

Risk of SARS-CoV-2 infection during the omicron surge in patients on dialysis

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In a recent study published in *Journal of the American Society of Nephrology*, a third COVID-19 mRNA vaccine dose in adults with kidney failure who were on dialysis enhanced patients' protection against

SARS-CoV-2 infection during the omicron-dominant period. A patient's response to vaccination or prior infection—as measured by circulating anti-SARS-CoV-2 antibody levels—was also an important predictor for subsequent risk of infection.

In the study of randomly-selected patients receiving dialysis in the United States, a team led by Shuchi Anand, MD, MS, Pablo Garcia, MD, MS, and Maria Montez Rath, Ph.D. (Stanford University School of Medicine) followed patients' monthly anti-SARS-CoV-2 antibody levels and ascertained COVID-19 infection during the omicron- dominant period of December 25, 2021 to January 31, 2022 using [electronic health records](#).

Among 3,576 patients receiving dialysis, 901 (25%) received a third mRNA vaccine dose as of December 1, 2022, and early antibody responses to third doses were robust. During the omicron-dominant period, SARS-CoV-2 infection was documented in 340 (7%) patients. Risk for infection was doubled among patients without vaccination and nearly 1.5-fold higher with 1–2 doses compared with 3 doses. Irrespective of [vaccine doses](#), risk for infection was at least 2-fold higher among patients with low circulating levels of anti-SARS-CoV-2 antibodies.

"The COVID-19 pandemic continues to evolve, and it is clear that COVID-19 will become an endemic infection—that is, an infection that circulates at regular intervals in our community. In such a situation, it is critical to devise strategies that protect the most medically vulnerable persons with appropriate vaccine doses or additional preventive measures (such as monoclonal antibodies), and early treatments," said Dr. Anand. "Measuring a person's circulating antibody response to SARS-CoV-2 virus may help us identify the highest risk persons eligible for enhanced protection among patients on dialysis, and other immunocompromised or frail populations."

More information: SARS-CoV-2 infection during the Omicron surge among patients receiving dialysis: the role of circulating receptor-binding domain antibodies and vaccine doses, *Journal of the American Society of Nephrology* (2022). [DOI: 10.1681/asn.2022040504](https://doi.org/10.1681/asn.2022040504)

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