

mRNA-1273 induces stronger response than BNT162b2 for immunosuppressed

May 16 2022



For immunosuppressed patients, mRNA-1273 induces a stronger

seroresponse than BNT162b2, according to a research letter published online May 16 in *JAMA Network Open*.

Jonathan Mitchell, M.B.B.S., from the Johns Hopkins University School of Medicine in Baltimore, and colleagues compared antispikes antibody titers after two-dose mRNA-1273 and BNT162b2 vaccines in immunosuppressed patients with rheumatic and musculoskeletal diseases (RMDs) and solid organ transplant recipients (SOTRs). Participants received two mRNA doses between Dec. 16, 2020, and July 6, 2021. At 15 to 45 days after the second dose, semiquantitative testing for antibodies against the receptor binding domain (RBD) of the severe acute respiratory syndrome coronavirus 2 spike protein was performed.

Data were included for 1,158 participants with RMDs and 697 SOTRs (55.8 and 52.7 percent received BNT162b2, respectively). The researchers found that the rate of anti-RBD titers of 250 U/mL or greater was comparable among BNT162b2 and mRNA-1273 recipients (91.5 versus 93.1 percent) among the 220 participants with RMDs not receiving immunosuppression, hydroxychloroquine, or [intravenous immunoglobulin](#). However, among the 938 patients with RMDs receiving immunosuppression, mRNA-1273 recipients had higher rates of anti-RBD titers of 250 U/mL or greater compared with BNT162b2 recipients (79.2 versus 60.5 percent). Differential immunogenicity according to the choice of mRNA vaccine platform was seen for the 260 SOTRs not receiving [mycophenolic acid](#) or [mycophenolate mofetil](#) (66.4 versus 44.7 percent) and for the 437 SOTRs receiving mycophenolic acid or mycophenolate mofetil (11.4 versus 4.3 percent).

"mRNA-1273 was more likely to induce stronger humoral immunogenicity compared with BNT162b2 in immunosuppressed patients; this effect was more pronounced with greater [immunosuppression](#)," the authors write.

One author disclosed financial ties to the biopharmaceutical industry.

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