Ontario Health
Cancer Care Ontario

Treating cancer with T-cell engaging antibodies: What you need to know

What are T-cell engaging antibodies?

T-cell engaging antibodies are a type of medication that use the T-cells in your own immune system to treat cancer. T-cells are a type of white blood cell that help to protect the body from infections and fight cancer.

How do T-cell engaging antibodies work?

Antibodies are proteins that help your immune system to target and destroy things that make you sick, like viruses or cancer cells. They can be made in your body by your immune system or manufactured as a medication.

T-cell engaging antibodies bring your body's T-cells directly into contact with cancer cells so that your immune system will destroy the cancer cells. This medication works differently than chemotherapy, which directly kills cancer cells.

How are T-cell engaging antibodies given?

Your health care team may recommend T-cell engaging antibodies as part of your treatment plan based on how well the medication is expected to work for the type of cancer you have.

- T-cell engaging antibodies are given either by needle (injection) under the skin or IV (infusion directly into your vein).
- Most people will get several doses of the T-cell engaging antibody as part of their treatment. The number and timing of doses will depend on your type of cancer and how well you respond to the treatment.
- You may be admitted to hospital so that your health care team can monitor for side effects after the first treatments.
- Your health care team will take the following steps to help prevent side effects:
    - The first few treatments will be given as smaller doses. The dose will gradually increase at each treatment visit (this is called the ramp-up or step-up phase).
    - You may be given medications before these treatments to help prevent certain side effects.

- Your health care team will tell you what to do when you leave the hospital, including what side effects to look out for, and who to contact.
- You will be given a wallet card that has information and instructions for other health care providers about your treatment and possible side effects. Show this card to all health care providers, especially if you need to go to the emergency room.

What are the side effects of T-cell engaging antibodies?

T-cell engaging antibodies cause your immune system to work harder, which can also damage healthy cells. This can cause side effects that are different from other cancer medications, like chemotherapy.

Below are **some** of the side effects that can be caused by T-cell engaging antibodies. Your health care team may give you medications before your treatments to help prevent side effects. Most of these side effects can be treated and reversed if they are caught early.

Cytokine release syndrome (CRS) can happen when your immune system responds aggressively to T-cell engaging antibody treatment. CRS usually happens at the start of treatment (during the ramp-up phase and with your first full dose). CRS symptoms can be mild but can also quickly become severe and life-threatening.

CRS can be treated. It is important to catch it early so that the treatment has the best chance of working well. Contact your health care team **right away** if you have any of the following signs of CRS:

- Fever higher than 38°C
- Trouble breathing
- Fast or irregular heartbeat
- Flu-like symptoms (such as chills, body aches and fatigue)
- Severe nausea, vomiting or diarrhea

Immune effector cell-associated neurotoxicity syndrome (ICANS) is a side effect from the T-cell engaging antibody treatment that affects your nervous system (brain and nerves). ICANS can happen on its own, or together with CRS. It can start during treatment, up to a week after treatment, or may start a few days after developing CRS.

ICANS is treatable, and it is very important to manage it as quickly as possible. You should contact your health care team right away if you have any of the following signs of ICANS:

- Headaches that are new or worse than usual
- Drowsiness or weakness

- Tremors
- Chills or shaking
- Change in handwriting
- Trouble speaking or swallowing
- Seizures

Other side effects caused by T-cell engaging antibodies include an increased risk of getting infections, and bleeding or bruising that is new or severe.

What should I do if I have side effects?

Some side effects from T-cell engaging antibodies can become serious or life-threatening very quickly. You must tell your health care team **right away** if:

- You start having **any new side effects**, especially if severe
- You notice any of your side effects getting worse

If you develop any new side effects or notice your side effects are getting worse, you should do one of the following **right away:**

- Speak to your cancer clinic during clinic hours.
- Call the after-hours nursing line.
- Go to your local urgent care clinic or emergency room.

You should always speak to your health care team if you have any concerns about side effects or any questions about your treatment plan.

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Need this information in an accessible format? 1-877-280-8538, TTY 1-800-855-0511, info@ontariohealth.ca.
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