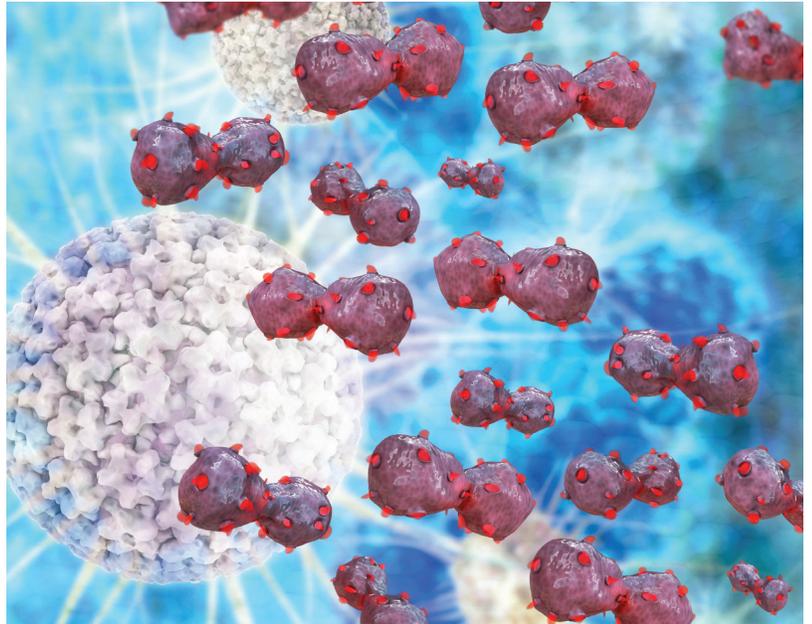


Understanding Immunotherapy

What is immunotherapy?

Immunotherapy is a treatment designed to boost the body's natural defenses to fight cancer. It uses materials made by the body or in a laboratory to boost, target, or restore a person's immune system. The immune system is a network of cells, tissues, and organs that work together to protect the body from infection.

Certain types of immunotherapy attack cancer or slow its spread to other parts of the body. Others make it easier for the immune system to destroy cancer cells. Your doctor may recommend immunotherapy after or at the same time as another treatment, such as chemotherapy. Or immunotherapy may be used by itself.



What are the types of immunotherapy?

There are several types of immunotherapy, including monoclonal antibodies, cancer vaccines, oncolytic virus therapy, T-cell therapy, and non-specific immunotherapies. Monoclonal antibodies act like the antibodies your body produces naturally to fight harmful substances. They're designed to target a specific protein in the cancer cells. Most of the new immunotherapies are monoclonal antibodies. These may also be called checkpoint inhibitors. Checkpoint inhibitors are a specific type of cancer drug that allows the immune system to destroy cancer cells. Other types of immunotherapy may deliver small radiation doses or other cancer drugs to the cancer cell. Cancer vaccines that treat cancer are still uncommon, but many are being studied in clinical trials. A vaccine exposes the immune system to an antigen. This triggers the immune system to recognize and destroy that antigen or related materials. Examples of non-specific immunotherapies include interferons and interleukins.

What are the side effects of immunotherapy?

Different immunotherapies cause different side effects. Each person's experience depends on the cancer's type and location, treatment dose, and overall health. Preventing and controlling side effects is a major focus of your health care team. Talk with them about any side effects you experience. Side effects from monoclonal antibody treatment can include rashes; low blood pressure; and flu-like symptoms, such as fever, chills, headache, weakness, and vomiting. Non-specific immunotherapies can also cause flu-like symptoms, as well as an increased risk of infection, rashes, and thinning hair. Most side effects go away after treatment, although some long-term side effects may occur months or even years after treatment. Learn more about managing side effects at www.cancer.net/sideeffects.

Questions to ask the health care team

Regular communication is important for making informed decisions about your health care. Consider asking your health care team the following questions:

- What is the type and stage of my cancer? What does this mean?
- What type of immunotherapy do you recommend and why?
- What is the goal of this treatment? To destroy cancer cells? To slow down the spread of cancer to other parts of the body?
- What immunotherapy clinical trials are open to me? Where are they located, and how do I find out more about them?
- Will immunotherapy be my only treatment or will other treatments be a part of my treatment plan?
- How will the treatment be given?
- How often will I receive this treatment? How long does each treatment session take?
- Where will I receive treatment?
- What will I experience when I receive this treatment? Will it hurt or cause me discomfort?
- What can I do to get ready for this treatment?
- What are the possible short-term and long-term side effects of this treatment?
- How will this treatment affect my daily life? Will I be able to work, exercise, and perform my usual activities?
- If I'm worried about managing the costs of cancer care, who can help me?
- Whom should I call with questions or problems?
- Is there anything else I should be asking?

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TERMS TO KNOW

Antigens:

Harmful substances that cause your body to make antibodies

Antibodies:

Proteins that fight infection

Biologic therapy:

Another name for immunotherapy

Clinical trial:

A research study that tests a new treatment or drug

Intravenous immunotherapy:

Medication given directly into a vein

Medical oncologist:

A doctor who specializes in treating cancer with medication

Oral immunotherapy:

Medication swallowed as a pill, capsule, or liquid

Oncolytic virus therapy:

A treatment that uses genetically modified viruses to destroy cancer cells

Radioimmunotherapy:

An immunotherapy treatment that delivers radiation directly to cancer cells

Targeted therapy:

Treatment that targets a cancer's specific genes, proteins, or the tissue environment that contributes to cancer

T-cell therapy:

A treatment that modifies a patient's own T cells to destroy cancer cells

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