

Supplementary Materials

Comparison of neutralizing activity between vaccinated and unvaccinated hospitalized COVID-19 patients infected with delta, omicron BA.1, or omicron BA.2 variant

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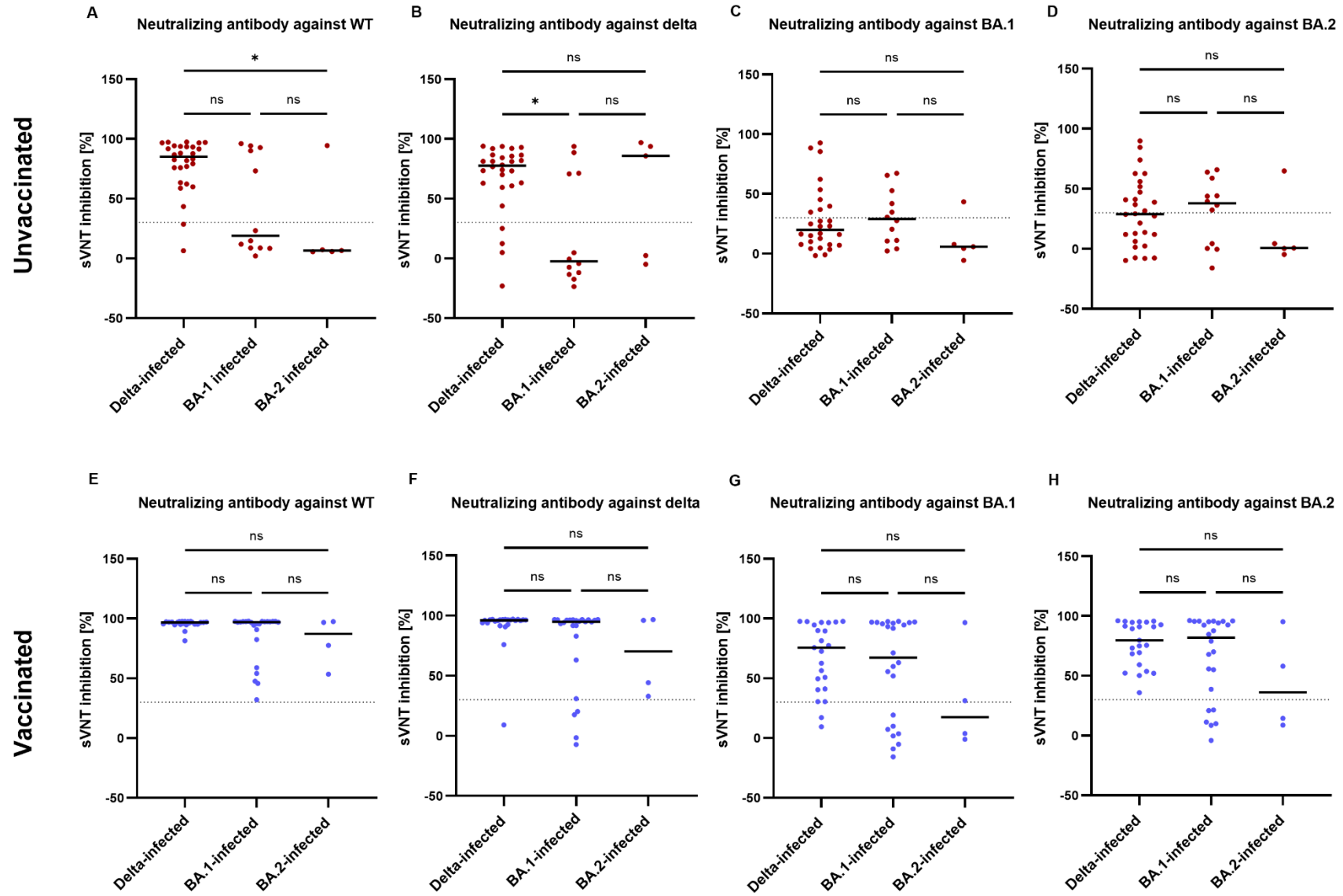


Figure S1. Neutralizing antibody titers in delta or omicron (BA.1 or BA.2)-infected patients against SARS-CoV-2 WT and variants, according to the variant contracted. The neutralizing antibody titers (sVNT % inhibition) against (A) WT, (B) delta, (C) omicron BA.1, and (D) omicron BA.2 are shown for unvaccinated patients (red), and against (E) WT, (F) delta, (G) omicron BA.1, and (H) omicron BA.2 for vaccinated patients (blue), categorized by the variant contracted. The lines indicate the median and dotted lines indicate the limit of positivity (30% signal inhibition). Statistical significance across the different variants was determined using the Kruskal-Wallis test with Dunn's correction. $*P < 0.05$ and ns = non-significant. Abbreviations: sVNT, surrogate virus neutralization test; WT, wild-type; NA, not applicable.

Table S1. Results of the surrogate virus neutralization test in delta or omicron SARS-CoV-2 infected patients.

| Surrogate virus neutralization test | Unvaccinated patients | | | | Vaccinated patients | | | |
|---|-------------------------|------------------------|-----------------------|----------------|-------------------------|------------------------|-----------------------|----------------|
| | Delta-infected (n = 28) | BA.1-infected (n = 12) | BA.2-infected (n = 5) | <i>P</i> value | Delta-infected (n = 23) | BA.1-infected (n = 24) | BA.2-infected (n = 4) | <i>P</i> value |
| Positivity ($\geq 30\%$ signal inhibition) | | | | | | | | |
| WT | 26 (92.9%) | 5 (41.7%) | 1 (20%) | <0.001 | 23 (100%) | 24 (100%) | 4 (100%) | NA |
| Delta | 24 (85.7%) | 4 (33.3%) | 3 (60%) | 0.004 | 22 (95.7%) | 20 (83.3%) | 4 (100%) | 0.455 |
| BA.1 | 9 (32.1%) | 7 (58.3%) | 1 (20%) | 0.276 | 21 (91.3%) | 16 (66.7%) | 2 (50%) | 0.045 |
| BA.2 | 13 (46.4%) | 8 (66.7%) | 1 (20%) | 0.198 | 23 (100%) | 18 (75.0%) | 2 (50%) | 0.005 |
| SO to serum sample collection (day), median [IQR] | 9 [3–19] | 4 [0.3–8.0] | 4 [1.5–12.5] | 0.141 | 7 [4.8–17.8] | 9 [4–12.8] | 5.5 [1.3–15.8] | 0.628 |

Abbreviations: SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; WT, wild-type; NA, not applicable; SO, symptom onset; IQR, interquartile range. The categorical variables were assessed using the Fisher's exact test and continuous variable was compared using the Kruskal-Wallis test.