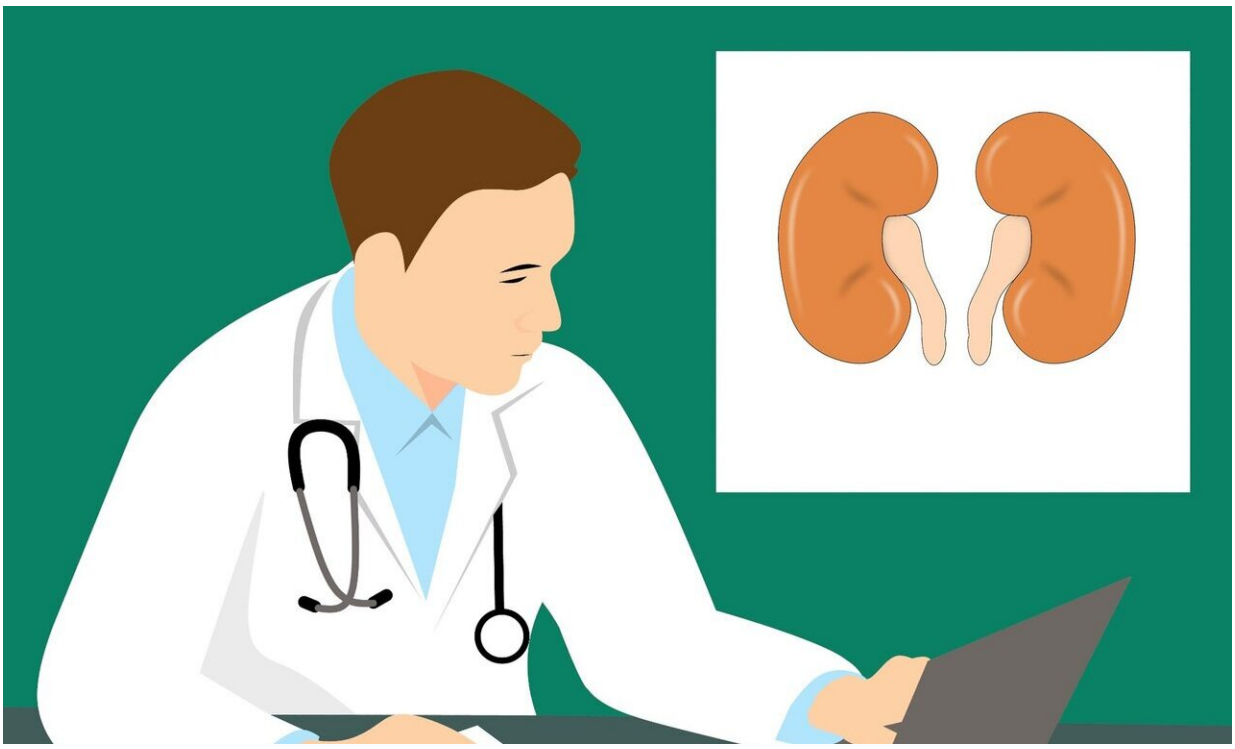
Immune system-related differences may explain higher COVID deaths among patients on dialysis

November 8 2021



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People with kidney failure who are on dialysis or who have received a kidney transplant face a higher risk of dying from COVID-19. New research reveals that these individuals have profound immune

system–related differences compared with people with normal kidney function, and that these differences are further amplified by SARS-CoV-2 infection. The findings will be presented online at ASN Kidney Week 2021 November 4–November 7.

The study included 32 patients who were on hemodialysis or who received a kidney transplant and were hospitalized for COVID-19, as well as 12 dialysis or transplant patients without COVID-19 and 10 healthy controls.

Patients with a severe COVID-19 course were older and showed lower counts of immune cells called lymphocytes and monocytes, compared with patients with a benign disease course. Patients without COVID-19 had lower numbers of all major immune cell subsets compared with healthy patients, and these numbers were further reduced in patients with COVID-19, especially in patients with a severe disease course.

Investigators noted several other immune system–related differences between patients and controls. "Although dialysis and kidney transplant patients are inherently heterogeneous groups, the immunological abnormalities during COVID-19 are similar across the two cohorts, with the exception of more pronounced defects in innate immunity and a dampened antibody response in kidney transplant patients," said lead author Stefania Affatato, of Università di Brescia—ASST Spedali Civili di Brescia, Brescia, Italy.

More information: Study: "Immunological response in dialysis and kidney transplant patients with SARS-CoV-2 infection"

Provided by American Society of Nephrology