Study: Solid organ transplant patients benefit from COVID-19 treatment

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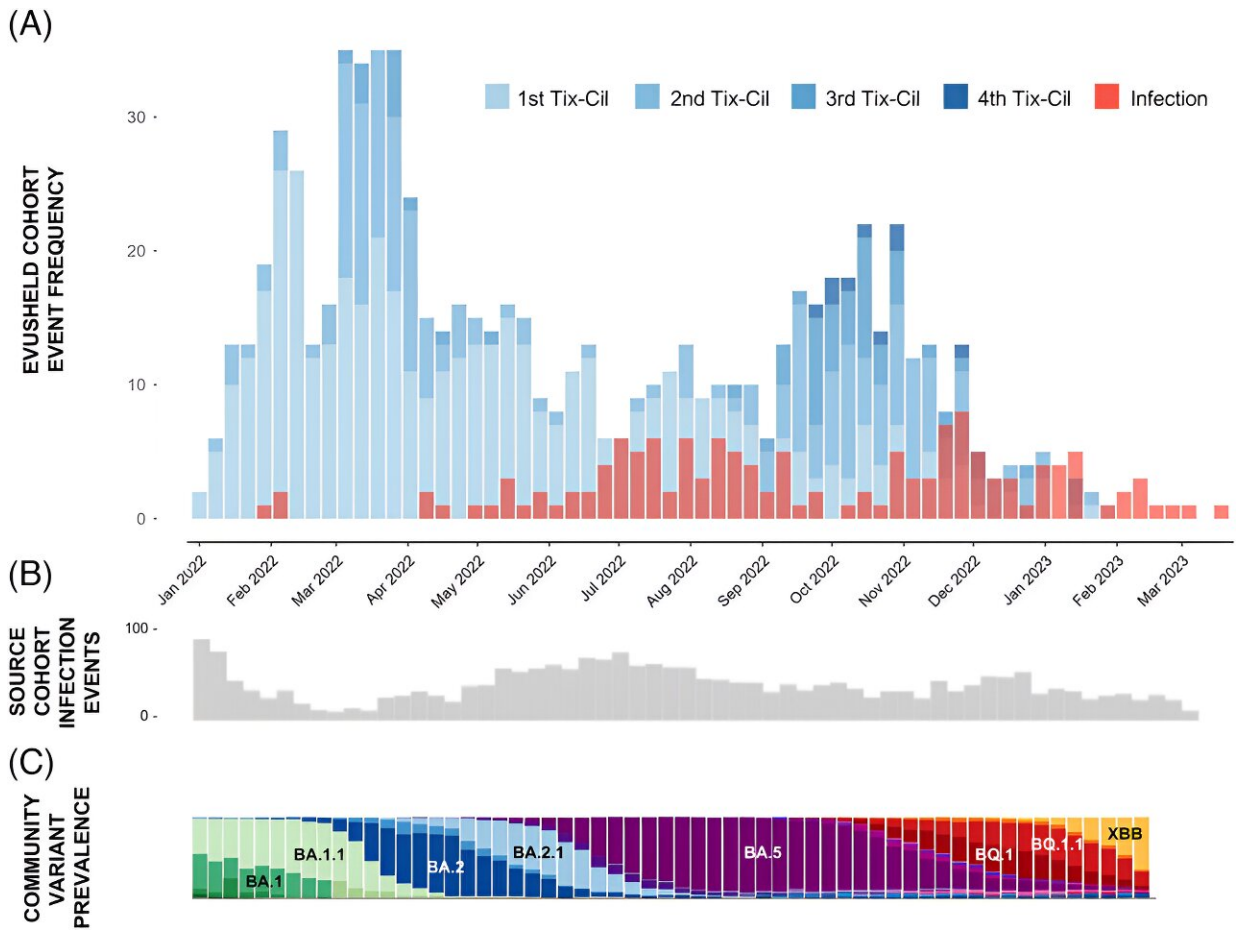

Tix-Cil dosing and infections during the study period. The frequency and timing of Tix-Cil dosing and SARS-CoV-2 infections occurring in the study cohort is shown in panel A. The background frequency and timing of infections in the larger source study population is shown in panel B. Changing predominance of Omicron subvariants in the local community is shown in panel C. Credit: *Transplant Infectious Disease* (2023). DOI: 10.1111/tid.14182

New research from Cedars-Sinai's Comprehensive Transplant Center found that a monoclonal antibody treatment reduced the risk of COVID-19 in a large group of solid organ transplant patients who were administered the drug as a preventive measure against the disease.

The study, recently published in the journal *Transplant Infectious Disease*, analyzed data from 911 solid organ transplant patients, 381 of whom had received at least one dose of the monoclonal antibody treatment tixagevimab–cilgavimab. The U.S. Food and Drug Administration (FDA) provided emergency-use authorization for the monoclonal antibody treatment in the fight against COVID-19 in immuno-compromised patients from December 2021 through January 2023.

"In this group of transplant patients, we found that the antibody reduced infection risk even amidst emergent omicron subvariants," said Stanley Jordan, MD, medical director of the Comprehensive Transplant Center's Human Leukocyte Antigen and Transplant Immunology Laboratory and study author.

"Additionally, we concluded that pre-exposure monoclonal antibody therapy likely represents a therapeutic strategy that will continue to offer clinical benefit for immuno-compromised persons who are known to derive limited protection from vaccinations," noted Jordan.

Solid organ transplant patients often receive antibody treatments designed to deplete T-cells and B-cells before their transplant, and they remain on long-term immuno-suppression after their procedure, as well, to reduce the risk of the body rejecting the new organ.

Because of this, transplant patients do not have a strong antibody

response to COVID-19 vaccinations, making them particularly susceptible to contracting the disease due to lack of immunity. If infected with SARS-CoV-2—the virus that causes COVID-19—this patient population is often at the highest risk for severe, life-threatening disease.

"Our message is that these transplant patients are still at risk for severe outcomes, even if vaccinated," said study author Susan Cheng, MD, MPH, the Erika J. Glazer Chair in Women's Cardiovascular Health and Population Science and director of the Institute for Research on Healthy Aging in the Department of Cardiology in the Smidt Heart Institute at Cedars-Sinai. "We are hopeful that a replacement group of monoclonals will soon be approved by the FDA."

To limit the risk of COVID-19 infection, study investigators recommend that solid organ transplant patients continue to wear masks in public places and avoid contact with individuals who are coughing or have had known contact with patients who have COVID-19.

More information: Stanley C. Jordan et al, Assessing the post hoc effectiveness of tixagevimab–cilgavimab for prevention of SARS-CoV-2 infections in solid organ transplant recipients, *Transplant Infectious Disease* (2023). DOI: 10.1111/tid.14182

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