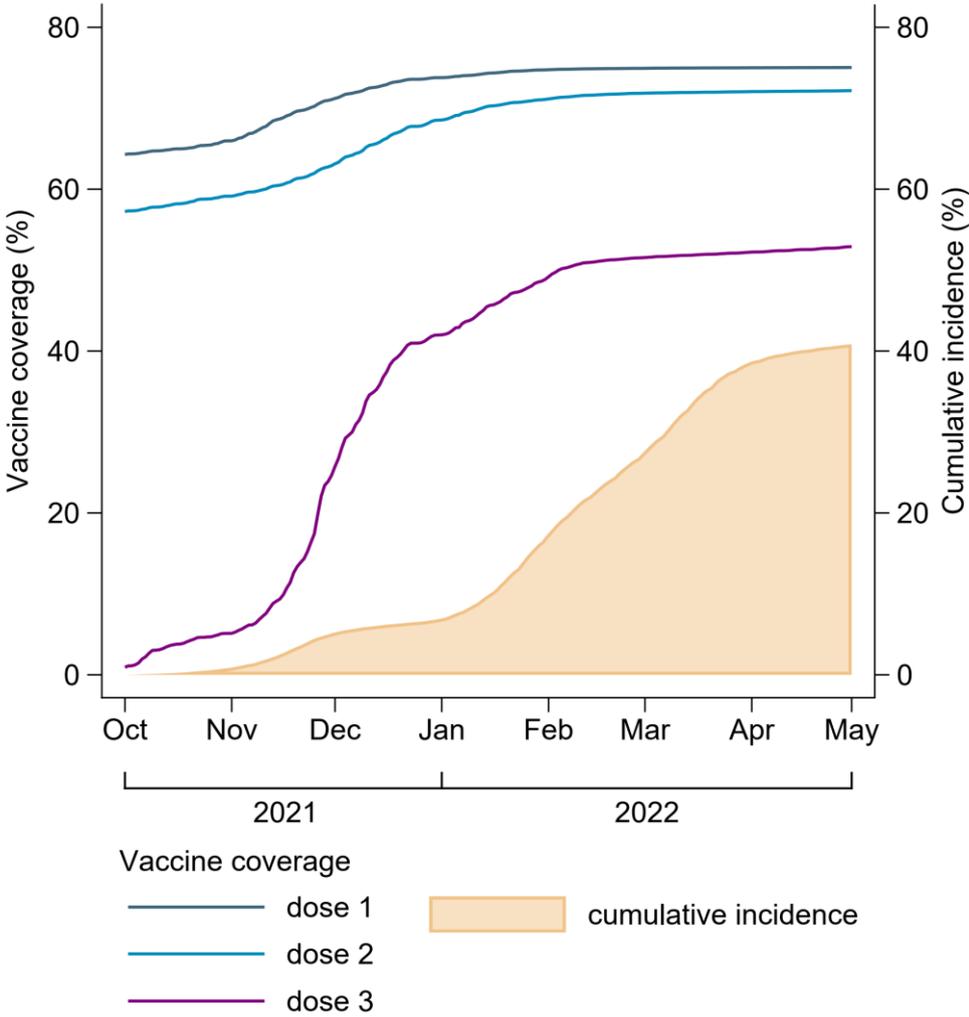


Figure S1. Vaccine coverage in the total population of Tyrol between 27.12.2021 and 30.04.2022 stratified by vaccine dose.

A Vaccinated at first and latest available follow-up measurement

		Follow-up measurement						Row total
		Seronegative	<500	500-<1000	1000-<2000	2000-<3000	≥3000	
First measurement	Seronegative	2 (11.1%)	4 (22.2%)	2 (11.1%)	5 (27.8%)	3 (16.7%)	2 (11.1%)	18
	<500	0 (0.0%)	157 (14.2%)	229 (20.7%)	245 (22.2%)	121 (11.0%)	352 (31.9%)	1104
	500-<1000	0 (0.0%)	48 (13.6%)	64 (18.1%)	76 (21.5%)	42 (11.9%)	123 (34.8%)	353
	1000-<2000	0 (0.0%)	31 (9.9%)	57 (18.2%)	66 (21.0%)	48 (15.3%)	112 (35.7%)	314
	2000-<3000	0 (0.0%)	7 (4.7%)	34 (22.7%)	52 (34.7%)	19 (12.7%)	38 (25.3%)	150
	≥3000	0 (0.0%)	5 (1.8%)	26 (9.6%)	59 (21.7%)	54 (19.9%)	128 (47.1%)	272

B Unvaccinated at first and latest available follow-up measurement

		Follow-up measurement						Row total
		Seronegative	<500	500-<1000	1000-<2000	2000-<3000	≥3000	
First measurement	Seronegative	101 (51.8%)	88 (45.1%)	6 (3.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	195
	<500	1 (0.8%)	107 (84.3%)	10 (7.9%)	5 (3.9%)	1 (0.8%)	3 (2.4%)	127
	500-<1000	0 (0.0%)	2 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2
	1000-<2000	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0
	2000-<3000	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0
	≥3000	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	1

Figure S2. Shift of vaccinated and unvaccinated participants across categories of anti-S IgG antibody levels in Binding Antibody Units per milliliter between first and last available follow-up measurement between October 2021 and April 2022. Seronegativity corresponds to anti-S IgG levels <7.1 Binding Antibody Units per milliliter. The intensity of the cell color reflects the row percentage of the cell. The diagonal of the matrix indicates the number (row percentage) of participants who remained in the same category of anti-S IgG antibody level between the first and last available follow-up measurement. The upper part of the matrix depicts the number (row percentage) of participants that were shifted to a higher category, i.e., they had an increase of anti-S IgG antibody levels between the first and last available follow-up measurements. The lower part of the matrix depicts the number (row percentage) of participants that were shifted to a lower category, i.e., they had a decrease of anti-S IgG antibody levels between the first and last available follow-up measurement. The analyses were restricted to participants with at least one follow-up measurement and who were vaccinated/unvaccinated throughout the duration of the follow-up. **(A)** The analysis involved 2211 participants who were vaccinated with at least one dose of any vaccine against SARS-CoV-2 at both measurements. **(B)** The analysis involved 325 participants who were unvaccinated at both measurements.