

Cancer treatment may inhibit immune response to COVID-19 vaccination

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A study by researchers at Mayo Clinic Cancer Center has found that patients with cancer who receive chemotherapy—and some targeted therapies, such as CDK4/6 inhibitors and therapies targeted at B cells—may mount an inadequate immune response to COVID-19 vaccination. The findings are published in *Mayo Clinic Proceedings*:

Innovation, Quality & Outcomes.

"It is important for patients with cancer who are receiving chemotherapy to receive a COVID-19 vaccine," says Saranya Chumsri, M.D., a Mayo Clinic hematologist and oncologist, and author of the paper. Dr. Chumsri says this advice also applies to patients with cancer who are taking a CDK 4/6 inhibitors. These inhibitors are a newer class of medicines used to treat hormone-receptor-positive and HER2-negative breast cancers.

Dr. Chumsri says that while CDK 4/6 inhibitors are not conventionally considered to be as immunosuppressive as chemotherapy, her research on patients with breast cancer who take these drugs found that they exhibited less optimal neutralizing antibody activity. Dr. Chumsri recommends that antibody levels be tested in these patients after vaccination, and they should consider receiving booster vaccinations for COVID-19.

Dr. Chumsri anticipates having additional data later this year regarding broader immune responses to COVID-19 vaccinations, including cellular and antibody responses in patients receiving chemotherapy and targeted therapies with booster vaccinations.

More information: Saranya Chumsri et al, Humoral Responses after SARS-CoV-2 mRNA Vaccination and Breakthrough Infection in Cancer Patients, *Mayo Clinic Proceedings: Innovations, Quality & Outcomes* (2021). [DOI: 10.1016/j.mayocpiqo.2021.12.004](https://doi.org/10.1016/j.mayocpiqo.2021.12.004)

Provided by Mayo Clinic

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