Supplementary Materials

Figure S1. Distribution of negative, positive and not-available samples for all cellular studies.
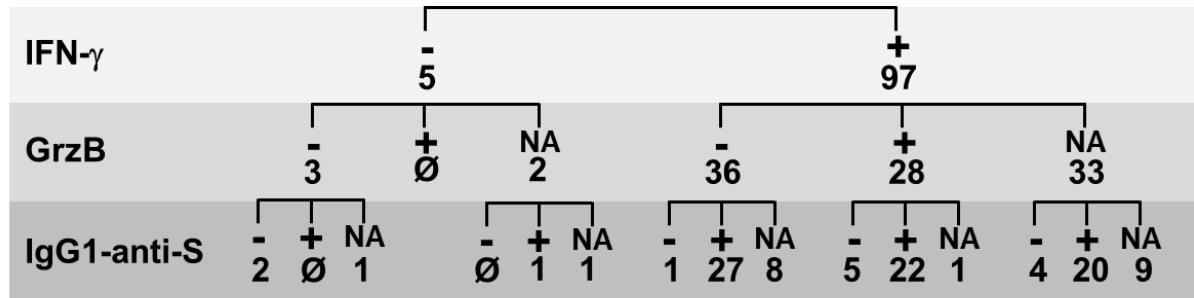
Figure S2. Relationship between memory T and B lymphocytes against SARS-CoV-2.

Figure S3. Relationship between anti-S and anti-N-specific IgG antibody titer and the cellular memory to SARS-CoV-2.

Figure S4. Frequency of (A) T and (B) B lymphocytes in the ELISpot assays, by severity of disease.

Figure S5. Relationship between cellular and humoral memory to SARS-CoV-2 and age (A-D), time since diagnosis of the infection (E-H), number of SARS-CoV-2 RNA copies (I-L) and gender (M-P).

Supplementary figures:

IFN-γ
- − 5
- + 97

GrzB
- − 3
- + Ø
- NA 2
- − 36
- + 28
- NA 33

IgG1-anti-S
- − 2 / + Ø / NA 1
- − Ø / + 1 / NA 1
- − 1 / + 27 / NA 8
- − 5 / + 22 / NA 1
- − 4 / + 20 / NA 9

NA: not-available sample

Figure S1. Distribution of negative, positive and not-available samples for all cellular performed studies: IFN-γ and granzyme B producer T lymphocytes and IgG1 anti-S producer B lymphocytes.
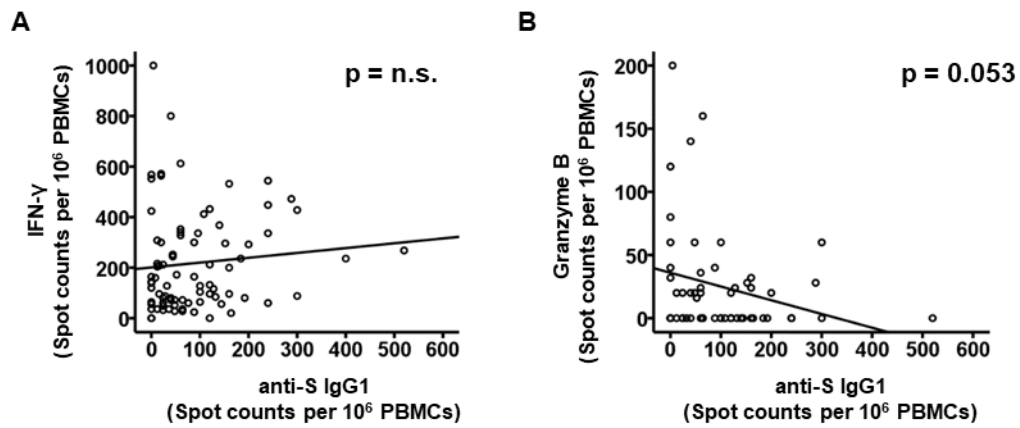
Figure S2. Relationship between memory T and B lymphocytes against SARS-CoV-2. Relationship between memory B lymphocyte response and **(A)** IFN-γ and **(B)** granzyme B production were analysed. p values and coefficients of correlation were calculated by using the Pearson test, n.s.: not significant.
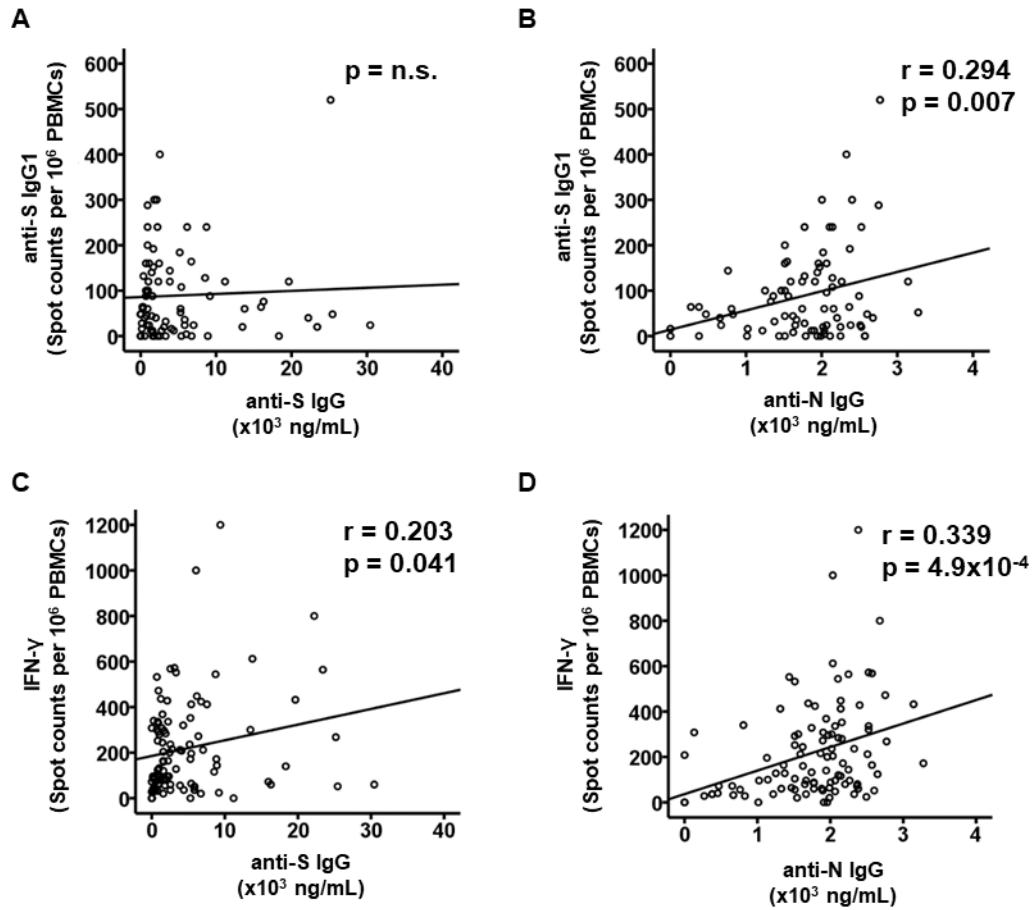
Figure S3. Relationship between anti-S and anti-N-specific IgG antibody titer and the cellular memory to SARS-CoV-2. The correlations between memory B lymphocyte response and **(A)** anti-S and **(B)** anti-N IgG plasma titers were analysed. The correlations between IFN-γ production and **(C)** anti-S and **(D)** anti-N IgG plasma titers were analysed. Pearson correlation coefficients and probabilities are shown in the upper right-hand corner; n.s.: not significant.
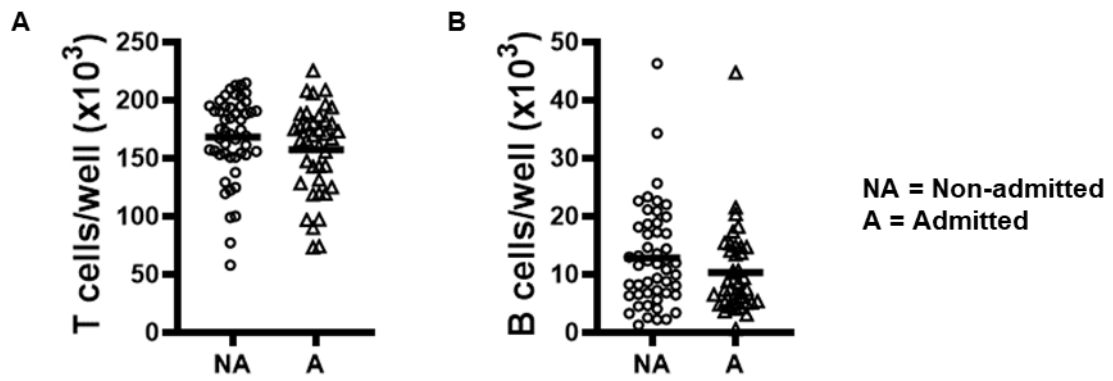
Figure S4. Number of (A) T and (B) B lymphocytes in the ELISPOT assays according to the severity of the disease. Number of T and B lymphocytes was analysed by flow-cytometry. Data are shown as scatter plots, horizontal lines mark mean values with means.
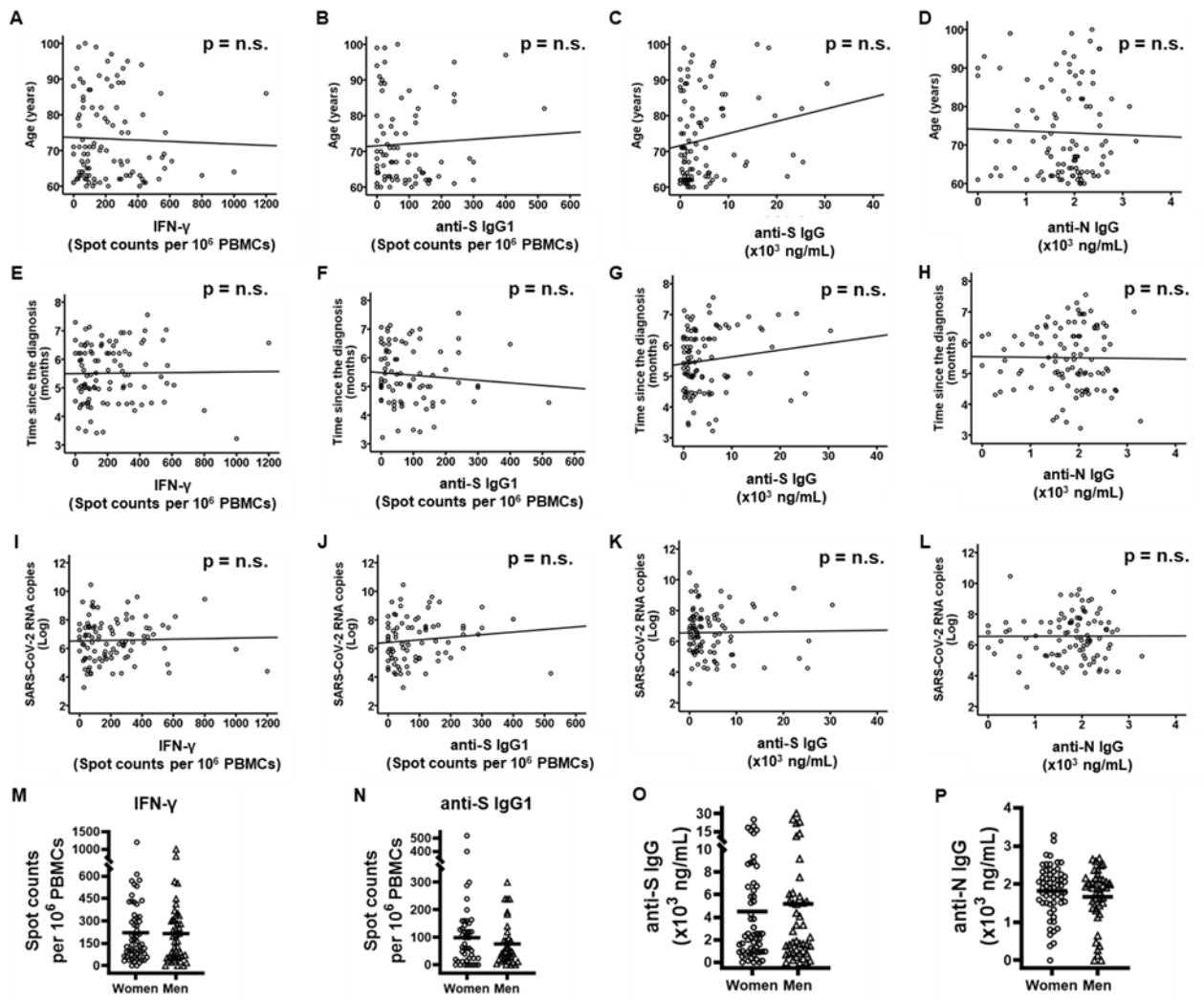
Figure S5. Relationship between cellular and humoral memory against SARS-CoV-2 and age (A-D), time since the diagnosis of the infection (E-H), number of copies of SARS-CoV-2 RNA copies (I-L) and sex (M-P). The correlations between age and (**A**) IFN-γ production, (**B**) memory B lymphocyte response, (**C**) anti-S and (**D**) anti-N IgG plasma titers were analyzed. The correlations between the time since the diagnosis of the infection and (**E**) IFN-γ production, (**F**) memory B lymphocyte response, (**G**) anti-S and (**H**) anti-N IgG plasma titers were analyzed. The correlations between the number of copies of SARS-CoV-2 RNA copies and (**I**) IFN-γ production, (**J**) memory B lymphocyte response, (**K**) anti-S and (**L**) anti-N IgG plasma titers were analyzed. p values and coefficients of correlation were calculated by using the Pearson test, n.s.: not significant.

Scatter plots show the number of antigen-specific spot forming cells producing **(M)** IFN-γ or **(N)** anti-S IgG1 in women and men. Serum titers of **(O)** anti-S or **(P)** anti-N IgG. Data are shown as scatter plots, horizontal lines mark mean values.