

Side Effects of Immunotherapy

■ What is immunotherapy?

Immunotherapy is a treatment that helps your body's immune system fight cancer. The immune system is your body's natural defense system. There are several types of immunotherapy that work in different ways, such as immune checkpoint inhibitors and chimeric antigen receptor (CAR) T-cell therapy. These medicines are also called "biologics."

You can have immunotherapy by itself or with other cancer treatments. Immunotherapy is given in a doctor's office or in the hospital, usually through a vein (intravenously or IV). Your cancer care team will closely monitor your health during and after this type of treatment.



■ What side effects can immunotherapy cause?

The most common side effects depend on which kind of immunotherapy you are receiving. Always let your cancer care team know when you experience a new or worsening medical problem during immunotherapy, even if those symptoms are not listed on this fact sheet.

Side effects depend on the medication, your dose and treatment schedule, cancer type, general health, and other factors. Immunotherapy side effects may happen during treatment, after some time following each treatment, or months or years after treatment ends. They may include:

- **Skin and hair changes.** Rashes, blisters, swelling, itching, dry skin, and/or sensitivity to the sun. You might also notice hair loss or extra hair growth.
- **Flu-like symptoms.** Fever, chills, headache, weakness, fatigue, nausea, and/or vomiting. Your body might feel achy, like you have the flu. Immunotherapy can also cause muscle and joint pain.
- **Hormone changes.** For example, immunotherapy might affect your thyroid gland. If it cannot make enough thyroid hormone, you might gain weight and feel very tired. Your doctor may monitor your hormone levels during treatment, depending on what type of immunotherapy you receive.
- **Syndromes related to CAR T-cell therapy.** CAR T-cell therapy may cause syndromes that affect multiple parts of the body. They include syndromes called CRS, ICANS, HLH, B-cell aplasia, and DIC.

■ Can these side effects be treated?

Your health care team can help you prevent or relieve many side effects. This is an important part of your overall cancer treatment. Before immunotherapy begins, ask your health care team what side effects are likely. **During treatment, let them know about any new, different, or worsening health problems as soon as possible.** This includes problems that you may not think are serious or caused by immunotherapy. It is easier for your health care team to effectively treat a side effect when the problem first appears and can prevent it from becoming severe.

Some side effects are serious and need treatment right away. If you need medical care at an emergency room or other place not familiar with your cancer treatment, be sure to tell them that you are receiving immunotherapy for cancer.

■ What care is needed after immunotherapy ends?

It is important to continue getting care for side effects after immunotherapy ends. Many side effects will go away when you finish treatment. But some effects can last beyond the treatment period. Other effects may appear months or years later. Your health care team can help you watch for and manage late or long-term side effects. This includes problems with fertility. Work with your doctor to create a survivorship care plan after you finish treatment with immunotherapy. This is an important tool to help watch for additional side effects in the future.

■ Side effects: Know what to look for

Side effects of immunotherapy can be mild, moderate, or even life-threatening. **Talk with your doctor to learn which side effects need immediate medical care.** With the help of your health care team, check off or circle the immunotherapy side effects that you should watch for. Make copies, if you need to, and bring them with you to your appointments or any place where you receive medical care.

Immunotherapy drug and dose _____

Type of cancer _____ Cancer stage _____

Possible side effects of this immunotherapy medication*

Any one of these could be a sign of a serious problem. Contact your doctor if you experience a side effect of immunotherapy.

- | | | |
|---|--|--|
| <input type="checkbox"/> Headaches | <input type="checkbox"/> Rash, itching, blisters | <input type="checkbox"/> Changes in vision |
| <input type="checkbox"/> Blood in urine or dark urine | <input type="checkbox"/> Weakness | <input type="checkbox"/> Eye changes, such as dryness or redness |
| <input type="checkbox"/> Muscle and joint pain | <input type="checkbox"/> Yellow skin or eyes | <input type="checkbox"/> Diarrhea |
| <input type="checkbox"/> Cough | <input type="checkbox"/> Trouble walking | <input type="checkbox"/> Constipation |
| <input type="checkbox"/> Breathing problems | <input type="checkbox"/> Numbness or tingling | <input type="checkbox"/> Swollen lymph nodes |
| <input type="checkbox"/> Bleeding or bruising easily | <input type="checkbox"/> Fast heartbeat | <input type="checkbox"/> Hair loss or extra growth |
| <input type="checkbox"/> Sweating more | <input type="checkbox"/> More sensitive to light | <input type="checkbox"/> Seizures |
| <input type="checkbox"/> Feeling faint, passing out | <input type="checkbox"/> Stiff neck | <input type="checkbox"/> Swelling |
| <input type="checkbox"/> Confusion | <input type="checkbox"/> Weight loss or gain | |
| <input type="checkbox"/> Difficulty concentrating | <input type="checkbox"/> Cold hands and feet | |
| <input type="checkbox"/> Other: _____ | | |
| _____ | | |
| _____ | | |

What other medical treatments are you receiving? _____

I should contact my doctor's office right away if I have these serious side effects: _____

Doctor's name _____ Phone _____ Email _____

For more information on the side effects of immunotherapy, visit www.cancer.net/sideeffectsimmuno. Download Cancer.Net's free mobile app at www.cancer.net/app to track and monitor side effects.

**This is not a complete list. Be sure to talk with your doctor about the side effects of immunotherapy.*

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