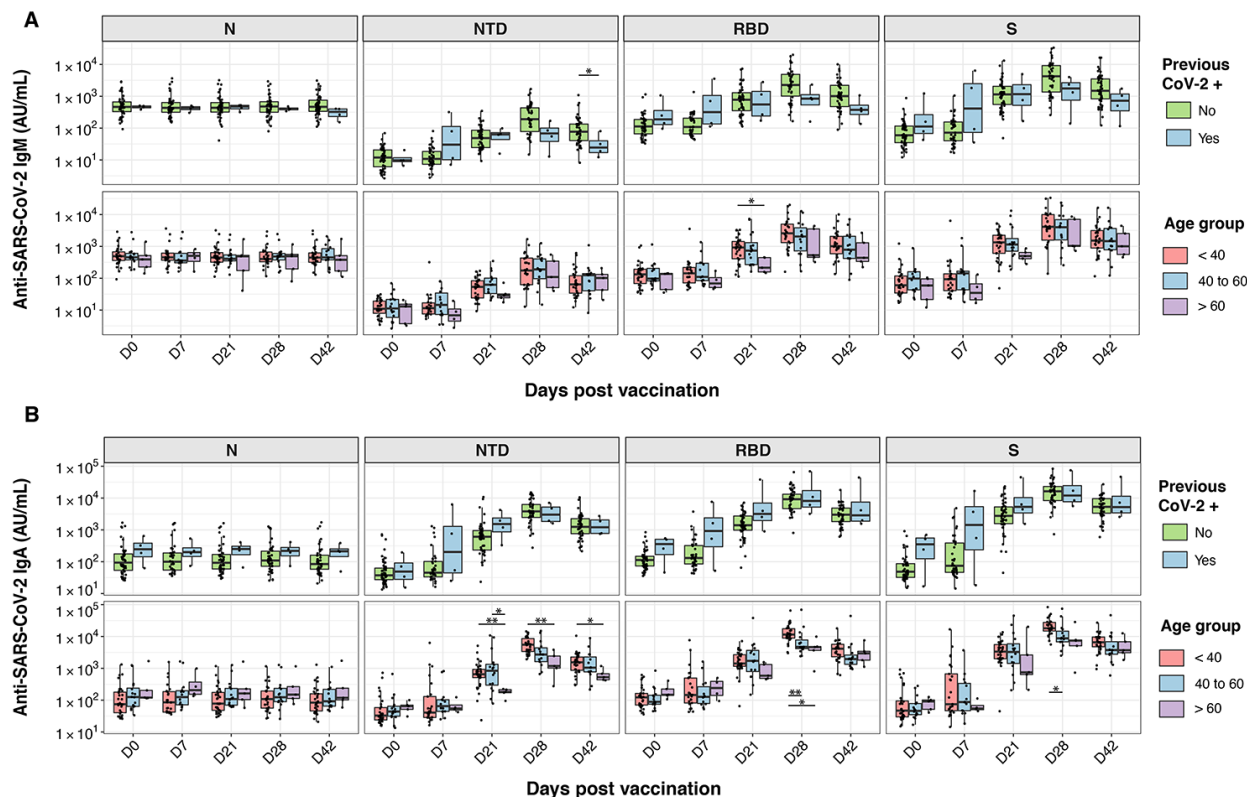
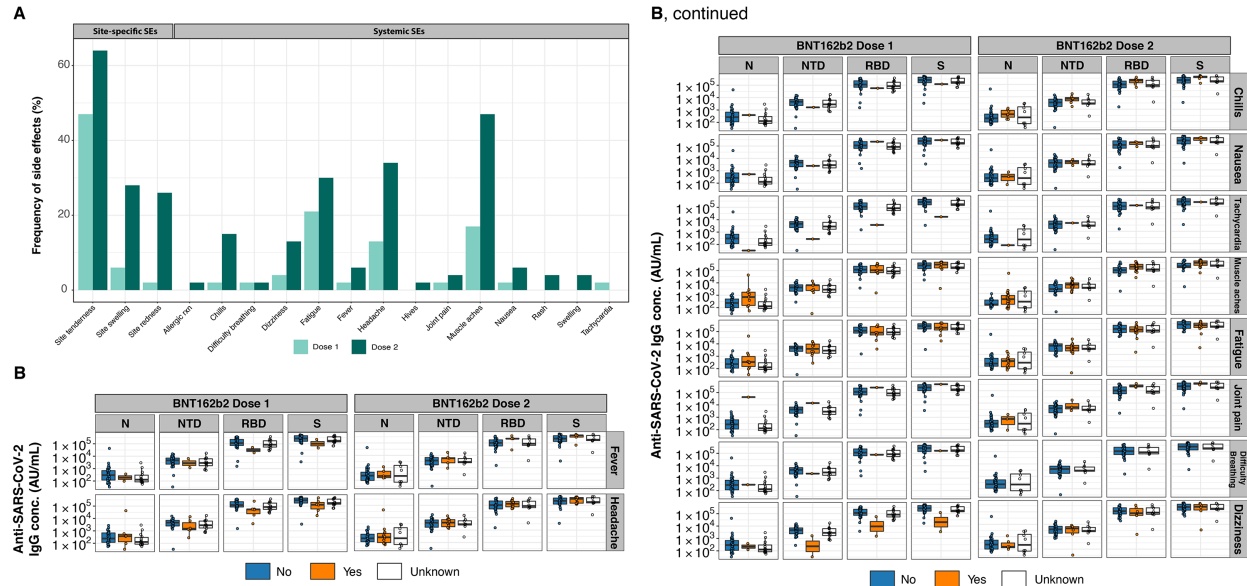


348 Supplemental Figures



349
350 **Figure S1: BNT162b2 vaccination induces variable and relatively low anti-SARS-CoV-2 IgM**
351 **and IgA concentrations.** Anti-SARS-CoV-2 N, NTD, RBD, and S IgM (A) and IgA (B) antibody
352 responses are shown for 257 plasma samples from 55 individuals who received BNT162b2 prime
353 (day 0) and boost (day 21) vaccination doses. Box-whisker plots of the MSD AU/mL anti-SARS-
354 CoV-2 IgG concentrations show the interquartile range as the box and the minimum and maximum
355 values as the ends of the whiskers. Statistical tests: two-sided Wilcoxon rank sum test (A and B,
356 top panels) and pairwise Wilcoxon rank sum test with Bonferroni correction (A and B, bottom
357 panels). * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$.

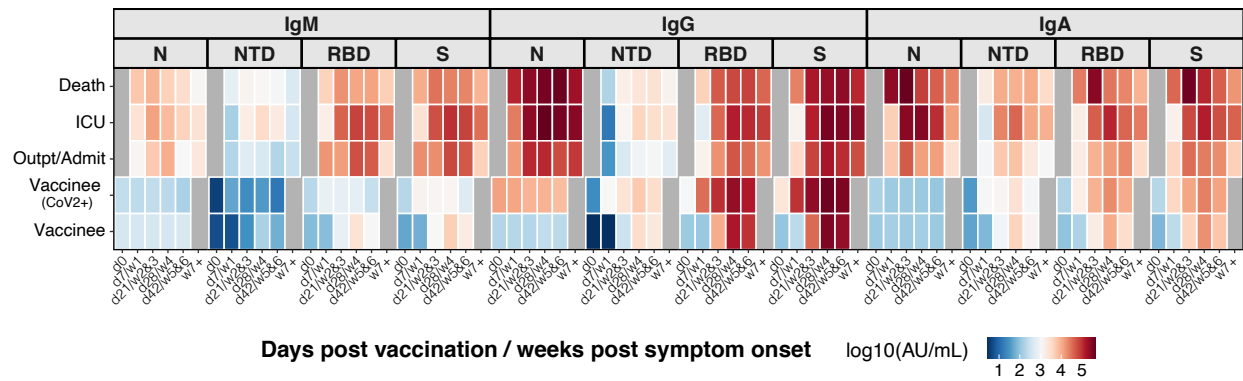
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360 **Figure S2: The magnitude of antibody responses is not correlated with reported vaccine-**
 361 **associated side effects (SEs).** (A) Frequency of vaccine-associated side effects after the prime
 362 (light green) and boost (dark green) vaccination dose. (B) Box-whisker plots of the MSD AU/mL
 363 anti-SARS-CoV-2 IgG concentrations show the interquartile range as the box and the minimum
 364 and maximum values as the ends of the whiskers. For a given SE (horizontal panels), vaccinees
 365 were grouped according to no SE reported (“No”, colored in blue) or SE reported (“Yes”, colored
 366 in orange). Vaccinees where SEs were unknown are shown as white boxplots.

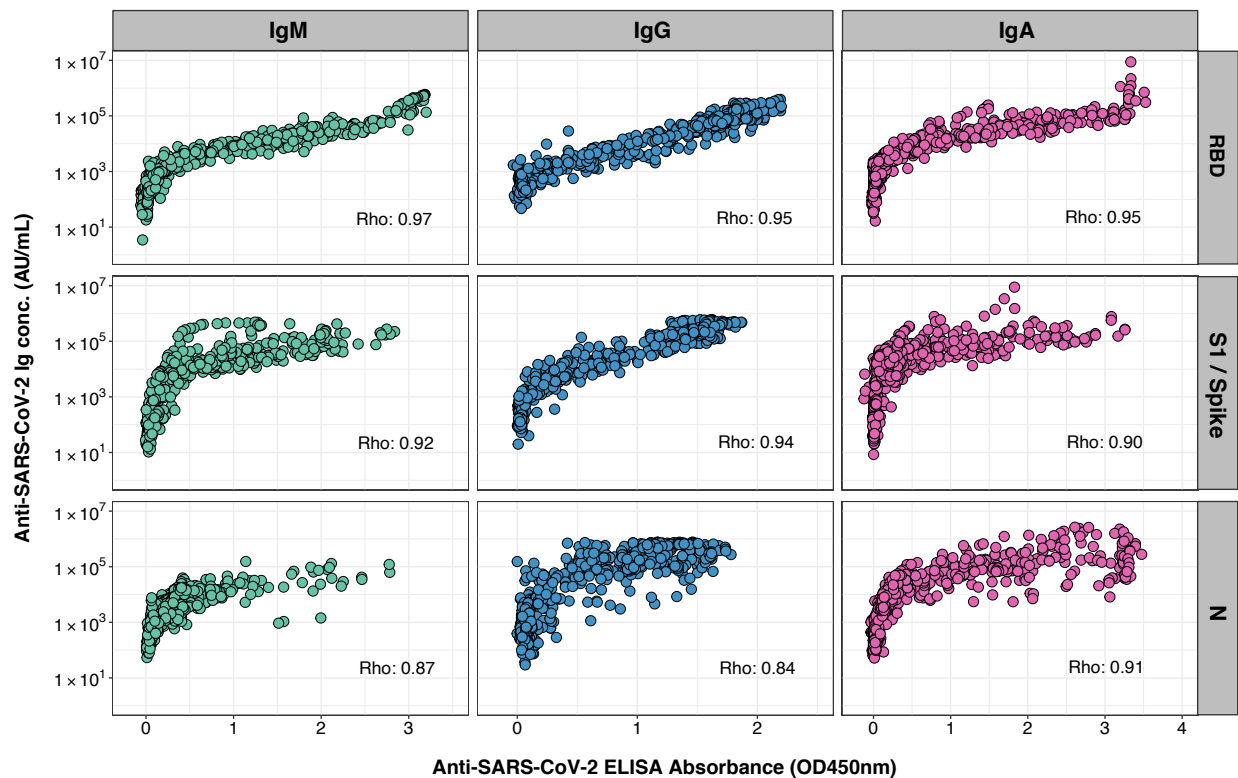
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369 **Figure S3: BNT162b2 vaccination and SARS-CoV-2 infection elicit divergent Ig isotype**
 370 **profiles.** Anti-SARS-CoV-2 N, NTD, RBD, and S IgM, IgG, and IgA antibody responses are
 371 shown for individuals who received BNT162b2 prime (day 0) and boost (day 21) vaccination doses
 372 and for COVID-19 patients. The heatmap shows the development of antibody responses in
 373 longitudinal samples from vaccinees/patients collected at / during day 0, day 7 / week 1, day 21 /
 374 weeks 2&3, day 28 / week 4, day 42 / weeks 5&6, and week 7 and later after vaccination / COVID-
 375 19 symptom onset (x-axis). Individuals were classified as outpatients (Outpt) and hospital admitted
 376 patients (Admit); intensive care unit (ICU) patients, those who died from their illness (Death) and
 377 vaccinees who did (CoV-2+) or did not have a positive SARS-CoV-2 test in the past. **Mean** values
 378 (as opposed to the **Median** values shown in the main Figure 2) of log₁₀ MSD arbitrary unit
 379 (AU)/mL concentrations were used to display a color code for each of the study groups.

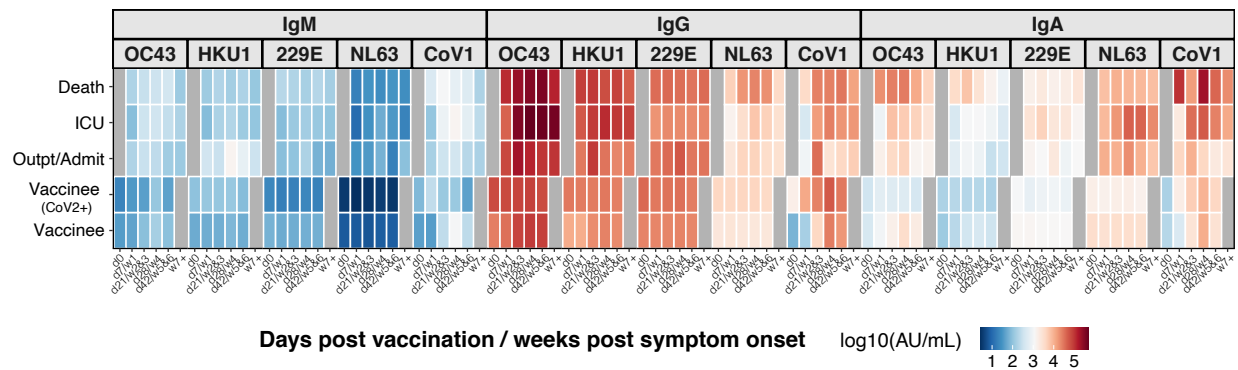
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382 **Figure S4: Correlation of anti-SARS-CoV-2 ELISA and ECL results.** Anti-SARS-CoV-2
383 RBD, S1/S, and N IgM, IgG, and IgA antibody responses were measured in 530 plasma samples
384 from 100 COVID-19 patients by ELISA and MSD ECL assays. ELISA versus MSD RBD and N
385 assay results and ELISA S1 versus MSD S assay results were highly correlated. Spearman rank
386 correlation (coefficient = Rho, displayed in the plot for each assay comparison) was used to assess
387 the strength of correlation between ELISA and MSD results. Outliers for the N assays with less
388 correlated ELISA and MSD results may be attributed to the fact that the N protein used in the
389 ELISAs was produced in *E. coli*, whereas the MSD N protein was produced in mammalian cells,
390 potentially causing differences in post-translational modifications and thus epitope recognition.

391



392

393 **Figure S5: Less broad serological responses to endemic HCoVs from BNT162b2 compared**
 394 **to SARS-CoV-2 infection.** Anti-SARS-CoV S, and anti-HCoV-OC43, -HKU1, -NL63 and -229E
 395 S IgM, IgG, and IgA antibody responses are shown for individuals who received BNT162b2 prime
 396 (day 0) and boost (day 21) vaccination doses and for COVID-19 patients. The heatmap shows the
 397 development of antibody responses in longitudinal samples from vaccinees/patients collected at /
 398 during day 0, day 7 / week 1, day 21 / weeks 2&3, day 28 / week 4, day 42 / weeks 5&6, and week
 399 7 and later after vaccination / COVID-19 symptom onset (x-axis). Individuals were classified as
 400 outpatients (Outpt) and hospital admitted patients (Admit); intensive care unit (ICU) patients, those
 401 who died from their illness (Death) and vaccinees who did (CoV-2+) or did not have a positive
 402 SARS-CoV-2 test in the past. **Mean** values (as opposed to the **Median** values shown in the main
 403 Figure 3) of log₁₀ MSD arbitrary unit (AU)/mL concentrations were used to display a color code
 404 for each of the study groups.