Cancer patients treated with immunotherapy can safely receive mRNA COVID-19 vaccines

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Swimmer's plot depicting days from first dose of mRNA SARS-CoV-2 vaccine to irAEs among patients who received an ICI within 90 days before or after vaccination and experienced an irAE after receipt of immunotherapy and vaccine (n=27). Abbreviations: ICI, immune checkpoint inhibitor; irAE, immune-related adverse event; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2. Credit: Journal of the National Comprehensive Cancer Network (2022). DOI: 10.6004/jnccn.2022.7048

New research published in the October 2022 issue of Journal of the National Comprehensive Cancer Network (JNCCN) confirms the safety of mRNA vaccines in people with cancer undergoing immunotherapy treatment. The researchers analyzed the frequency of side effects (also referred to as immune-related adverse events, or irAEs) in 408 patients receiving immune checkpoint inhibitor (ICI) therapy between January 16 and March 27, 2021. They found no increase in type, frequency, or severity of side effects from those receiving both immunotherapy and the vaccine at the same time.

"We see no evidence to suggest that taking the COVID-19 vaccine increases the risk of immune-related adverse events in newly or previously ICI-treated patients. Also, the vaccine will not disrupt treatment or lead to early discontinuation," said senior author Mini Kamboj, MD, Chief Medical Epidemiologist, Infection Control at Memorial Sloan Kettering Cancer Center (MSK). "Vaccines continue to offer strong protection from severe COVID-19 for all variants, and patients are highly encouraged to stay up-to-date on their COVID-19 vaccination."

This research supports NCCN's recommendations for COVID-19 vaccination in people with cancer. The current guidance acknowledges that there is an acceptable safety profile for COVID-19 vaccination in people being treated with immunotherapy, while also calling for more data. The newly-published study in JNCCN can help answer that call.

The JNCCN article cites a previous study that found approximately one-fifth of patients receiving ICI treatment were reluctant to get vaccinated against COVID-19 due to fear of added side effects.

"The main catalyst for this study was vaccine hesitancy among patients on immunotherapy and the uncertainty among treating clinicians on how to address these concerns," explained lead author Adam Widman, MD, also with MSK. "This was surprising, since there is overwhelming evidence of higher risk for COVID-19-infection related complications in patients actively receiving cancer treatment. We felt it was essential to share our experience and encourage vaccine uptake in this vulnerable population."

"It is encouraging that patients treated with immunotherapy who were also vaccinated for COVID-19 did not experience immune checkpoint toxicity at a greater rate than those patients who received immunotherapy and were unvaccinated," commented Bryan J. Schneider, MD, University of
Michigan Rogel Cancer Center, who is Vice-Chair of the NCCN Clinical Practice Guidelines in Oncology Panel for Management of Immunotherapy-Related Toxicity, and was not involved in this research.

"The worry that side effects would increase during immune checkpoint therapy may have led patients or providers away from routine vaccination; however, recent reviews have not supported this concern. Patients should receive mRNA-based vaccines per institutional guidelines. This recommendation is also reflected in the NCCN Guidelines for Management of Immunotherapy-Related Toxicities."


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