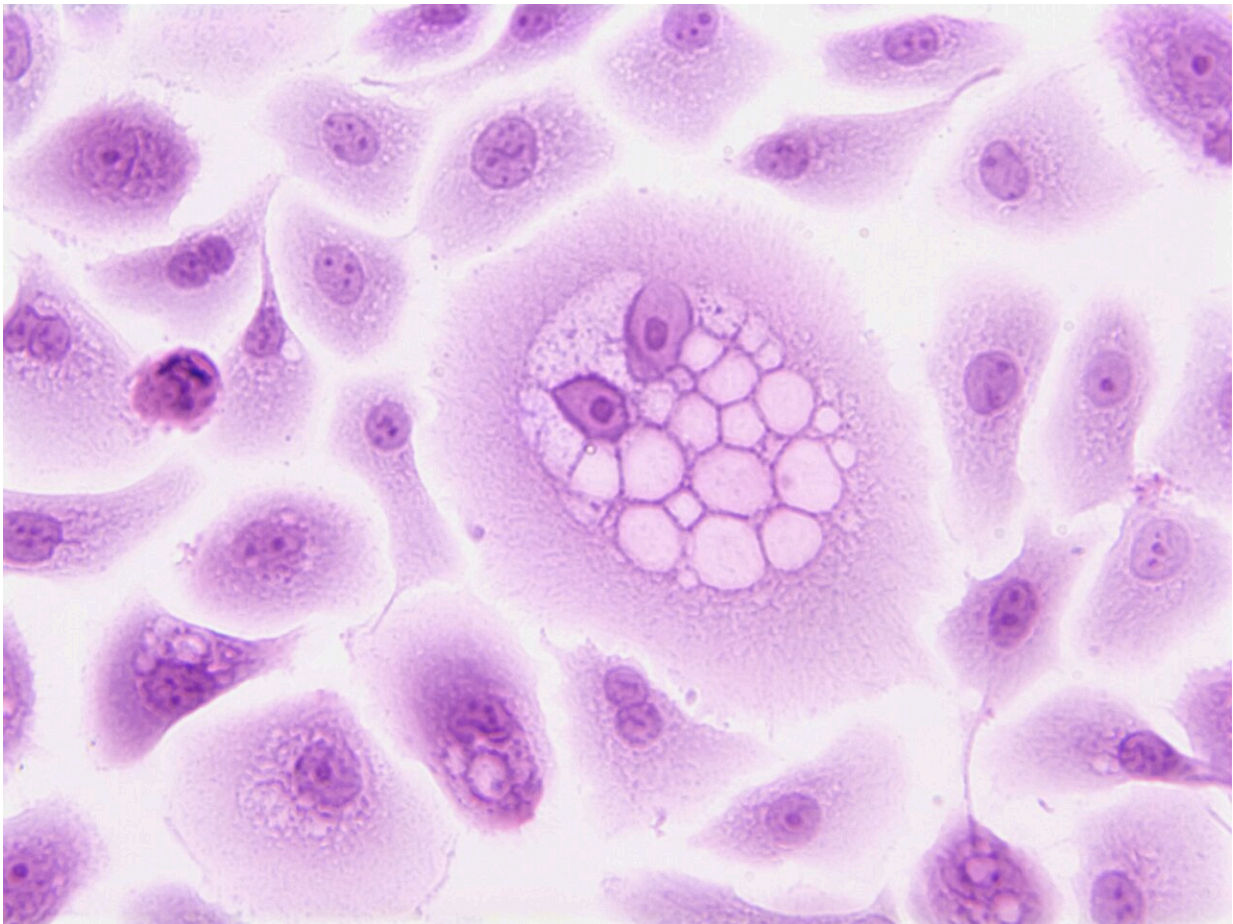


Research finds cancer immunotherapy does not interfere with COVID-19 immunity

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Research findings published in *Frontiers in Immunology* show that cancer

immunotherapy does not interfere with COVID-19 immunity in previously vaccinated patients. These findings support recommending vaccination for patients with cancer, including those receiving systemic therapies, say Saint Louis University scientists.

Immunotherapy is a treatment strategy that boosts a patient's immune system to attack [cancerous cells](#). In this novel study led by Ryan Teague, Ph.D., professor of molecular microbiology and immunology at Saint Louis University's School of Medicine, the Teague lab studied T cell responses and antibody responses against the SARS-CoV-2 spike protein in vaccinated and unvaccinated patients receiving immunotherapy. Their research found data to support the clinical safety and efficacy of COVID-19 vaccination in patients receiving immune checkpoint inhibitors, a class of immunotherapy drugs.

"It was thought that patients who had recently been vaccinated for or exposed to COVID-19 may have boosted [inflammatory responses](#) after immune checkpoint blockade treatment," Teague said. "The study found that immunotherapy did not tend to boost immune responses against COVID-19 in vaccinated patients, supporting the safety of receiving immune checkpoint inhibitors and the vaccine simultaneously."

Teague notes that several timely factors came together to enable this research. In July 2022, the Teague lab published a study in *Cancer Immunology Immunotherapy* using a new technique known as Single-Cell RNA Sequencing, which allows researchers to study [genetic information](#) at the individual cell level to characterize immune responses after [cancer treatment](#) to identify biomarkers that could predict better patient outcomes.

Having collected blood from more than 100 [patients](#) with cancer during the COVID-19 pandemic, Teague recognized the opportunity to extend the benefit of this collection toward improving our understanding of

patient immune responses against the vaccine.

"The COVID paper came from a unique window of time where we had a pandemic, and we had this valuable collection of patient samples that we could use to ask this timely question," Teague said.

Additional authors include graduate students Alexander Piening, Emily Ebert, Niloufar Khojandi, and Assistant Professor Elise Alspach, Ph.D., from the Department of Molecular Microbiology and Immunology at SLU's School of Medicine.

More information: Alexander Piening et al, Immune responses to SARS-CoV-2 in vaccinated patients receiving checkpoint blockade immunotherapy for cancer, *Frontiers in Immunology* (2022). [DOI: 10.3389/fimmu.2022.1022732](https://doi.org/10.3389/fimmu.2022.1022732)

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