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COVID-19 Vaccines in People with Cancer

The [COVID-19 pandemic](#)¹, caused by the SARS-CoV-2 virus, continues to have a serious impact on many people, including cancer patients, their families, and caregivers. (To learn more about COVID-19 and how it might affect cancer patients and caregivers, see [Common Questions About the COVID-19 Outbreak](#)².)

Vaccines (also called immunizations or vaccinations) are used to help a person's immune system recognize and protect the body against certain infections. Vaccines are now becoming available to help protect against COVID-19. Here we'll discuss some of the questions people with cancer (or with a history of cancer) might have about the COVID-19 vaccines.

The situation for every person who has (or has had) cancer is different, so it is best to discuss the risks and benefits of getting the COVID-19 vaccine with your cancer doctor. They can advise you about if and when you should receive it.

Is it safe for cancer patients to get any type of vaccine?

People with cancer (or with a history of cancer) can get some vaccines, but this depends on many factors, such as the type of vaccine, the type of cancer a person has (had), if they are still being treated for cancer, and if their immune system is working properly. Because of this, **it's best to talk with your doctor before getting any type of vaccine**. To learn more, see [Vaccinations and Flu Shots for People with Cancer](#)³.

Which COVID-19 vaccines are available?

Currently, 2 COVID-19 vaccines have received emergency use authorization (EUA)

from the US Food and Drug Administration (FDA):

- The **Pfizer-BioNTech vaccine** is [authorized](#)⁴ for people 16 years of age or older. It is given in 2 doses, 3 weeks apart.
- The **Moderna vaccine** is [authorized](#)⁵ for people 18 years of age or older. It is given in 2 doses, 4 weeks apart.

Both vaccines have been found to be more than 90% effective at preventing COVID-19 infection in people who receive both doses, although they might not be as effective after only one dose.

These vaccines contain messenger RNA (mRNA), which is genetic material. After a person receives the vaccine, the mRNA tells the cells in the body to make copies of the virus's "spike" protein (the protein that normally helps the virus infect human cells). This doesn't cause disease, but it does trigger the immune system to learn to act against the virus if the body is exposed to it in the future.

What is an emergency use authorization (EUA)?

In an EUA, the FDA allows the use of a vaccine or drug during a time of emergency, such as the current COVID-19 pandemic, when the available evidence shows the potential benefits outweigh the potential risks. An EUA is not the same as a full FDA approval, which requires a more thorough review of safety and effectiveness.

Drugs and vaccines that have been given an EUA continue to be studied in clinical trials. For example, it is not yet clear if someone who gets one of the vaccines can still spread the virus to others. This is still being studied, as are any possible long-term effects of the vaccines. Researchers are also still trying to determine how long the vaccines will provide protection against the virus. In the meantime, **health experts recommend that those who get the vaccine still wear a mask and continue to practice social distancing and good hand hygiene.**

What are the side effects of the vaccines?

Some people have reported side effects after getting the vaccines, such as pain at the injection site, tiredness, headache, muscle and joint pain, chills, and fever. These side effects typically go away within a few days.

Very few serious safety concerns have been reported for either vaccine so far. In very rare cases, people have had serious allergic reactions after getting one of the vaccines.

This seems to be more likely in people who have had serious allergic reactions before.

These vaccines are still fairly new, so possible long-term side effects are still being studied.

Are the COVID-19 vaccines available for people with cancer?

The supply of vaccines in the United States is likely to be limited for some time. It might also vary in different parts of the country based on the distribution of the vaccine, the priorities for vaccination in different areas, and the number of people who want to get the vaccine.

The US Centers for Disease Control and Prevention (CDC) has made recommendations as to which groups of people should get the vaccines first. States and other authorities are using these recommendations to guide their distribution of the vaccine, although they do not have to follow them exactly. (In fact, some states have chosen to use slightly different priorities when deciding which groups should be offered the vaccines first.)

The groups most likely to get the vaccines first include people at higher risk (such as front-line health care workers, first responders, and residents of nursing homes). This will be followed by groups of people at slightly lower risk (such as people of a certain age, people with certain health conditions, and people who work in other essential professions), and so on.

Cancer patients and people with a history of cancer are not included in the first group of people the CDC has recommended to get the vaccines. But people with cancer might be considered in the one of next priority groups, which includes [people with certain high-risk medical conditions](#)⁶.

Again, states and other authorities will use the CDC guidelines to decide their own priorities for vaccine distribution, but they do not have to follow them. To learn more about the priorities for vaccination in your area, contact your state or local health department.

Other COVID-19 vaccines are likely to become available in the coming months as well, which should help with the supply of vaccines. However, it will probably still be some time before the vaccines become widely available for anyone who wants them.

Should cancer patients and survivors get the vaccine?

The initial studies testing the COVID-19 vaccines did not include people getting treatment with drugs that suppress the immune system, like chemotherapy (chemo), or people who have weakened immune systems for other reasons. (This is because the studies needed to see first if the vaccines work in people with healthy immune systems.) Because of this, it's not yet clear how effective the vaccines might be in these groups of people.

It's generally recommended that vaccines not be given during [chemo](#)⁷ or [radiation treatments](#)⁸. (An exception to this is the flu shot.) This is mainly because vaccines need a healthy immune system response to work, and you may not get a good response if your immune system is suppressed by your cancer treatment. Some types of [immunotherapy](#)⁹ might affect the immune system as well.

The situation for every person who has (or has had) cancer is different, so it is best to discuss the risks and benefits of getting the COVID-19 vaccine with your cancer doctor. They can advise you about if and when you should receive it.

Is it OK for cancer caregivers to get the vaccine?

Some vaccines for other diseases contain live viruses, which typically are not recommended for cancer caregivers because they might have unwanted effects on cancer patients. However, the COVID-19 vaccines available so far do not contain live viruses, so getting one of these vaccines does not put you at risk for passing COVID-19 on to the person you're caring for.

It's important to know that if you do get a COVID-19 vaccine and are later exposed to the virus, it's not yet clear if the vaccine will prevent you from infecting someone else (even if you don't get sick). Because of this, **health experts recommend that those who get the vaccine still wear a mask and continue to practice social distancing and good hand hygiene.**

People getting the vaccine might not feel well for a few days after each shot, so it might make sense to have someone else available to help with caregiving during this time.

Will the flu vaccine protect against COVID-19?

Even though the influenza (flu) vaccine will NOT protect you against COVID-19, it is very important that [cancer patients talk to their doctor about the benefits and risks of getting the flu shot](#)¹⁰.

The flu and COVID-19 are both caused by viruses that can spread easily and can cause

serious illness in older people, those with weakened immune systems, and others with certain medical conditions. These infections share many of the same symptoms, so it can be hard to tell which one you might have without having specific tests.

People who live with or care for someone at high risk of getting the flu should also get the flu vaccine.

The overlap of this year's flu season on top of the COVID-19 pandemic could cause a significant burden on healthcare systems, so getting the flu vaccine could help lessen this.

The CDC has more information on [the differences between COVID-19 and the flu](#)¹¹, as well as [the best time to get the flu vaccine](#)¹².

Where can I get more information about COVID-19 vaccines?

The [CDC](#)¹³ and [FDA](#)¹⁴ have more information about COVID-19 vaccines, including the approval process, safety, the different types of vaccines, and the known possible risks and benefits of each one.

For more information about COVID-19 vaccine availability in your area, contact your state or local health department.

Hyperlinks

1. www.cancer.org/about-us/what-we-do/coronavirus-covid-19-and-cancer.html
2. www.cancer.org/latest-news/common-questions-about-the-new-coronavirus-outbreak.html
3. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/low-blood-counts/infections/vaccination-during-cancer-treatment.html
4. www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/pfizer-biontech-covid-19-vaccine
5. www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/moderna-covid-19-vaccine
6. www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html
7. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html
8. www.cancer.org/treatment/treatments-and-side-effects/treatment-

- [types/radiation.html](#)
9. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html
 10. www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/low-blood-counts/infections/vaccination-during-cancer-treatment.html
 11. www.cdc.gov/flu/symptoms/flu-vs-covid19.htm
 12. www.cdc.gov/flu/prevent/vaccinations.htm
 13. www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html
 14. www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines

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