



CANCERcare®

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fact sheet

# WHAT IS IMMUNOTHERAPY?

**Immunotherapy, also called biologic therapy, is a type of cancer treatment that uses the body's immune system to fight cancer.**

## WHAT IS THE IMMUNE SYSTEM?

The immune system's job is to identify and destroy potentially harmful invaders within the body, such as viruses, fungi and bacteria that can cause infections. Cells in the immune system are able to find differences between healthy cells and abnormal cells and to selectively eliminate the abnormal cells.

**There are two main parts of the immune system:** the innate immune response and the adaptive immune response. The innate immune response is a general way the body attacks any foreign substances on the skin and in the body. The adaptive immune response is how the body learns to attack specific invaders. These two sides work together to keep the body safe from infections and cancer.

**The activity of the immune system has to be carefully balanced:** both an overactive and an underactive immune system can be harmful. Our growing understanding of how the immune system keeps its balance is the heart of the field of immuno-oncology that has led to the development of immunotherapies to treat people with cancer.



## IMMUNOTHERAPY TO TREAT CANCER

One concept behind immuno-oncology is to find ways to convince a person's own immune system that the cancer is a foreign body that needs to be attacked. This is hard, as cancer cells develop ways to hide from the immune system.

A key to the development of effective cancer immunotherapies is achieving the balance of being able to "turn on" the immune system. It can then recognize cancer cells, eliminate them and prevent the immune system from damaging healthy cells. With the body's immune system, immunotherapies help fight cancer the following ways:

- Stopping or slowing the growth of cancer cells
- Preventing the cancer from spreading to other parts of the body
- Helping the immune system destroy cancer cells

(over)



## QUESTIONS TO ASK YOUR DOCTOR ABOUT IMMUNOTHERAPY

- Does immunotherapy have a role in treating my diagnosis?
- What are the goals of this treatment?
- What are the possible side effects of immunotherapy, both in the short term and the long term?
- How will this treatment affect my daily life?
- Will I be able to work, exercise and perform my usual activities?
- Are there immunotherapy clinical trials available to me?

## IMMUNOTHERAPY TO PREVENT CANCER

For many years, we have known that cancers are caused by genetic changes. More recently, immunoncology researchers have discovered that chronic inflammation from substances in our environment, like tobacco smoke and viral infections, can also cause the development of cancer.

It's through this inflammatory process, for example, that certain high-risk types of human papilloma virus (HPV) can not only cause genital warts but also lead to cervical, anal, mouth, vulval and throat cancers. As an example of using the adaptive immune response, two vaccines on the market are recommended for use in children 11 to 12 years old to prevent HPV infection.

These vaccines are very effective at eliminating the pre-cancerous changes that can lead to the development of cancer through this inflammatory process. This is a great example of how we can use the immune system to help prevent cancer.

### CancerCare® Can Help

Founded in 1944, CancerCare is the leading national organization providing free support services and information to help people manage the emotional, practical and financial challenges of cancer. Our comprehensive services include case management, counseling and support groups over the phone, online and in-person, educational workshops, publications and financial and co-payment assistance. All CancerCare services are provided by master's-prepared oncology social workers and world-leading cancer experts.

To learn more, visit [www.cancercare.org](http://www.cancercare.org) or call **800-813-HOPE (4673)**.

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