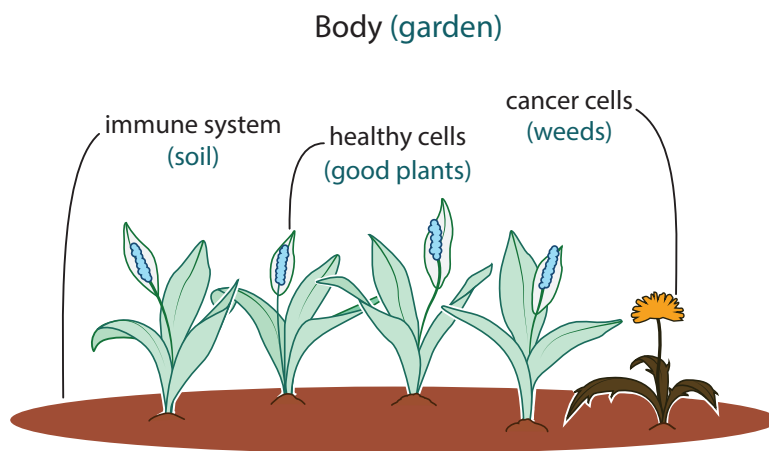

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A short introduction to immunotherapy

The following pages will introduce you to immunotherapy as a type of cancer treatment. We will use an analogy of your body as a garden to explain **how immunotherapy works, and how it is different from other treatments.**

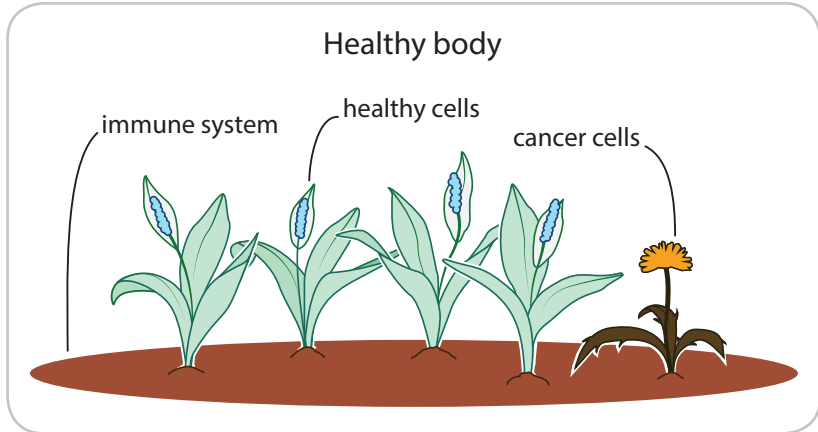


How might immunotherapy work with my immune system to fight cancer?

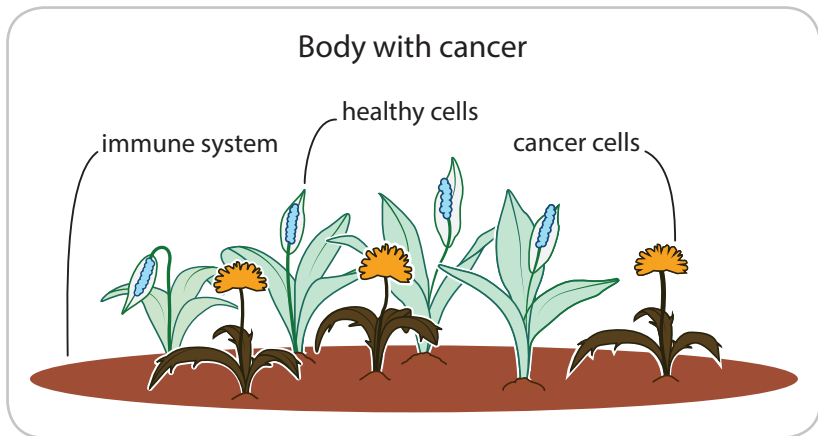
Immunotherapy may help your body's own immune system fight cancer.

Here is an analogy to explain the concept.

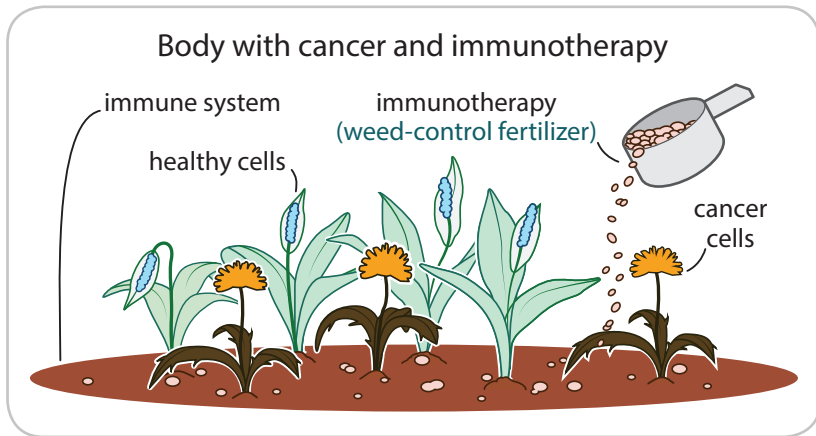
Imagine your body as a garden, where the soil is your immune system. When you're healthy, the soil is rich and well tended, and the garden is green. Normally, the soil is able to prevent weeds from growing out of control.



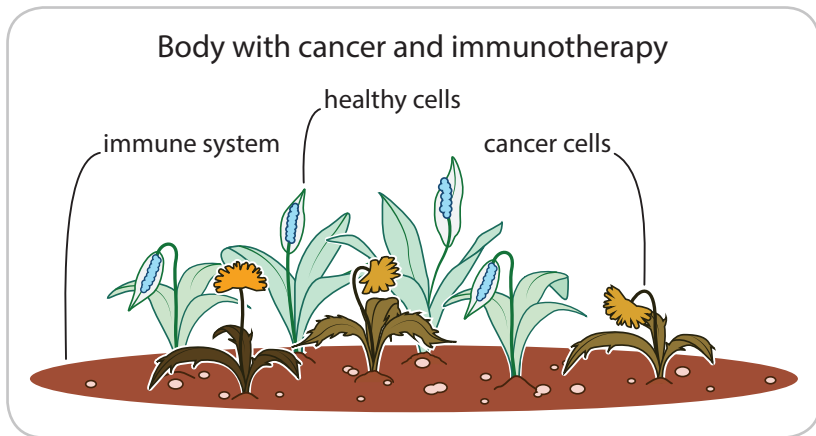
Cancer cells are like weeds in your garden. Sometimes the soil can allow weeds to grow and spread, and soon, the entire garden suffers as your plants compete for space and nutrients.



Immunotherapy is like adding weed-control fertilizer to the soil. It enriches the garden's existing soil.



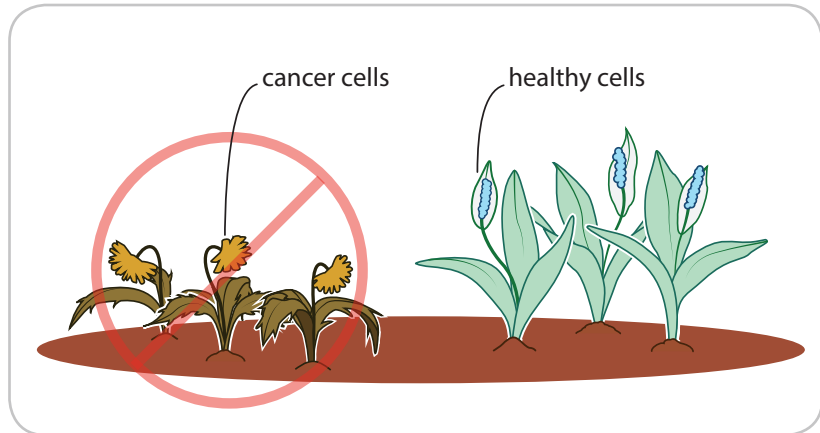
Now the soil can help keep the weeds under control and can maintain the garden's health. But too much fertilizer may harm your garden.



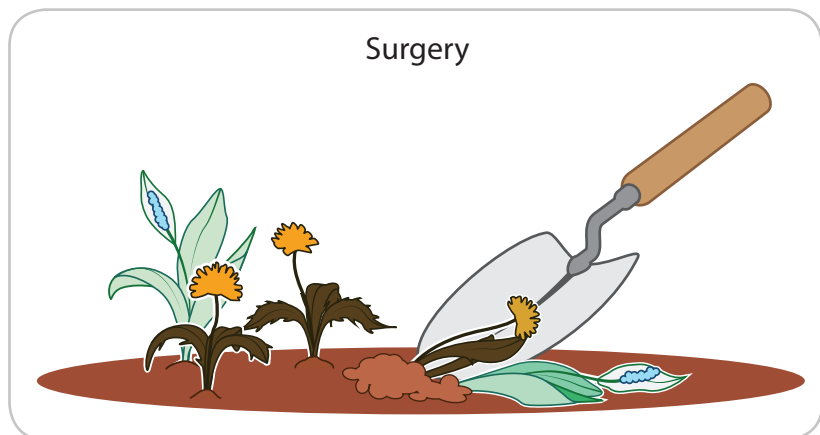
How is immunotherapy different from other types of cancer treatment?

Immunotherapy is a unique approach that may **help your body's own immune system fight cancer**. To understand how immunotherapy is different from other types of cancer treatment, let's continue with the garden analogy.

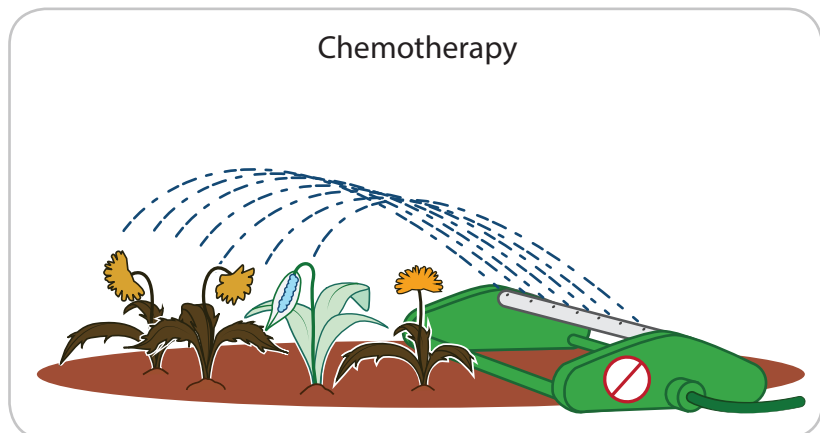
If your body is like a garden, you and your cancer care team will decide **how to remove the weeds** (cancer cells) **while doing the smallest amount of harm to the good plants** (healthy cells).



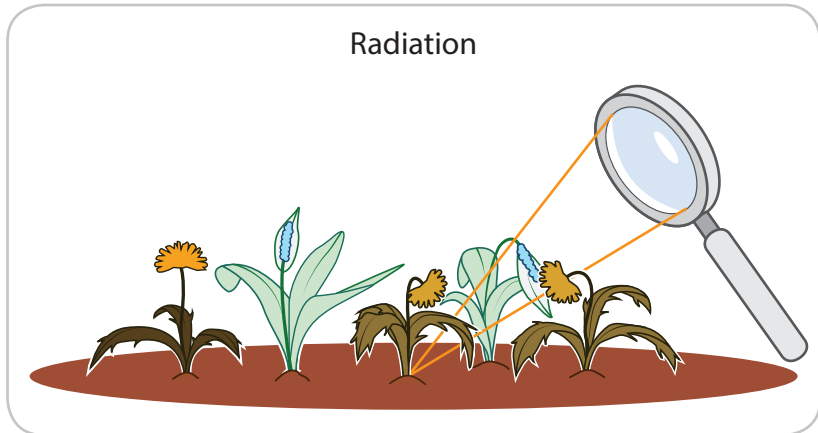
Surgery removes large patches of weeds and the soil around them, sometimes disturbing the good plants and leaving some weed roots behind.



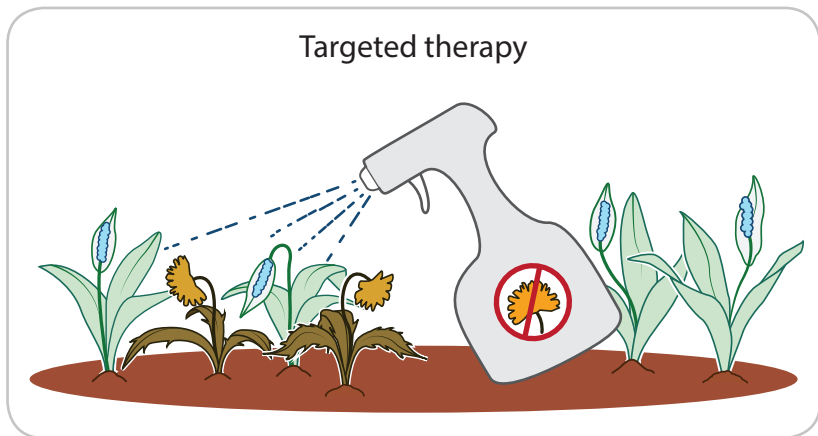
Chemotherapy is like spraying a general weed killer on the whole garden. This approach may not kill all the weeds, and may also harm some good plants.



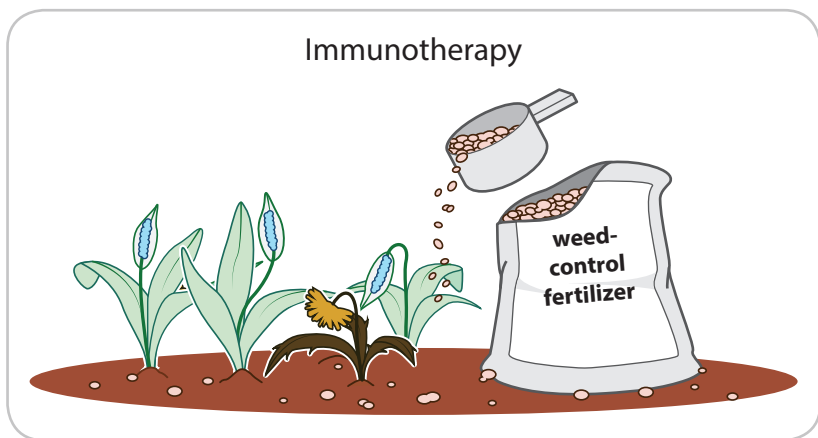
Radiation is like increasing the power of the sun with a magnifying glass to target and dry out the weeds, but in the process, some of the good plants can also be harmed.



With **targeted therapy**, weeds are directly sprayed with weed killer. Good plants may still be harmed.



Instead of targeting the weeds, **immunotherapy** is like adding a weed-control fertilizer to the soil. This fertilizer enriches the soil to help control weeds, which in turn restores the health of your garden. But too much fertilizer in the soil might harm your garden.



Ask your cancer care team about the different treatment options available to you.

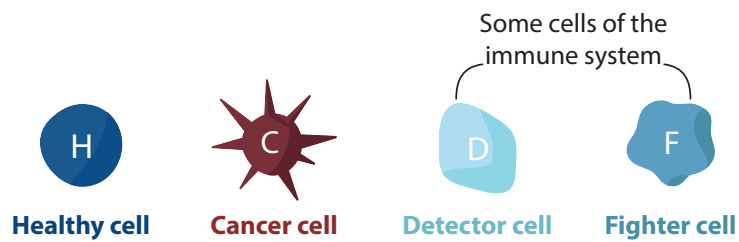
The immune system and cancer

The following pages will explain:

- **How the immune system normally works to fight cancer**
- **How cancer can “trick” the immune system and grow into a tumor**

Cell guide

Look for these key players as you read on:

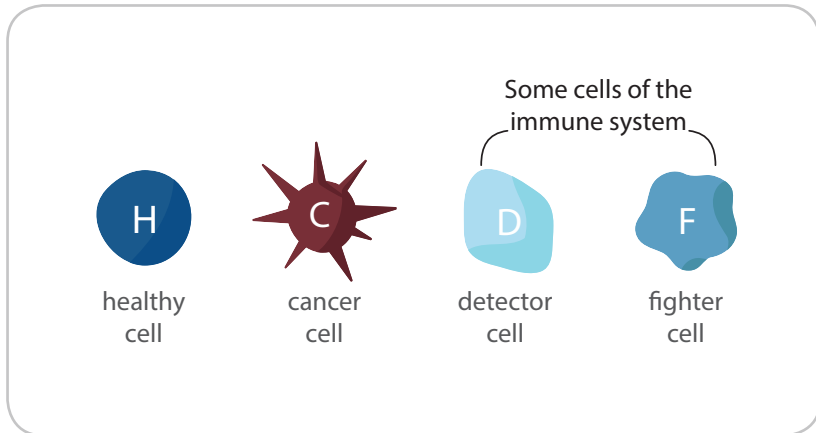


What is the role of the immune system?

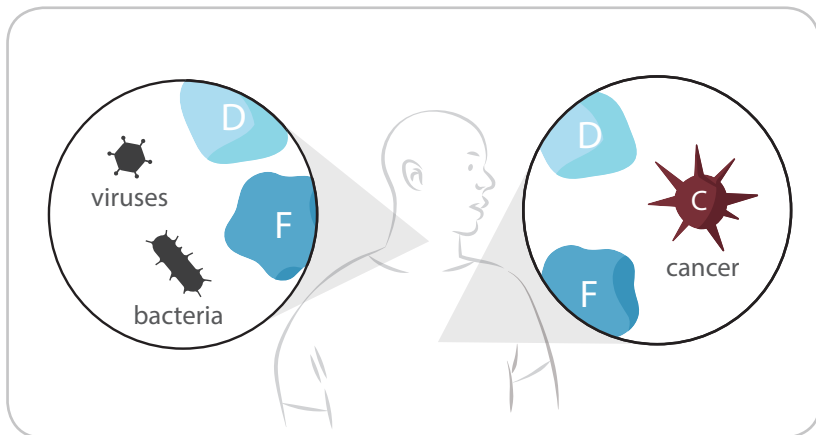
Your immune system can protect healthy cells from infections and diseases, and can prevent unhealthy cells from growing out of control. Let's take a closer look.

Normally, you have different **healthy cells** in your body. In some cases, there may be unhealthy cells, like **cancer cells**.

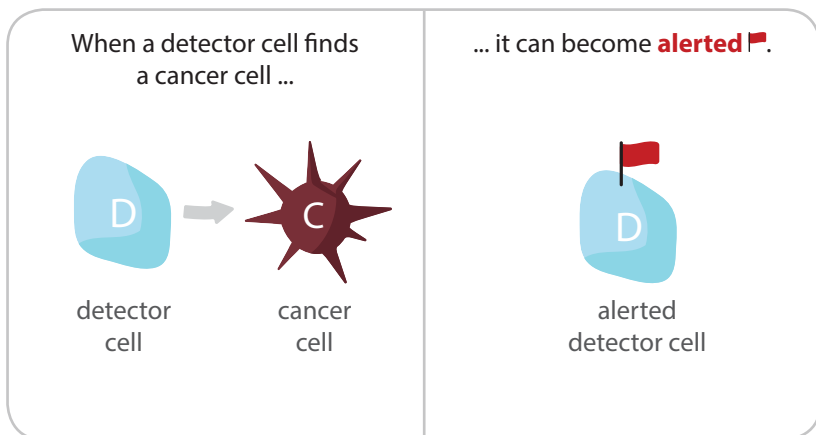
Your immune system is made up of many types of cells, including: **detector cells** and **fighter cells**.



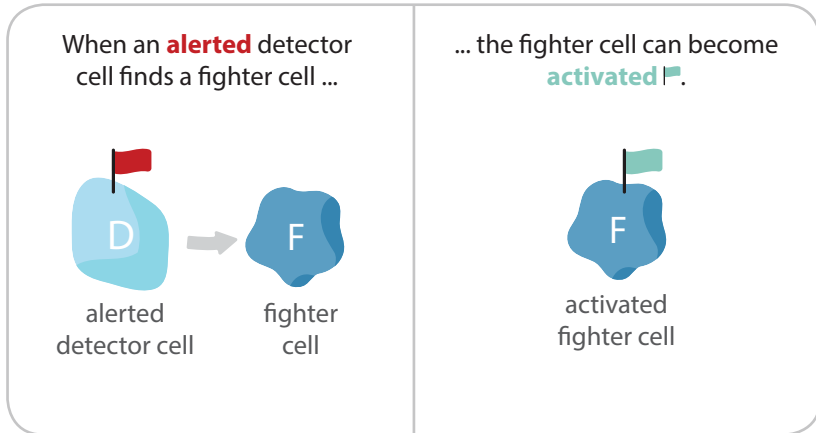
Detector cells and fighter cells travel around your whole body looking for threats outside of your body like **viruses** and **bacteria**, and threats inside of your body such as **cancer**.



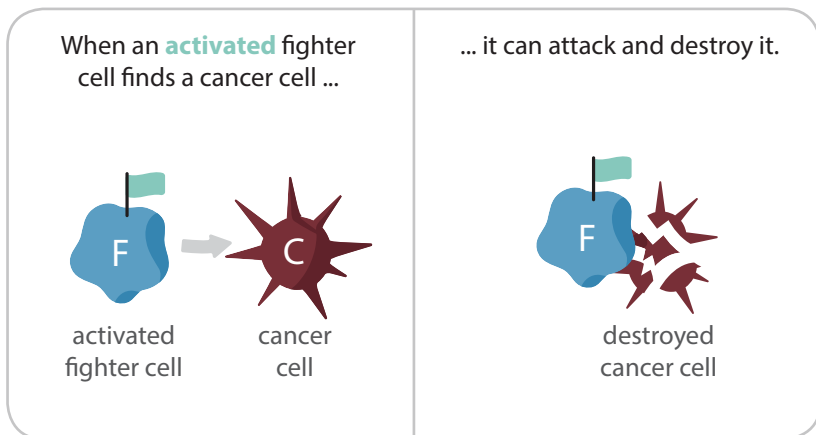
Normally, when detector cells find threats — like cancer cells — they can become **alerted**.



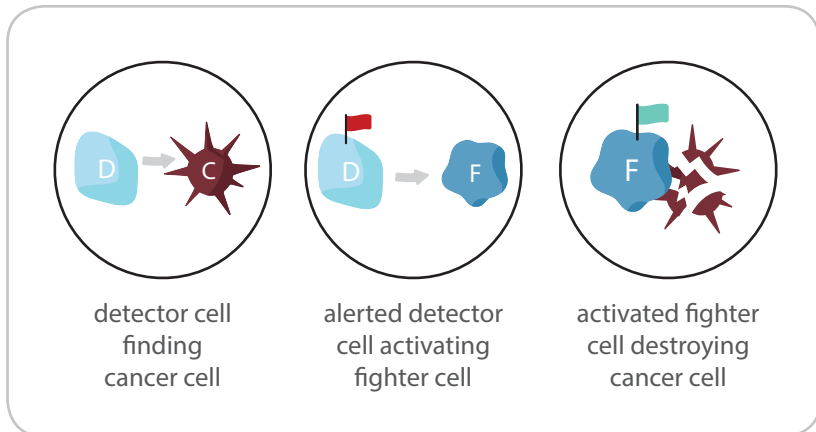
Alerted detector cells seek out fighter cells for help. When found, the **fighter cells can become activated**.



Activated fighter cells can then seek out, find, attack, and destroy cancer cells.



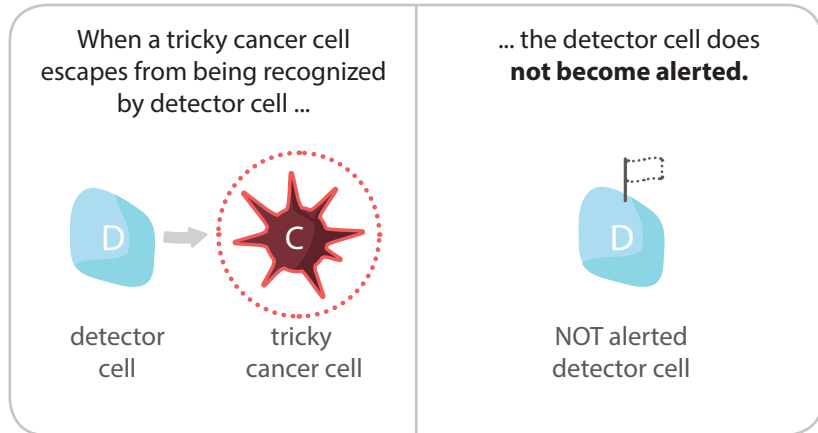
Through these interactions, the immune system can work to keep your body healthy. **This is happening in your body all the time.**



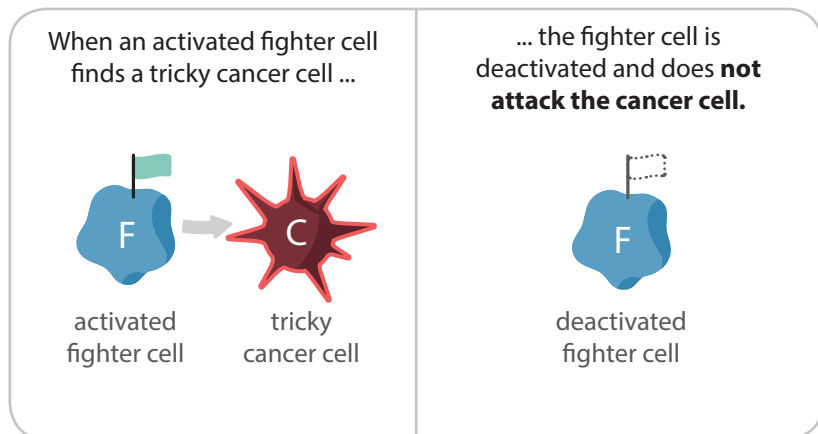
How might the immune system be “tricked” by cancer?

Your immune system can be tricked by cancer cells. Cancer cells can change the way immune cells normally react to cancer. Let’s take a closer look.

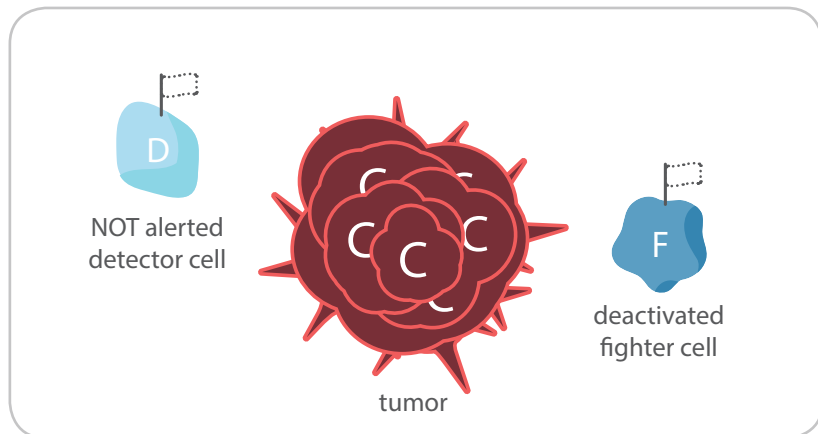
Tricky cancer cells can escape from being recognized by detector cells. In turn, the detector cells do not become alerted.



Fighter cells can be deactivated by tricky cancer cells, and in turn do not attack cancer cells.



Over time, tricky cancer cells that can **escape from detector cells** and **deactivate fighter cells** can continue to survive and grow into a tumor.



Possible effects of immunotherapy

The following pages will explain the science of immunotherapy, as well as some practical information about what your experience receiving immunotherapy may be like.

Science topics include:

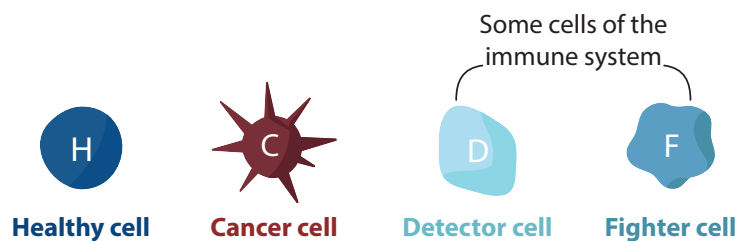
- **How immunotherapy might work**
- **How your tumor might respond to immunotherapy**
- **Possible side effects**

Practical topics include:

- **Factors to consider before starting immunotherapy**
- **How to talk to your cancer care team, including example questions**
- **How to prepare for treatment visits**

Cell guide

Look for these key players as you read on:

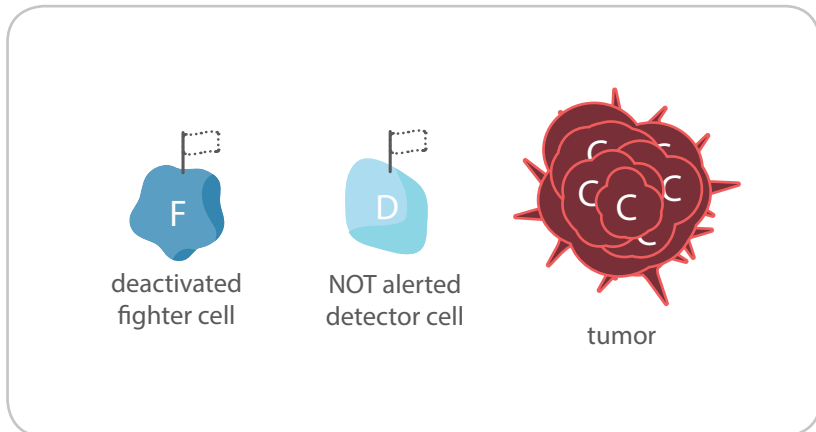


How might immunotherapy help the immune system fight cancer?

There are different types of immunotherapies. They can all help the immune system in different ways. Let's take a closer look.

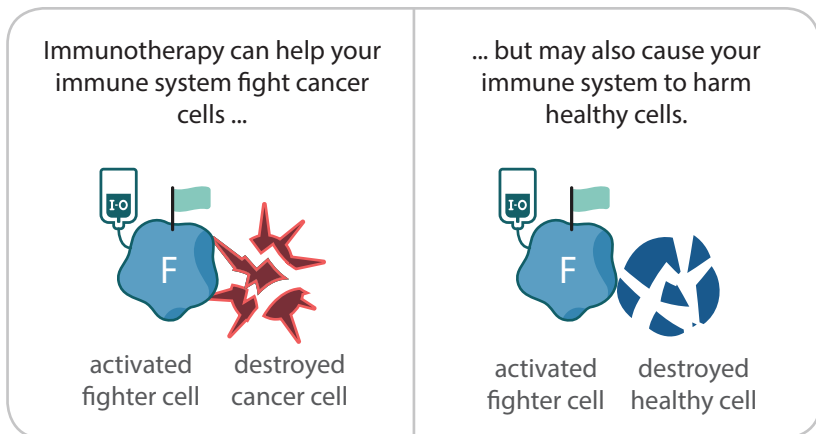
Tricky cancer cells can **escape from detector cells** and **deactivate fighter cells**. In turn, these cancer cells can continue to survive and grow into a tumor.

Your immune system **may need help finding and attacking the tricky cancer cells again.**



That's where immunotherapy comes in.

Immunotherapy can help your **immune system** fight cancer. However, immunotherapy might also cause your immune system to harm healthy cells.

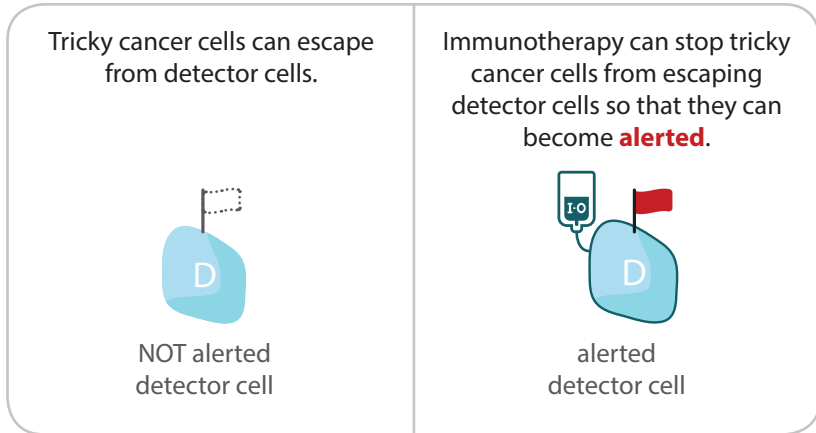


The way immunotherapy works is different from how other types of cancer treatment work.

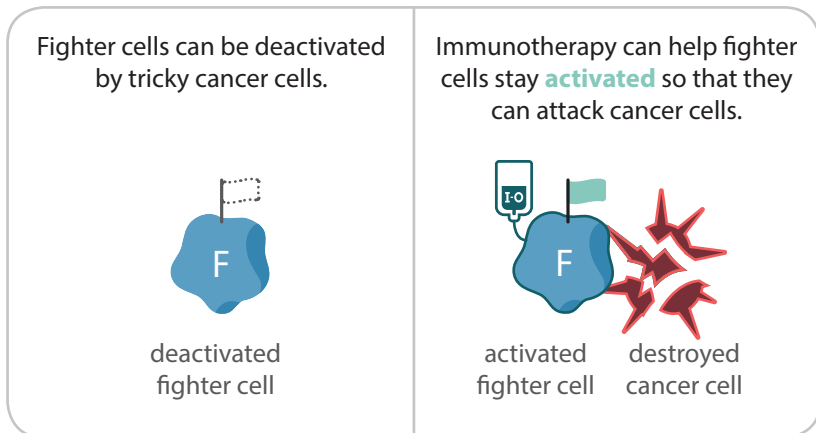
For example, **chemotherapy** acts on **fast-growing cells**. This may destroy cancer cells, but may also destroy healthy fast-growing cells, like hair cells.



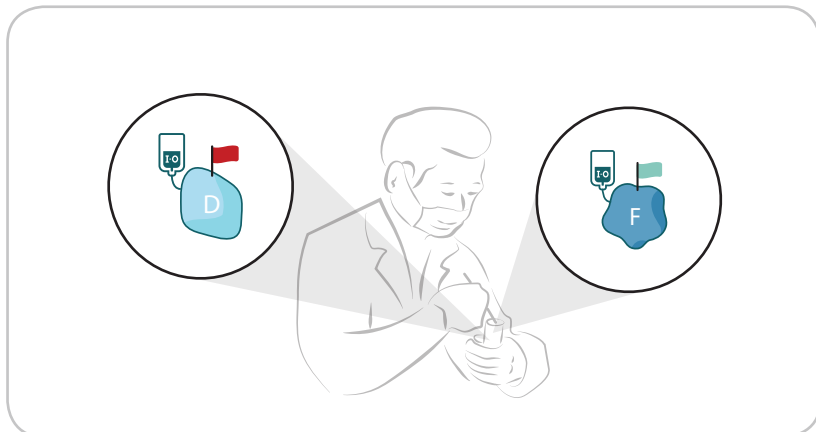
Some immunotherapies stop tricky cancer cells from escaping detector cells. Then, detector cells can become **alerted**.



Other immunotherapies can **help fighter cells stay activated**. The activated fighter cells can then attack cancer cells.



There is research being done to see how new immunotherapies may help your immune system fight cancer.



What might my immunotherapy journey be like?

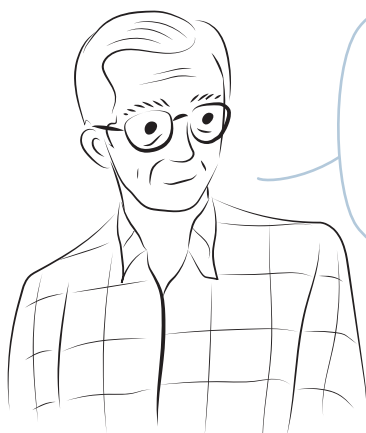
Going on immunotherapy is a big decision that you will make together with your doctor. Your immunotherapy journey will be unique, and will depend on the specific immunotherapy that your doctor feels is right for you. Keep in mind that immunotherapy may not work for everyone.

The general steps of an immunotherapy journey may be:

1. **Considering immunotherapy as a treatment**
2. **Being an active partner in your treatment**
3. **Monitoring your health**

1. Considering immunotherapy as a treatment

- Talk to your **doctor** about immunotherapy, and how it may be different from your other cancer treatment options.
- Think about important **life factors** such as cost, travel, and time commitment.
- Think about whether you will be willing to:
 - **Talk to your cancer care team** about all of your side effects.
 - **Keep your cancer care team up-to-date** and informed about your health.
 - **Be an active partner** with your cancer care team throughout your immunotherapy treatment.



My doctor and I are a team. When we first discussed immunotherapy, we talked about side effects, life factors, and tests that had to happen before I even decided to get the treatment.

If you and your doctor decide that immunotherapy is the right option for you, then you will go on to steps 2 and 3.

2. Being an active partner in your treatment

- **Attend** all of your immunotherapy treatment visits.
- **Tell your cancer care team about how you feel**, including any side effects that may be new, different, or bothersome.
- **Have medical tests done** to monitor your progress and your possible side effects.

3. Monitoring your health

- **Keep track of any side effects** that may be new, different, or bothersome.
- Talk with the people around you about the **kind of help that you may need**.



My mom was my caregiver during my treatment, and I always had open lines of communication with her. It was great that we discussed the kind of help that I needed, but it might have been even more important to let her know what I **didn't** need – cooking my meals.

What factors are important for me to consider before starting immunotherapy?

You may want to consider some of the following factors:

- Will I need **support from friends and family** to help me through this treatment?
- Will I have a way of **getting to the hospital or clinic** for my treatment visits?
- Will I be able to **take time off work** if I need to?
- Will I still be able to **take part in activities** that are important to me?
- Will I be able to **pay for this treatment**?

Receiving immunotherapy can become a longer-term commitment, so thinking about these life factors may help guide your decision.

Where can I learn more about immunotherapy as an option?

Your cancer care team is your best source of information. They can:

- Answer your **questions about immunotherapy**
- Recommend **trustworthy resources**
- Tell you about **available support** at your hospital or clinic



When I was researching treatments on the internet, I felt pretty overwhelmed. It was hard to tell which resources were genuine, so I talked to my doctor, and she helped me find resources that were right for me.

How do I talk to my cancer care team?

You may feel intimidated about talking to your cancer care team and asking questions. Sometimes it is also hard to understand what the doctor says, or remember what you wanted to ask and talk about.

But, asking questions is an important way to address the things that may be worrying you.

Here are a few tips about asking questions.

- Think about and write down what you want to ask **before** you talk to your cancer care team.
- Take notes or ask if you can record the visit.
- If you don't understand your cancer care team's answer to your question, ask for clarification. **Don't be shy about asking for more information!**



For me personally, it was important to stand up and be my own advocate, and to ask **all** of my questions.

How do I prepare for treatment visits?

Consider doing the things listed below before going to your treatment visit.

- **Call ahead to confirm the appointment.** Ask what you might **need to bring**, or what you might **do to prepare**.
- **Arrange transportation** to and from the visit.
- **Write down any questions** that you might have, and any topics that you may want to discuss with your cancer care team (like new side effects).
- **Keep your health information** in one place and bring it to every visit.
- **Bring something to do** while waiting for or while receiving your immunotherapy treatment infusions.
- **Bring back-up** — a friend or family member who can act as a second set of ears and eyes at an appointment.



Sometimes when I get home after my appointment, I remember other things I wanted to ask. I should have written them down!



I took my laptop, books, knitting, music, even a movie to watch — just things to take my mind off the infusion.

What kind of questions can I ask my cancer care team?

You can ask **any questions** you like. To help you get started, here is a list of example questions to think about.

QUESTIONS ABOUT IMMUNOTHERAPY

NOTES

Is immunotherapy right for me?

Are there approved immunotherapies for my cancer?

How long will I be on an immunotherapy?

Is there another patient that I can talk to about their immunotherapy experience?

Will I or my female partner be allowed to get pregnant while I am on immunotherapy?

What are my other options?

If there is no approved immunotherapy for my cancer, then is there an immunotherapy-related or other clinical trial available for me?

QUESTIONS ABOUT IMMUNOTHERAPY TREATMENT VISITS

NOTES

How often do I need to come to the hospital or clinic for my immunotherapy treatment visits?

How long does each visit usually take?

**QUESTIONS ABOUT IMMUNOTHERAPY
TREATMENT VISITS (CONT'D)**

 **NOTES**

What happens during each visit?

How will I receive immunotherapy (e.g., an IV, a pill)?

Should someone come with me to each visit?

How will I feel after each visit?

What happens if I miss a visit?

Who can I contact after hours?

If I move, can I continue immunotherapy at another hospital or clinic?

QUESTIONS ABOUT COSTS

 **NOTES**

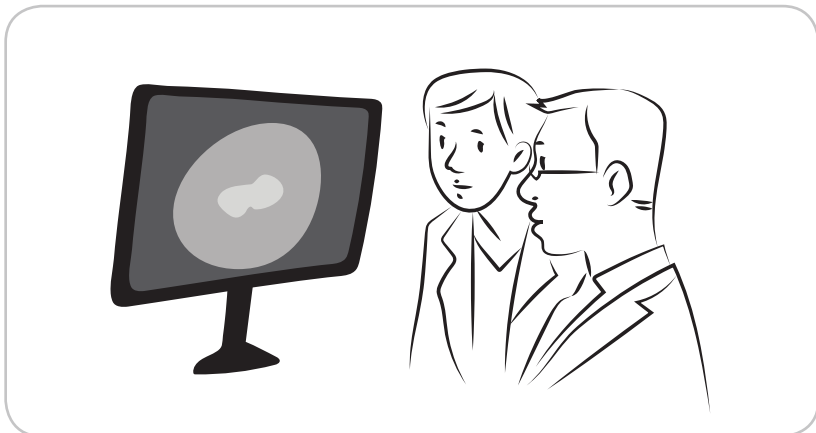
How much will immunotherapy cost?

Who can I talk to if I have questions about costs, insurance coverage, and payments?

How might my tumor respond to immunotherapy?

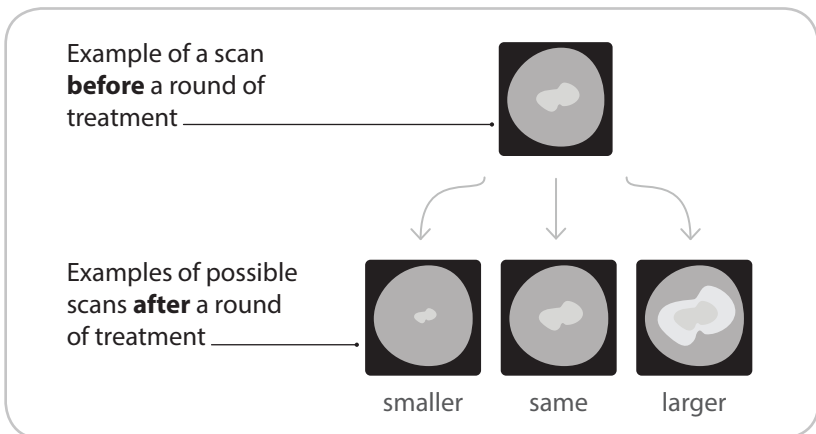
Tumors can respond differently to immunotherapy depending on the type of immunotherapy and how your immune system reacts to it. For some people, immunotherapy can help shrink the tumor. For others, the tumor may stop growing even if it does not get smaller. It is also possible that the tumor may not respond to immunotherapy at all.

At your hospital or clinic visits, your cancer care team may use scans to monitor your progress.



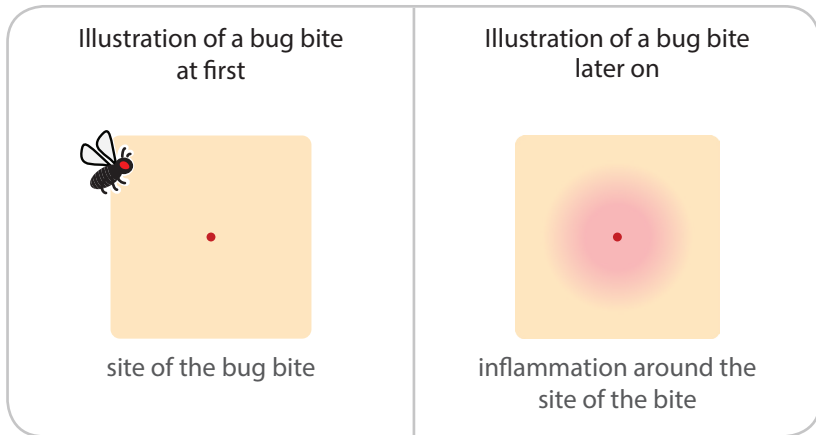
After a round of treatment, the tumor may look **smaller, the same, or larger** compared to before.

If your tumor looks larger in the scans, it may not mean that immunotherapy isn't working.

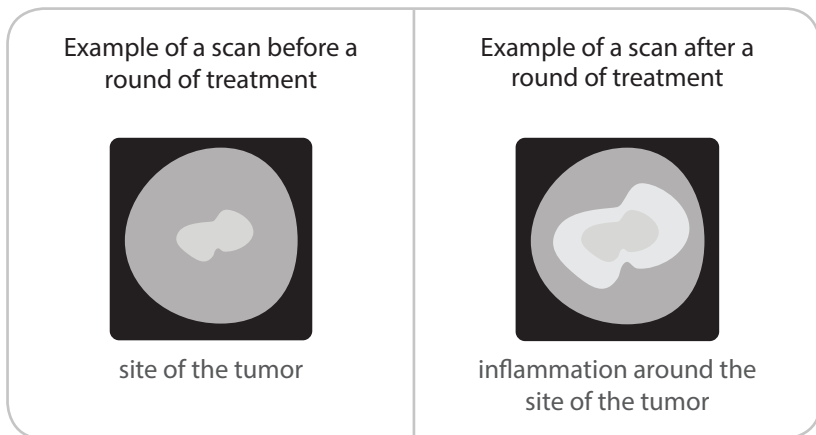


Here is an analogy to explain why this could happen.

Think of a bug bite, where the skin becomes red, hot, and swollen around the site of the bite. This is a sign of **inflammation**, which results from your **immune system's reaction to a threat, not from the bite itself.**

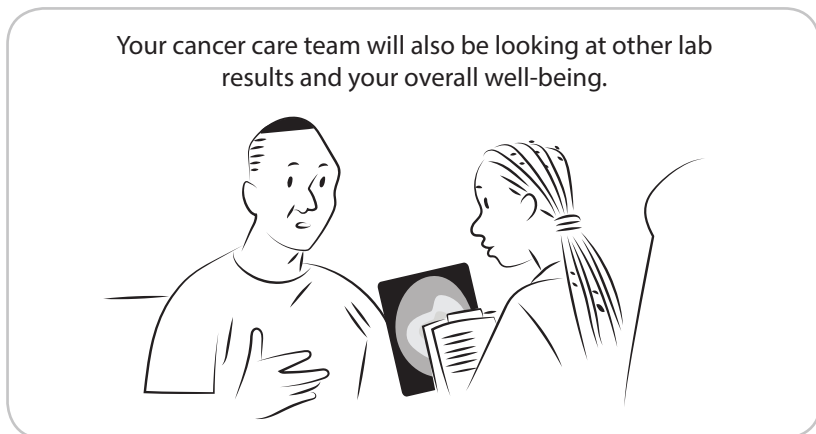


A similar thing could appear in your scans. If the immunotherapy is working, **inflammation may happen around the tumor** as your immune system moves to surround it. This can make your tumor look larger on scans.



In other cases when the tumor appears larger on scans, it might be that immunotherapy isn't working and the tumor is growing. **Everyone responds to immunotherapy differently.**

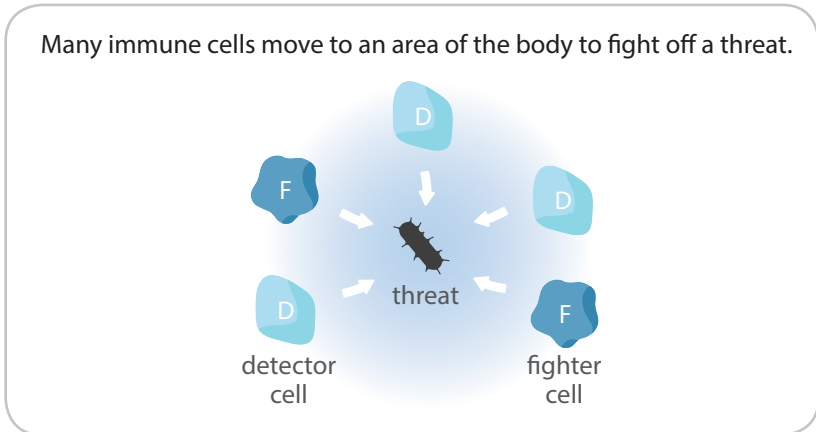
Scans are not the only way to see if immunotherapy is working. **Your cancer care team will also be looking at other lab results and your overall well-being.**



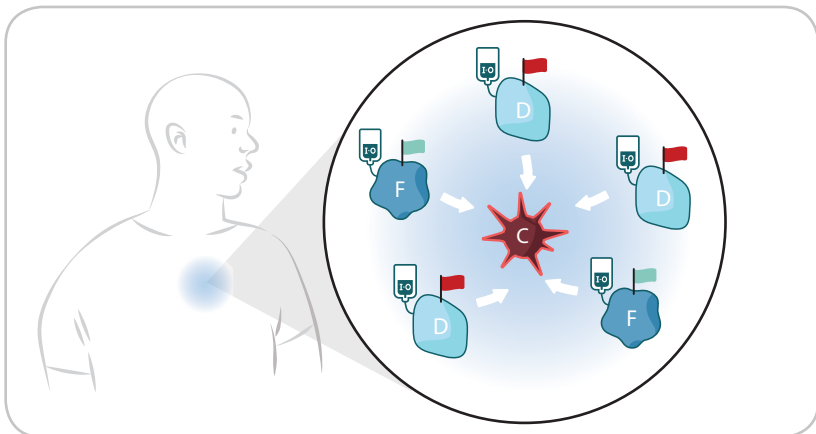
Can immunotherapy cause side effects?

Yes, immunotherapy can cause side effects. Some of these side effects can happen because the treatment may cause inflammation in the body **beyond the area of the tumor**. Some side effects can become serious or life-threatening.

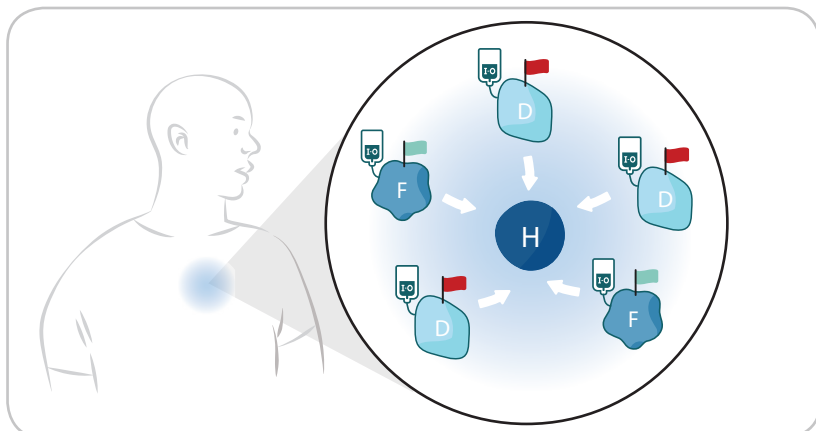
Inflammation happens when many different immune cells move to an injured or threatened area of the body to fight off the threat.



Immunotherapy can help your immune cells **attack cancer cells**. This can cause inflammation around the tumor.

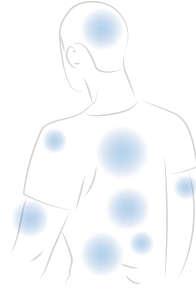


However, immunotherapy can also cause your immune cells to **attack healthy cells**. This may lead to inflammation around a healthy body part.



Immunotherapy works on the immune cells that are found throughout your whole body. For this reason, inflammation may happen anywhere in your body. It may also happen at any time during or after treatment.

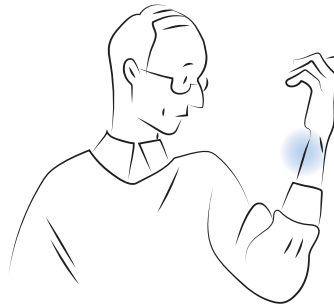
Immunotherapy works on the immune cells that are found throughout your whole body. For this reason, inflammation may happen anywhere in your body.



Inflammation looks and feels different depending on where it is in the body.

You may be familiar with inflammation of the skin, which looks like swelling and redness. But those are not the only signs. For example, inflammation of the lungs may feel more like a cough.

Inflammation of the skin may look like swelling or redness.



Inflammation of the lungs may feel like a cough.



Inflammation is not the only cause of side effects of immunotherapy. There may also be other causes.

Remember that some side effects of immunotherapy can also be serious or life-threatening. **Telling your cancer care team about any changes you experience will make it easier for them to help.**

Telling your cancer care team about any changes you experience will make it easier for them to help.



What are some possible side effects of immunotherapy?

Your cancer care team will have a better idea of what side effects you may experience. **Ask your cancer care team for a list of side effects so that you can recognize them as soon as they come up.**

The side effects that you may get will depend on the immunotherapy you are receiving, and how your immune system reacts to it. Everyone's immunotherapy experience will be unique.

Side effects may happen during or after immunotherapy treatments. Since immune cells are found throughout the whole body, side effects may also happen anywhere in the body. Some side effects may be serious or life-threatening.



Your cancer care team can give you a list of possible side effects for your specific immunotherapy.

In fact, you can find a list of side effects for **any** approved prescription drug through the Food and Drug Administration's (FDA) database, and sometimes on the drug's website.

What should I do if I get side effects?

It is important to keep your cancer care team up-to-date on how you feel. Tell your cancer care team about any changes that are **new, different, or bothersome**. Keep close track of your symptoms, and if you have a caregiver helping you, tell them about it too.



You know your body best, and you can tell when you are feeling bad or good. It may help to keep a record of symptoms as they come up, so that you can share them with us — your cancer care team.

Here are some tips on how you can identify, keep track of, and report your side effects:

- Keep a journal to track how you feel every day.
- Note how you feel after an immunotherapy treatment visit.
- Let your cancer care team know if you feel any changes that are new, different, or bothersome.
- **Tell your cancer care team about side effects as soon as possible! This may help them manage your side effects earlier.**



For fear of being a nuisance, some patients are reluctant to report side effects to their cancer care team. **Do not hesitate!** We are here to help you and we need to be fully informed to provide the best care possible.

Tracking your side effects is key to monitoring your progress.

What kind of questions can I ask my cancer care team?

You can ask **any questions** you like. Below, you'll find a list of example questions to think about.



After I talked to my doctor about side effects and knew what to look out for, I felt much better.

QUESTIONS ABOUT SIDE EFFECTS

NOTES

What kind of side effects might I feel?

.....

When do side effects usually happen?

.....

Who should I talk to if I get a side effect?

.....

How will I know when I should call the doctor and when I should just keep track of my side effects?

.....

If I have to see an ER doctor or any other healthcare professional, what do I tell them about my immunotherapy and side effects?

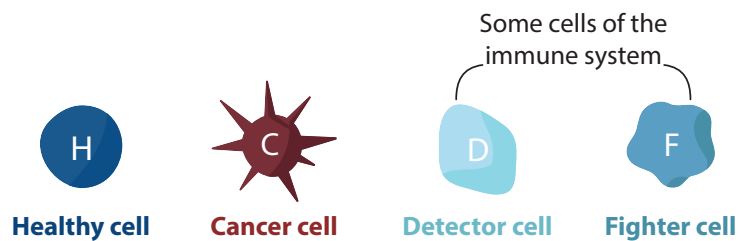
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Immunotherapies used with other treatments

The following pages will explain current research about **how immunotherapies can be used with other treatments to fight cancer**. It also includes some example questions that you can ask your cancer care team about this topic.

Cell guide

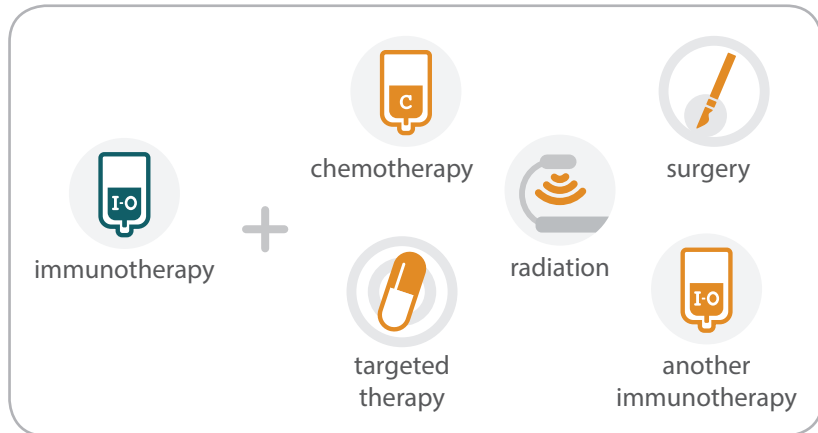
Look for these key players as you read on:



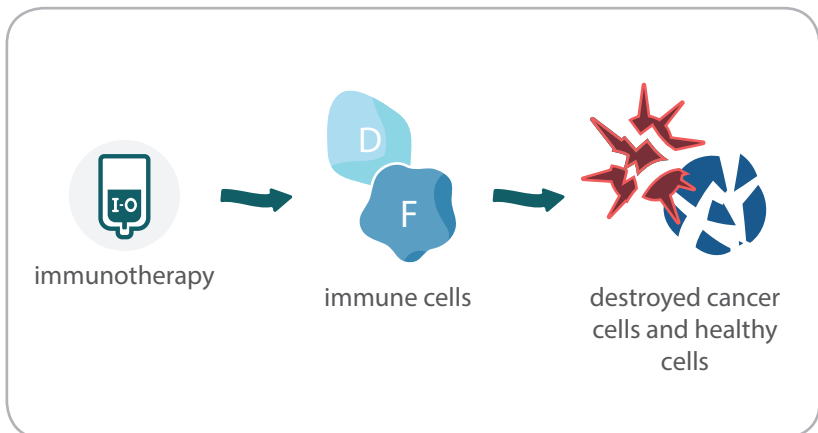
What might happen if I receive immunotherapy with another cancer treatment?

There is ongoing research into how immunotherapies can be used with other treatments to fight cancer. Generally, **when you take more than one cancer treatment, both the risks and benefits may be increased.**

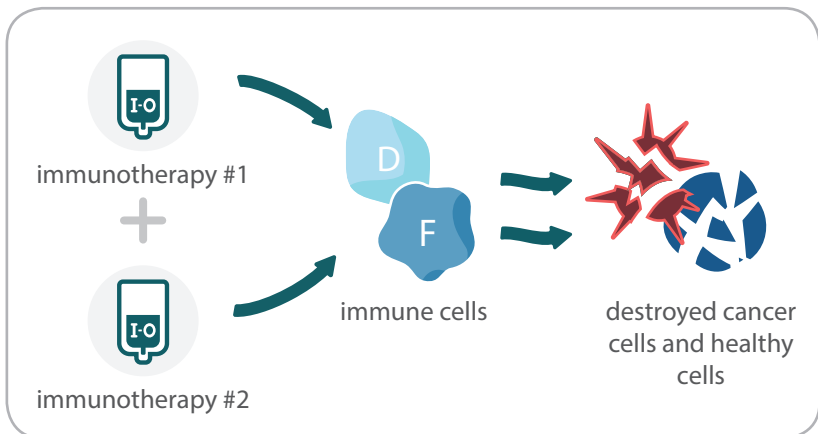
There is research being done to see if an immunotherapy can be used together with other treatments, like chemotherapy, radiation, surgery, targeted therapy, and another immunotherapy.



Taking one type of immunotherapy treatment can help your immune system fight cancer. But, it can also harm healthy cells in the process.

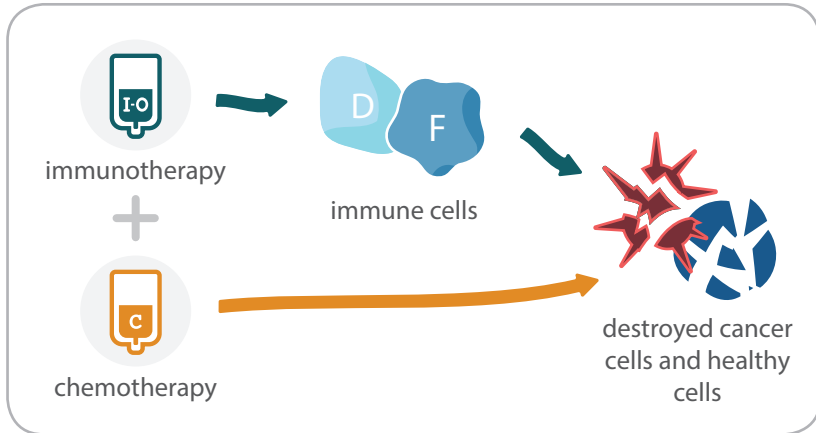


If you take two different types of immunotherapies together, there may be a **greater chance your immune cells will attack both cancer and healthy cells.**



The idea is similar when immunotherapy is used with another type of cancer treatment.

There may be a **greater chance of fighting cancer**, but also a **greater chance of harming healthy cells**.



Talk to your cancer care team about the best treatment option for you.



What kind of questions can I ask my cancer care team?

You can ask **any questions** you like. Here is a list of example questions to think about.

QUESTIONS ABOUT HOW IMMUNOTHERAPY MAY BE USED WITH OTHER TREATMENTS

NOTES

Will this immunotherapy be my only treatment? If not, what other treatments could be a part of my treatment plan?

Will I have more side effects if I receive more than one type of treatment?

Will I be receiving the treatments at the same time or one after the other?

Will I have to come in multiple times to the hospital or clinic to get multiple treatments, or do they happen all in one day?

Will all of my treatments be in the same hospital or clinic?

How many different treatments can I have?

Can I talk to anyone who has had multiple treatments?

What kind of research has been done about this?

Self-care and further reading

The following pages will highlight **ways that you can take care of yourself** during this difficult time.

At the end, you will find some **online resources** about immunotherapy, and **suggestions for next steps**.



Is it normal to feel the way I do?

Living with cancer can be an emotional time. **The feelings you are having are normal responses to this life-changing experience.**

Sometimes you can cope with these feelings on your own, but other times you may want help from others. Remember that you are human too and not just a patient. **You are not alone in your fight against cancer.**

What can I do to cope?

Your emotional, physical, and spiritual well-being are all equally important. Identifying how you are feeling is the first step in taking care of yourself.



I like to journal and meditate to take my mind off stress. It's important to take time for self-reflection.

Consider taking some time every week to reflect on:

- How you are maintaining relationships with others
- The emotions that you are feeling (good or bad)

What can I do to keep track of my feelings?

From time to time, use the self-reflection list below to help you tune in to how you are doing. Feel free to make copies of this page.

In the past 7 days:

I felt worried...

Never Rarely Sometimes Often Always

I felt sad...

Never Rarely Sometimes Often Always

I felt afraid...

Never Rarely Sometimes Often Always

I felt hopeful...

Never Rarely Sometimes Often Always

I felt angry...

Never Rarely Sometimes Often Always

I felt optimistic...

Never Rarely Sometimes Often Always

I felt helpless...

Never Rarely Sometimes Often Always

I felt energetic...

Never Rarely Sometimes Often Always

I felt guilty...

Never Rarely Sometimes Often Always

I felt happy...

Never Rarely Sometimes Often Always

I felt anxious...

Never Rarely Sometimes Often Always

I felt empowered...

Never Rarely Sometimes Often Always

I felt in denial...

Never Rarely Sometimes Often Always

I felt grateful...

Never Rarely Sometimes Often Always

I felt _____

Never Rarely Sometimes Often Always

I felt _____

Never Rarely Sometimes Often Always

Consider sharing the self-reflections above with your cancer care team

to start a conversation. Discussing your feelings and concerns can help others understand how they can help you.

Who can I talk to for more support?

You may find it helpful to allow others to take part in your journey and learn from their experiences and insights. It is very common for patients to be active in their community, seek support, and ask for help from other people like:

- The cancer care team
- Fellow immunotherapy patients
- Support groups (in your area or online)
- Professionals like therapists, counselors, or spiritual leaders
- Friends and family members



We know that this is a difficult time for you. Feel free to approach us for additional help. We may be able to introduce you to other resources in your area.

How can I maintain my general well-being?

Consider doing the activities listed below to maintain your general well-being. Always check with your doctor before starting any new activity.

- Going for a walk and getting fresh air
- Exercising
- Doing an activity that you enjoy
- Resting
- Eating healthy meals

Which online resources can give me more information about immunotherapy?

You can stay up-to-date on immunotherapy research by visiting the following websites:

BMS: Exploring the Power of Immuno-Oncology www.immunooncology.com

Cancer Research Institute www.cancerresearch.org

American Cancer Society www.cancer.org

Stand Up to Cancer www.standup2cancer.org

Cancer Support Community www.cancersupportcommunity.org

ClinicalTrials.gov www.ClinicalTrials.gov

CancerCare www.cancercare.org

Food and Drug Administration's database Drugs@FDA or <https://www.accessdata.fda.gov/scripts/cder/daf/>

This list of resources is provided as a convenience. Bristol-Myers Squibb does not endorse, and is not responsible, for information provided by third-party organizations.

What can I do next?

- **Consider visiting the links listed above** to get more information about immunotherapy.
- **Consider preparing for any conversations with your cancer care team** by reviewing the example questions in this resource, and writing down any other questions that you might have.
- **Talk to your cancer care team and ask them any questions** you have about immunotherapy. Consider using the spaces provided in this document to record their answers.
- **Consider the factors in your own life** that may be affected by receiving immunotherapy, and start planning ways to gain more control of your life and treatment.