

## **Supplementary Document S5. SARS-CoV-2 infections following vaccination**

Eight people with multiple sclerosis (PwMS) reported a SARS-CoV-2 infection following vaccination over a median follow-up time of four months: six after the first vaccination and two after the second vaccination. The infections were detected by polymerase chain reaction test in six patients and antibody test in one patient. The remaining patient provided no data on the test type. Five of the eight patients were treated with disease-modifying drugs (DMDs) at the time of the infection (glatiramer acetate: two patients; ocrelizumab, fingolimod, siponimod: one patient each), and three were without an immunomodulatory treatment. SARS-CoV-2 infections occurred within two months after the first vaccination in five patients while the remaining three PwMS did not provide data on infection dates. All SARS-CoV-2 infections reported until the data export date occurred from February to June 2021.

The lower rate of breakthrough infections (N=2, 0.1%) in our study after a fully administered SARS-CoV-2 vaccination compared with findings from the general population (Hacisuleyman et al.: 0.5%, Geysels et al.: 0.3%) [1,2] may be explained by (i) the short interval between complete immunization and the subsequent observation and reporting time captured in the present study with potentially still-well-preserved immunity against SARS-CoV2 [3,4], (ii) the observation period in our study (May to October) that lies outside the seasonal peak of SARS-CoV-2 infections in Germany from November to April [5] and (iii) the fact that only clinically manifest vaccination breakthroughs were documented in our study. In the continuation of our study, we expect more robust longitudinal results on these aspects for clinical practice [6]. Further differences in the frequencies of reported vaccination reactions (Supplementary Document S6) compared with the previous studies by Lotan et al. [7] and Achiron et al. [8] may be due to differences in data access (country-wide online survey vs. single specialized clinic vs. country-wide healthcare database) and data collection types (patient-reported vs. physician/neurologist-reported).

## **References**

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