

Humoral response in hemodialysis patients stronger with mRNA-1273

February 16 2022



(HealthDay)—For patients undergoing hemodialysis, the severe acute

respiratory syndrome coronavirus 2 (SARS-CoV-2) mRNA-1273 vaccine elicits a stronger humoral response than the BNT162b2 vaccine, according to a study published online Feb. 3 in *CMAJ*, the journal of the Canadian Medical Association

Kevin Yau, M.D., from the Sunnybrook Health Sciences Centre in Toronto, and colleagues compared the serologic response after vaccination with BNT162b2 and mRNA-1273 (129 and 95 patients, respectively) in patients undergoing maintenance [hemodialysis](#). SARS-CoV-2 immunoglobulin G antibodies to the [spike protein](#) (anti-spike), receptor binding domain (anti-RBD), and nucleocapsid protein (anti-NP) were measured at six to seven and 12 weeks after the second vaccine dose and were compared to the median convalescent serum antibody levels from 211 controls with previous SARS-CoV-2 infection.

The researchers found that 73% of patients who received BNT162b2 and 95% who received mRNA-1273 attained convalescent levels of anti-spike antibody at six to seven weeks after two-dose vaccination. Also, 50 and 79% of those who received BNT162b2 and mRNA-1273, respectively, reached the convalescent level for anti-RBD. Anti-spike and anti-RBD levels were significantly lower in patients who received BNT162b2 than in those who received mRNA-1273 at 12 weeks after the second dose. For anti-spike, 57.4% who received BNT162b2 versus 96% who received mRNA-1273 maintained the convalescent level; for anti-RBD, the corresponding proportions were 38.5 and 63%.

"The decline in SARS-CoV-2 [antibodies](#) at 12 weeks after vaccination in those who received BNT162b2 is concerning because levels of anti-spike and anti-RBD generally correlate with levels of neutralizing antibody, which have been inferred to provide protection against symptomatic SARS-CoV-2 infection," a coauthor said in a statement.

Several authors disclosed financial ties to the pharmaceutical and health

care industries.

More information: Kevin Yau et al, Differences in mRNA-1273 (Moderna) and BNT162b2 (Pfizer-BioNTech) SARS-CoV-2 vaccine immunogenicity among patients undergoing dialysis, *Canadian Medical Association Journal* (2022). [DOI: 10.1503/cmaj.211881](https://doi.org/10.1503/cmaj.211881)

Copyright © 2022 [HealthDay](#). All rights reserved.

Citation: Humoral response in hemodialysis patients stronger with mRNA-1273 (2022, February 16) retrieved 29 March 2023 from <https://medicalxpress.com/news/2022-02-humoral-response-hemodialysis-patients-stronger.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.