Many Cancer Patients Should Receive Third COVID-19 Vaccine Dose

Certain types of cancer treatment can lead to inadequate immune response.

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People undergoing treatment for solid tumors and patients with blood cancers—whether they're currently on treatment or not—should receive a third dose of the Pfizer-BioNTech or Moderna COVID-19 vaccines, according to new guidelines from the National Comprehensive Cancer Network (NCCN).

Studies have shown that people with certain types of cancer are at greater risk for severe COVID-19 and death. This is especially true for people with blood cancers, or hematological malignancies, such as leukemia, lymphoma or multiple myeloma.

NCCN previously recommended that most people living with cancer should receive COVID-19 vaccines as soon as possible, though some might need to wait for their immune system to recover after receiving certain types of treatment.

The standard two doses of the Pfizer-BioNTech and Moderna messenger RNA (mRNA) vaccines are highly effective at preventing symptomatic illness, hospitalization and death, but some people with cancer—as well as other immunocompromised people—may not respond as well.

While most people with solid tumors produce good antibody responses after their second dose, a quarter of people with blood cancers do not respond well and may not be fully protected. Blood cancer patients treated with monoclonal antibodies that target the CD20 receptor on antibody-producing B cells are particularly at risk for poor vaccine response.

In August, the Food and Drug Administration (FDA) updated its emergency use authorization for the Pfizer-BioNTech and Moderna vaccines, and the Centers for Disease Control and Prevention (CDC) recommended an additional dose for moderately to severely immunocompromised people. These include patients being treated for cancer, organ and stem cell transplant recipients, people taking immunosuppressive drugs and people with advanced or untreated HIV. Studies have shown that an extra booster can raise antibody levels in some immunocompromised people.

Taking the latest research and regulatory approvals into account, the updated NCCN guidance

says the following groups should be considered eligible for a third dose of the mRNA COVID-19 vaccines right away:

- Patients with solid tumors (either new or recurring) who receive treatment within one year of their initial vaccine dose, regardless of the type of cancer therapy;
- Patients with active hematologic malignancies regardless of whether they are currently receiving cancer therapy;
- Anyone who has received a stem cell transplant or engineered cellular therapy (such as CAR-T therapy), especially within the past two years;
- Recipients of stem cell transplants who are receiving immunosuppressive therapy or have a history of graft-versus-host disease, regardless of the time of transplant;
- People with additional immunosuppressive conditions (for example, HIV) and those treated with immunosuppressive medications unrelated to their cancer therapy.

Based on the CDC's recommendation, people should wait at least four weeks between their second and third vaccine doses. People who get COVID-19 despite their initial vaccination should wait until they test negative for the coronavirus before receiving their third shot. A third dose of the same vaccine is preferred, if possible. The guidance advises that immunocompromised people should try to get their third dose at a health care facility, if possible, rather than at a pharmacy or a public vaccination clinic, in order to limit their risk of exposure.

What's more, people living in the same household with immunocompromised individuals should also get a third dose once it is available to them, the NCCN COVID-19 Vaccination Advisory Committee recommends. The Biden administration has said it plans to offer boosters to all adults several months after their second shot, pending a green light from the FDA and CDC, though some experts think this isn't necessary for everyone.

"When it comes to people's safety, we have to take every precaution," said Steve Pergam, MD, MPH, of the Fred Hutchinson Cancer Research Center, co-leader of the NCCN COVID-19 Vaccination Advisory Committee. "That means even after a third dose of vaccine, we still recommend immunocompromised people—such as those undergoing cancer treatment—continue to be cautious, wear masks and avoid large group gatherings, particularly around those who are unvaccinated."

Click here for the latest NCCN COVID-19 vaccine guidance.

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