Information for
patients & families

Bispecific Antibodies

Treatment - Systemic

Cancer Care Alberta

Introduction

Your healthcare team has recommended treatment with bispecific antibodies. Sometimes they are known as bispecifics, or "BsAbs".

This booklet will teach you:

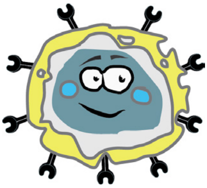
1. What bispecific antibodies are and how they work
2. How bispecific antibodies are given
3. The side effects of bispecific antibody treatments.

What are bispecific antibodies?

Bispecific antibodies are a type of medicine that use your immune system to fight cancer. They are specially-developed antibodies. Antibodies are proteins that recognize and attach to harmful things in your body.

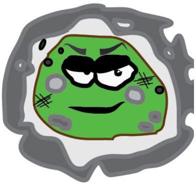
How do bispecific antibodies work?

They act like a bridge between T-cells and cancer cells. This bridge allows T-cells to see cancer cells and destroy them.



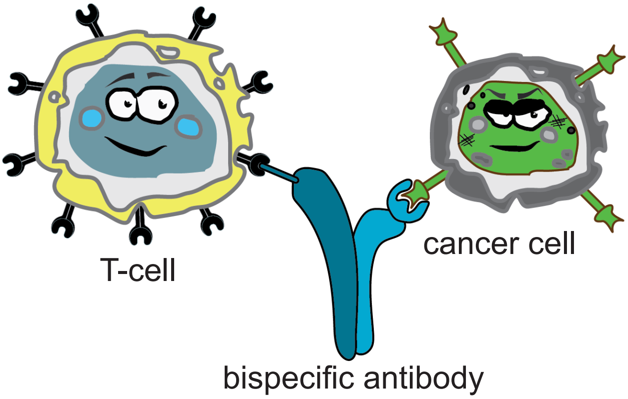
T-cells: These are a type of white blood cell. They are like soldiers of your immune system. They recognize harmful things like diseases and work to get rid of them.

Cancer cells: These are the abnormal cells that divide and grow out of control in the body.



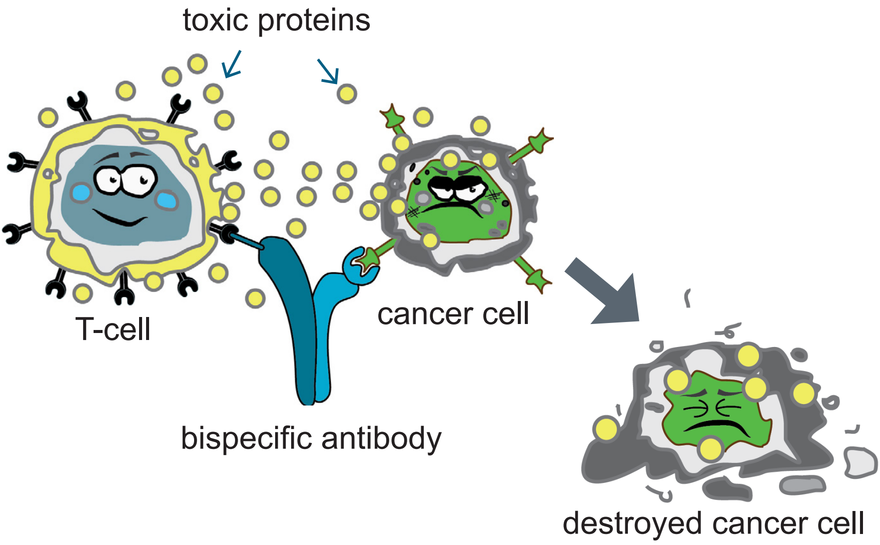
The bridge:

A bispecific antibody works like a bridge. One end of the bridge attaches to a T-cell, and the other end attaches to a cancer cell.



Teamwork:

When the bispecific antibody connects the T-cell and the cancer cell, it helps the T-cell recognize the cancer cell as harmful, and that it should be destroyed. The T-cell then releases toxic proteins that destroy the cancer cell.



How will I get bispecific antibody treatment?

This treatment is usually given by an injection through your skin using a needle or IV (intravenous) into your blood stream. You may get this medicine in the hospital, or in an outpatient treatment area.

Some bispecific antibodies are given through an IV using a **CADD Solis pump**. This pump goes home with you and slowly gives the medication over time. If you need this pump, your healthcare team will teach you about the pump.

How often will I get treatment?

Different types of cancer will have different treatment schedules. Treatments may be given daily, weekly, or less often. Discuss your treatment options and schedule with your healthcare team.

How do treatment doses work?

Often, you start with a small amount of the medicine. After a few days or weeks, you are given a bit more or the full dose. This is called a **step-up** dose. This helps your body get used to the medicine and can lower your risk of having severe side effects.

You may also be given medicine to help with the side effects of treatment. These may be given before or after your treatment and can make you feel sleepy or tired.

Ask your healthcare team if it's safe to drive or operate machinery while on this medication.

What are the possible side effects of this treatment?

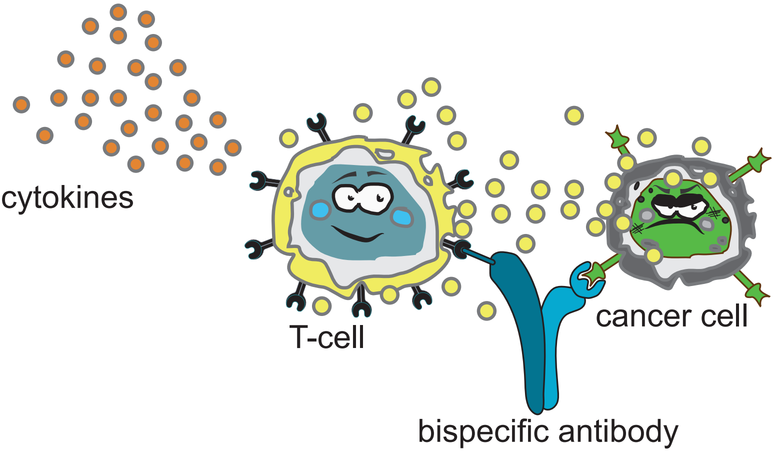
This treatment can have unique side effects. These are usually mild, but in rare cases can be severe. Side effects can become dangerous **if left untreated**, so it is important you know what to look for and when to tell your healthcare team about your symptoms.

You will be given a Bispecific Antibodies Emergency Contact Card and Emergency Triage Letter.

Always keep these with you.

Cytokine release syndrome (CRS)

What it is: As the T-cells start destroying the cancer cells, they can release large amounts of cytokines into the blood.



Cytokines are chemicals that tell your immune system how to work. If too many cytokines are released, sometimes the immune system can overreact. This is known as cytokine release syndrome (CRS). CRS can make you very sick.

Cytokine release syndrome (CRS)

What can happen:	• High fever above 38.0°C (100.4°F) • Difficulty breathing • Low blood pressure • Dizziness • Chills • Fast or irregular heartbeat • Shaking (tremors) or seizures • Headache • Rash.

If you have these symptoms, follow the instructions on your Bispecific Antibodies Emergency Contact Card, go to an emergency room, or call 911 right away.

Everyone will experience symptoms differently. These symptoms:

- May be mild or severe. You may need to go to the treatment centre or the emergency room to get help with symptoms or to get a special medication. Sometimes you may need to be hospitalized. In severe cases, you may need the support of the Intensive Care Unit (ICU).
- May happen any time during your treatment. It is **most common** for these symptoms to happen within 24-48 hours of a step-up dose.

Cytokine release syndrome (CRS)

What can be done:

- You will take medications before your treatment and sometimes after to help prevent CRS. Be sure to take your medication as prescribed.
- Have a friend, family member, or caregiver stay with you and monitor you for symptoms for 48 hours after each step-up dose. Your healthcare team will let you know when you no longer need someone to stay with you.
- Your healthcare team will let you know when to check your temperature. If it is above 38°C (100.4°F), follow the instructions on your Bispecific Antibodies Emergency Contact Card.
- If you have a blood pressure machine or oxygen monitor at home, your healthcare team may ask you to check your blood pressure or oxygen levels. They will tell you how often to check and what to watch out for.
- You may be asked to stay close to your treatment centre or stay in the hospital. If this is needed your healthcare team will let you know when and for how long.
- Make sure you have acetaminophen (like Tylenol ®) at home and any medicine your doctor has prescribed in case of CRS.
- Tell your healthcare team about any new or worsening symptoms. There is medication that can help.

Neurotoxicity (Neurologic Toxicity)

What it is: Neurotoxicity happens when bispecific antibodies activate the immune system and affect the nervous system. Your nervous system includes your brain, spinal cord, and the nerves in your body. It helps you think, move, and feel.

What can happen:

- Headache
- Dizziness
- Confusion
- Difficulty speaking, swallowing, or writing
- Muscle weakness or pain
- Fainting or very low blood pressure
- Drowsiness or decreased level of consciousness.

If you have these symptoms follow the instructions on your Bispecific Antibodies Emergency Contact Card, go to an emergency room, or call 911 right away.

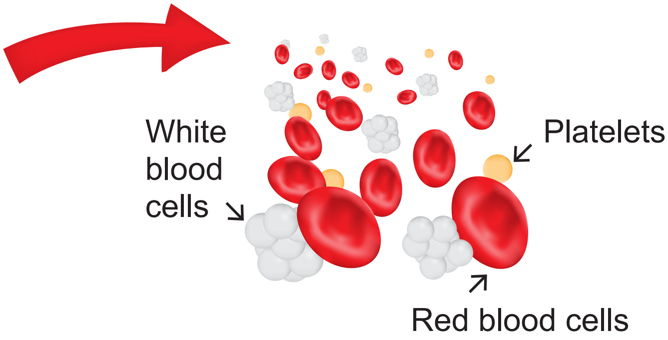
What can be done:

- Tell your healthcare team if you have any symptoms. There are medications that can help. Follow the instructions on your Bispecific Antibodies Emergency Card.
- If possible, have a friend, family member, or caregiver stay with you and monitor you for symptoms while you are on treatment. Ask your healthcare team for more details.

Cytopenia

What it is: Bispecific antibodies can cause low blood counts called cytopenia. Blood counts include:

- White blood cells (immune cells)
- Red blood cells (cells that carry oxygen throughout your body)
- Platelets (cell fragments that help your blood clot).



What can happen:

- Low white blood cell counts — you may get infections more easily.
- Low red blood cell counts — you may feel more tired or tire more easily.
- Low platelet counts — you may bleed or bruise more easily.

What can be done:

- Have your blood tested when asked by your healthcare team.
- Report any new or worrisome symptoms to your healthcare team.
- You may be prescribed medication or get a blood product transfusion to help improve your blood counts.

Infection

What it is: Infections happen when your body can’t fight harmful germs like bacteria or viruses. This treatment may increase your infection risk by decreasing the number of your white blood cells (immune cells), or by making your white blood cells less effective in fighting germs.

What can happen: You can get sick. This can range from mild to severe illness. Symptoms include:

- A fever of 38.0°C (100.4°F) or higher
- Chills, sweating, or shaking
- A cough or a runny nose
- Feeling short of breath, having trouble breathing, it hurting to breathe, or your chest feeling tight
- Pain, redness, or swelling in your throat, mouth, eyes, skin, or joints
- Peeing more often than usual, or it burns when you pee, or your pee is cloudy
- Pain in your stomach, rectum, vagina, or penis
- Diarrhea
- A new rash.

> Tell your healthcare team about new or worsening symptoms. Go to the emergency room or call 911 if you have potentially life threatening symptoms like chest pain or trouble breathing.

What can be done:

- Your healthcare team may prescribe medication to help prevent infections. Be sure to take it as prescribed.

Things you can do to help prevent infections:

- Clean hands by washing or using hand sanitizer often
- Avoid sick people and crowds
- Bathe or shower daily
- Keep your skin and lips moist and healthy
- Wear sunscreen when outside
- Keep wounds/scratches clean and covered
- Wash all fruits and vegetables before you eat them
- Wear gloves when gardening
- Be careful around animal waste (litter) and avoid animal scratches.

Tumour lysis syndrome (TLS)

What it is:	Bispecific antibodies help your T-cells kill cancer cells. When the cancer cells die, they release their contents into the bloodstream. The kidneys may have trouble removing these contents from the blood. This can lead to tumour lysis syndrome (TLS).
What can happen:	In TLS, the blood has high levels of uric acid, potassium, and phosphate, and low levels of calcium. This imbalance in your blood can damage your kidneys and heart.
What can be done:	• Stay hydrated by drinking at least 2 litres (8 cups) of fluids a day. • If you are at high risk for TLS, you will get medication to prevent it. Your healthcare team will monitor you for symptoms and give you IV hydration if needed.

Tumour flare

What it is: A tumour flare happens in patients with a cancer mass or masses (tumours). As the immune system destroys cancer cells, the cancer mass can get bigger before it shrinks.

What can happen: Your cancer symptoms may suddenly reappear or get worse.

What can be done: If you are at risk for this, your doctor will monitor you closely especially if you have a tumour close to your airway, heart, or lungs.

Nausea and vomiting

What it is: You may feel sick to your stomach (nausea) and vomit with this treatment.

What can happen: It is important to manage nausea and vomiting effectively. Severe nausea and vomiting may cause you to lose important fluids and nutrients.

Symptoms include:

- Feeling queasy
- Dizziness
- Irritability
- Upset stomach
- Restlessness
- Lack of appetite
- Increased saliva production — more fluid (spit) in your mouth
- Inability to eat or drink without feeling like you need to vomit.

What can be done: The best way to control nausea and vomiting is to prevent them from happening. Let your healthcare team know if you have nausea or vomiting. They can give you medications to help prevent or reduce nausea or vomiting. Let them know if your medication is not working.

Diarrhea

What it is: Diarrhea is when you have loose watery stools often. Your treatment, infection, medication or other reasons may cause diarrhea.

Symptoms include:

- Loose or watery stools 3 or more times a day
- Stomach cramps, pain, gas, or feeling bloated
- Dehydration
- Weight loss
- Rectal pain, bleeding, or discharge.

! Tell your healthcare team right away if you have blood or mucous in your stool.

What can happen: Diarrhea can cause dehydration, which may:

- Make you feel tired (fatigued)
- Make you feel uncomfortable
- Damage or irritate the skin around your anus
- Cause changes in your blood cell counts.

What can be done:

- Tell your healthcare team if you have diarrhea. They can give you medications to help.
- To prevent dehydration, drink at least 2 litres (8 cups) of fluids a day. If you are unable to drink enough, you may be given extra fluids and nutrients through an IV.
- Change your diet. Eating small meals, eating foods with less fibre, and eating slowly can help. A dietitian can help you choose the right foods. Ask your healthcare team to refer you.
- Take care of the skin around your anus. Keep it clean. Sometimes warm water and soft wipes help.
- Wash your hands well and often to avoid infections.

Find more tips to help with nausea and vomiting, diarrhea, and other side effects by visiting cancercarealberta.ca, clicking on "In Treatment", "Managing Side Effects" or scanning this QR code:

Other side effects or concerns

Treatment can also cause issues with:

- Eating well
- Fatigue
- Sexual health
- Emotional and mental wellbeing.

If you have any of these concerns, talk with your healthcare team. They can refer you to other professionals that can help you with these concerns.

Pregnancy:
Do not try to get pregnant or get someone pregnant until your healthcare team says it's okay. We do not know how this treatment may affect unborn babies.

It can be scary to hear about the side effects of bispecific antibodies. Talk to your healthcare team about your risk of side effects. We are here to support you.

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The information is to be updated every 3 years, or as new clinical evidence emerges. If there are any concerns or updates with this information, please email cancerpatienteducation@ahs.ca.

Important things to remember:

Bispecific antibodies help your body’s T-cells fight cancer.

Let your healthcare team know about any side effects.

Know your emergency contact numbers and when to get help.

For other Cancer Care Alberta resources, visit **cancercarealberta.ca**

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