A Spotlight on Bispecific Antibodies

Understanding bispecific antibody treatment in relapsed or refractory multiple myeloma (RRMM)

Johnson&Johnson

This information is current as of December 2025

WELCOME!

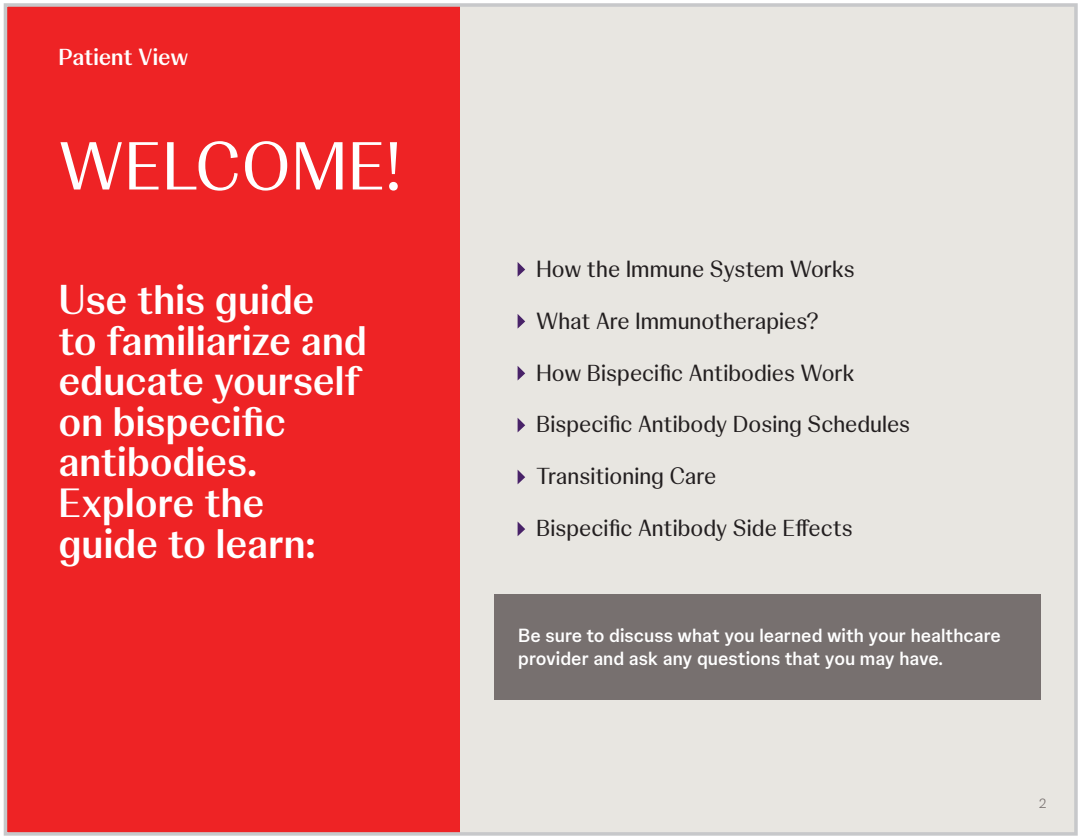
Use this guide to familiarize and educate yourself on bispecific antibodies. Explore the guide to learn:

- How the Immune System Works
- What Are Immunotherapies?
- How Bispecific Antibodies Work
- Bispecific Antibody Dosing Schedules
- Transitioning Care
- Bispecific Antibody Side Effects

Be sure to discuss what you learned with your healthcare provider and ask any questions that you may have.

Nurse View

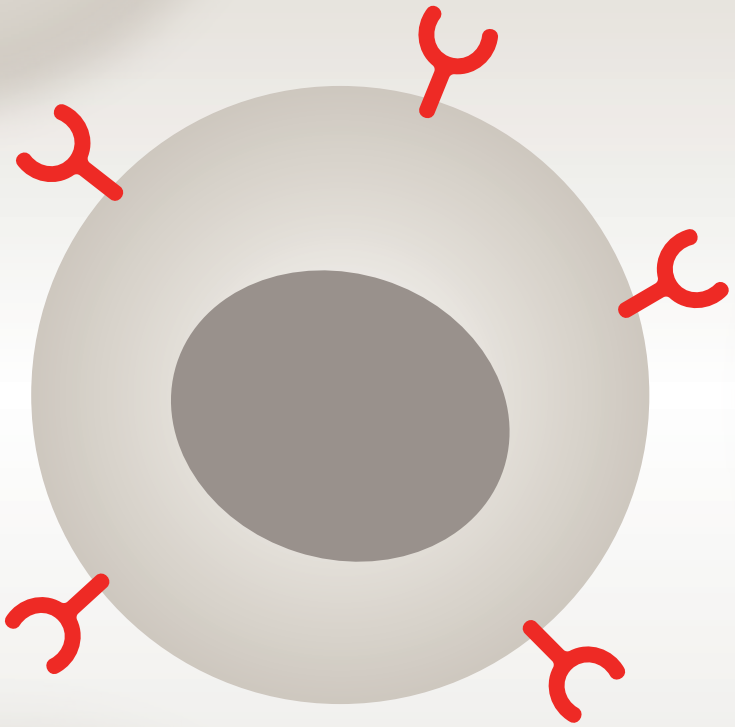
WELCOME!



Patient View

Introduction to the Immune System

- Our immune system, when functioning normally, can find and destroy abnormal cells. As a result, the immune system may prevent or slow the growth of many cancers
- A group of immune cells called “T-cells” play a role in helping to identify the cancer cells and may help fight the cancer
- Yet, your body’s T-cells can’t always recognize cancer cells on their own. Some cancer cells may hide from the immune system by developing genetic changes that make them less visible to T-cells



Nurse View

Introduction

Patient View

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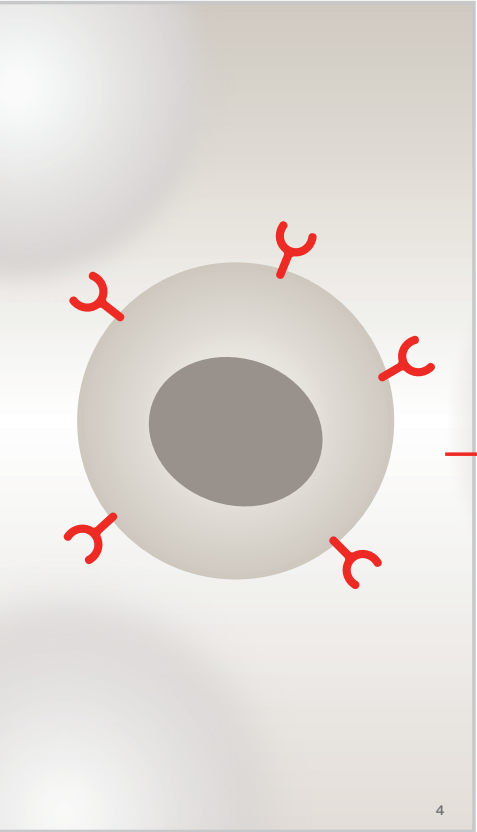

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Patient View

Patients May Ask:

- Do people with multiple myeloma have weakened immune systems?

Q&A:

Q: Why does a cancer cell develop genetic changes?

A: A cancer cell may produce a genetic change or evolve in order to survive in its environment; in this case, it would be evolving to hide from the immune system.

Q: How are T-cells able to destroy cancer cells?

A: T-cells may be able to fight and destroy cancer cells by using their ability to release cytokines.

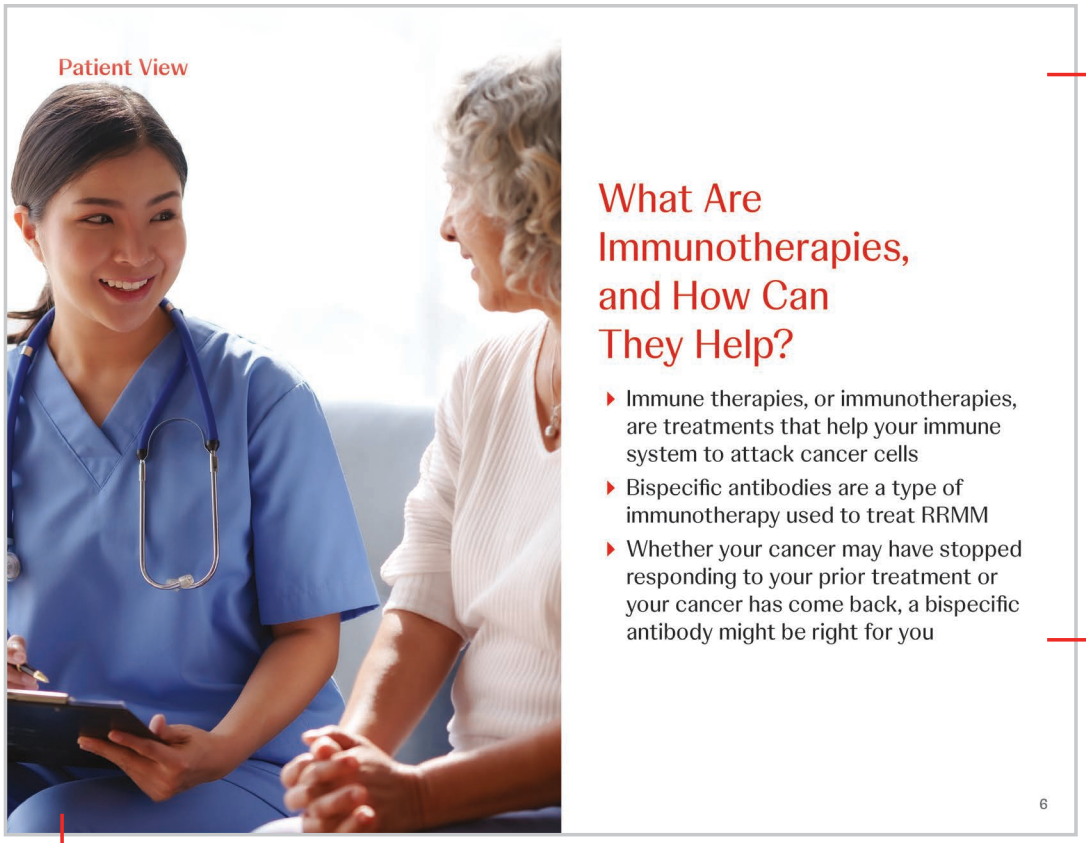
Patient View

What Are Immunotherapies, and How Can They Help?

- Immune therapies, or immunotherapies, are treatments that help your immune system to attack cancer cells
- Bispecific antibodies are a type of immunotherapy used to treat RRMM
- Whether your cancer may have stopped responding to your prior treatment or your cancer has come back, a bispecific antibody might be right for you

Nurse View

What Are Immunotherapies, and How Can They Help?



Patient View

Patients May Ask:

- What immunotherapies are options for me?

Discussion Point:

Select immunotherapy options in multiple myeloma include:

- Monoclonal antibodies
- Bispecific antibodies
- Chimeric antigen receptor (CAR) T-cell therapy

Q&A:

Q: How can an immune response be aided with a bispecific antibody?

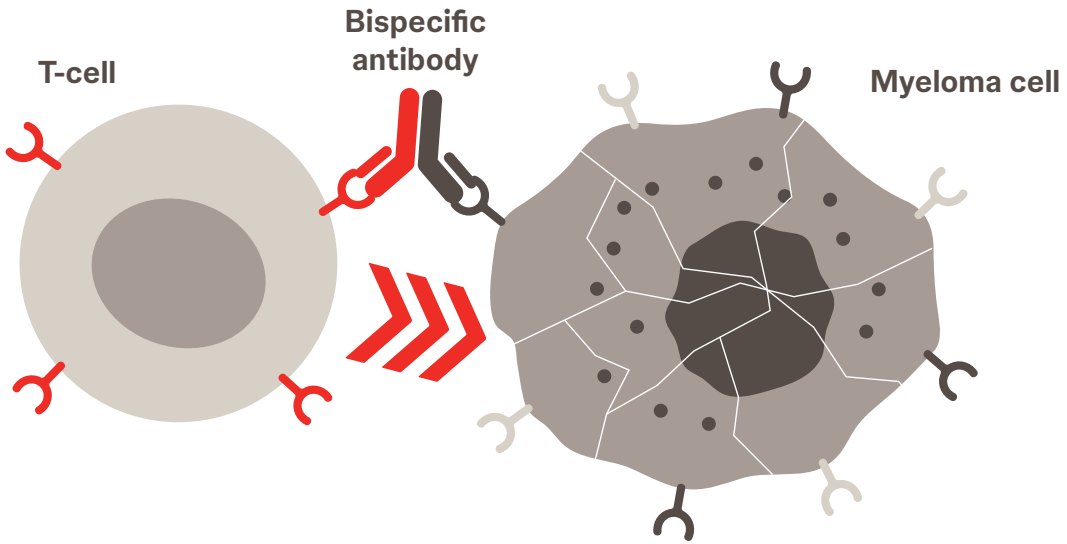
A: T-cells can't always recognize or locate the multiple myeloma cells on their own, so sometimes they need assistance from a medication. A bispecific antibody can assist in identifying multiple myeloma cells, which can help the immune system destroy these cells.

Patient View

What Are Bispecific Antibodies?

In multiple myeloma, bispecific antibodies, also known as bispecifics, bind to 2 different cells at once, a T-cell (immune cell) and a myeloma cell (cancerous cell), in order to treat your condition.

How do they work?



By binding to both a T-cell and a myeloma cell, the bispecific helps your immune system recognize the myeloma cells and activate the T-cells to destroy the myeloma cells in your body.

Bispecifics can bind to some healthy cells. Discuss with your care team what this could mean for you during treatment.

Nurse View

What Are Bispecifics?

Patient View

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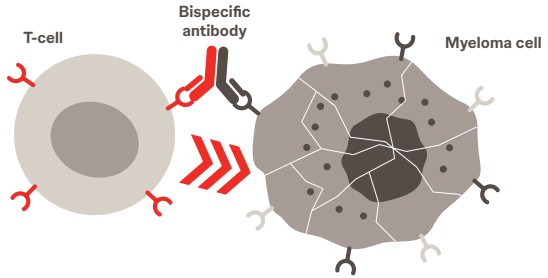

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Patient View

Patients May Ask:

- What does bispecifics binding to healthy cells mean for my treatment?

Discussion Point:

Typically, once the bispecific attaches to the T-cell and myeloma cell, cytokines can be released from the T-cell during what is called "T-cell activation."

Cytokines are proteins that help guide immune response and help control inflammation in the body.

Q&A:

Q: How does this treatment compare with CAR-T?

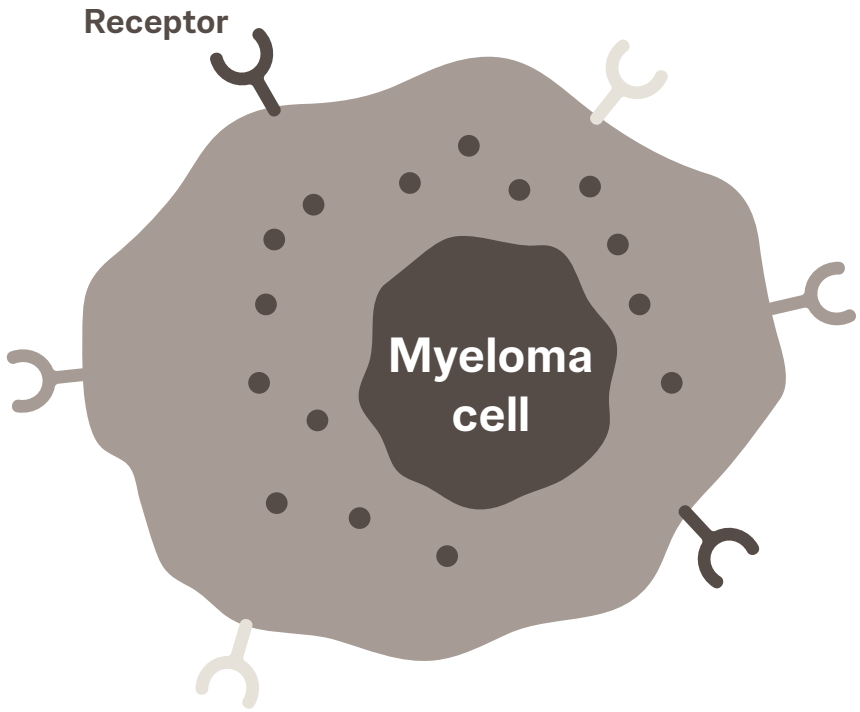
A: CAR T-cell therapy works through collection and genetic modification of your body's own T-cells to create personalized CAR T-cells that will recognize and fight your cancer. Your CAR T-cells are then returned to your body in a one-time infusion.

Patient View

Bispecific Targets

How do bispecifics recognize the myeloma cells in the body?

- A bispecific locates the myeloma cell by targeting specific receptors on the surface of the myeloma cell
- Bispecifics bind to the receptor on the myeloma cell
- Approved bispecific antibodies target different receptors on myeloma cells
- Your healthcare provider may prescribe different bispecifics at separate points throughout your treatment journey



Each bispecific targets one type of receptor on a myeloma cell. Speak with your healthcare provider to learn more about the different types of receptors.

Nurse View

Bispecific Targets

Patient View

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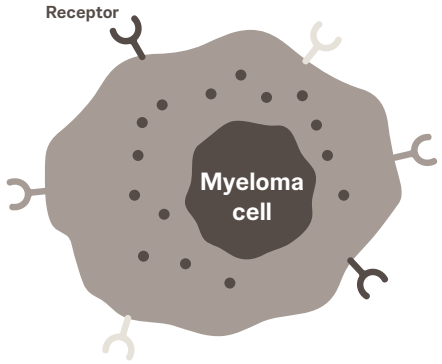

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Patient View

Patients May Ask:

- What are the differences between the 2 receptors that a bispecific will target?

Discussion Point:

Each bispecific is designed to bind to one particular receptor on myeloma cells.

Q&A:

Q: What happens once the bispecific binds to the myeloma cell?

A: When the bispecific attaches to the receptor on the myeloma cell and on the T-cell, the T-cell activates. This activation leads to the release of cytokines, which then leads to the destruction of myeloma cells.

Patient View

Dosing and Administration

How are bispecifics given in patients with RRMM?

- Bispecifics are given as a Subcutaneous (SC) injection under the skin or Intravenous (IV) infusion depending on the bispecific
- Dosing schedules for bispecifics involve a "step-up dose" period followed by ongoing "treatment doses"
- After the step-up dosing schedule is complete, ongoing treatment doses will be given regularly depending on the bispecific dosing schedule

Step-Up Dosing Schedule

The number of step-up doses can vary depending on the bispecific.

What is step-up dosing?

- Step-up dosing allows the healthcare team to slowly increase the dosage strength as your body adjusts to the treatment
- You should be hospitalized for certain doses during the step-up dosing schedule. Hospitalization recommendations may vary depending on the bispecific

You should be closely monitored for serious and non-serious side effects during this step-up period

Why is step-up dosing needed?

- Bispecifics are given according to the step-up dosing schedule to reduce the risk of cytokine release syndrome (CRS)

Nurse View

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Patient View

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Patient View

Discussion Point:

Ongoing treatment will likely be in a healthcare provider office or in another local oncologist office.

Q&A:

Q: How long will step-up dosing last before the full treatment doses start?

A: Timing for step-up dosing depends on both side-effect management as well as how many step-up doses a particular bispecific has before moving to the ongoing treatment doses.

Patients May Ask:

- Is hospitalization always necessary when taking a bispecific?*
- What are the necessary preparations for taking a bispecific?

If unsure of answers, please refer to specific product prescribing information.

Patient View

Transition of Care

You may receive your step-up doses at a different location than your ongoing treatment doses

- When you initiate step-up dosing, you will be closely monitored and should be hospitalized for certain doses during the step-up dosing schedule because of the potential for serious side effects. Hospitalization recommendations may vary depending on the bispecific

- Once your step-up dosing schedule is completed, you will transition to receiving ongoing treatment doses, which may occur in your local oncologist's office

Here are some recommendations to consider when transitioning between treatment phases:

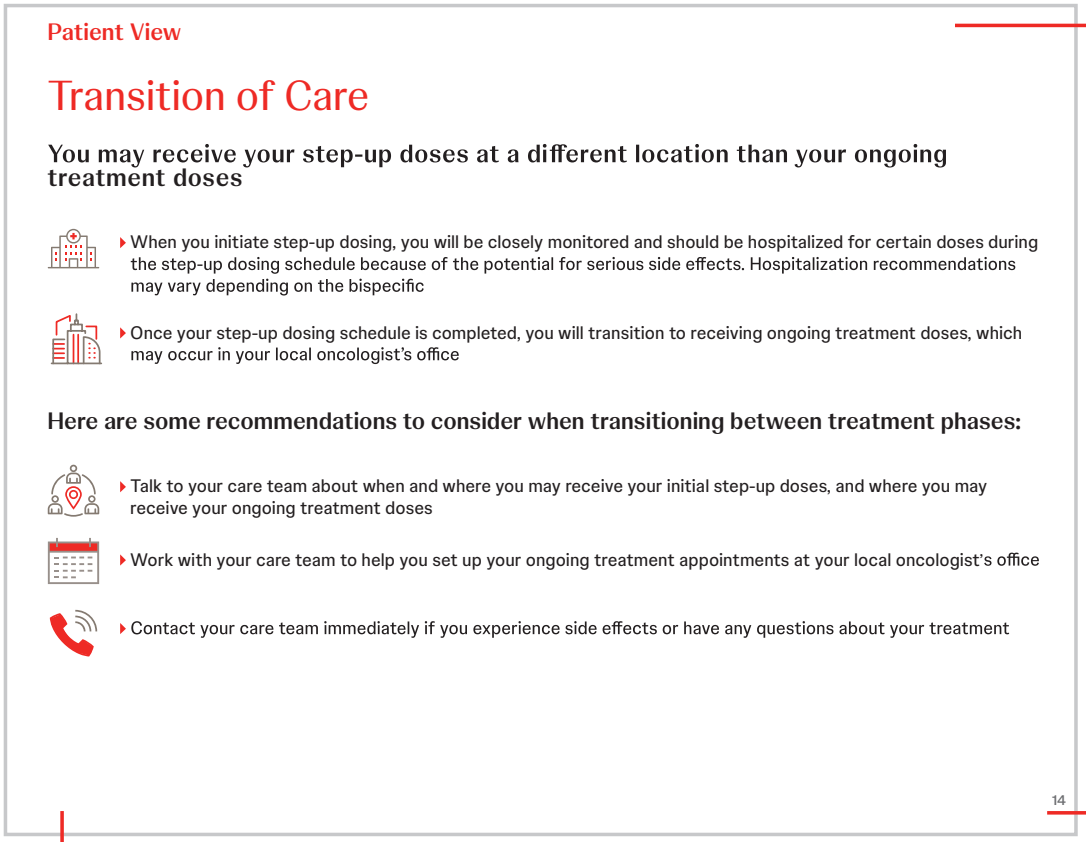
- Talk to your care team about when and where you may receive your initial step-up doses, and where you may receive your ongoing treatment doses

- Work with your care team to help you set up your ongoing treatment appointments at your local oncologist's office

- Contact your care team immediately if you experience side effects or have any questions about your treatment

Nurse View

Transition of Care



Patient View

Patients May Ask:

- Are there transportation services available to me if I need to go to another location for my treatment?
- How will I find the different treatment locations?

Discussion Point:

There are some logistical challenges patients may encounter when receiving a bispecific. Patients should be hospitalized for certain doses during the step-up dosing schedule. Hospitalization recommendations may vary depending on the bispecific. When the time comes to receive ongoing treatment doses, the patient will likely transition their care to a local oncologist's office.

Discuss the practice's ability to offer support to the patient during the transition period from the step-up dosing schedule to ongoing treatment.

Q&A:

Q: What if I run into logistical problems like not having a hospital or healthcare provider near me during the transition of care?

A: Based on the treatment you and your healthcare provider choose, there are different patient support programs available to ease the transition of care and ensure you have access to a hospital or healthcare provider to complete your ongoing treatment.

Patient View

Side Effects: CRS

Bispecifics may cause cytokine release syndrome (CRS), which can be serious, life-threatening, or lead to death.

Cytokine release syndrome (CRS) – A condition that can occur after some types of immunotherapy treatment such as treatment with bispecifics. CRS is caused by the rapid release of cytokines into the blood from immune cells affected by the immunotherapy. Cytokines are immune substances that have many different purposes in the body. Most patients have a mild reaction, but sometimes the reaction may be severe or life-threatening.

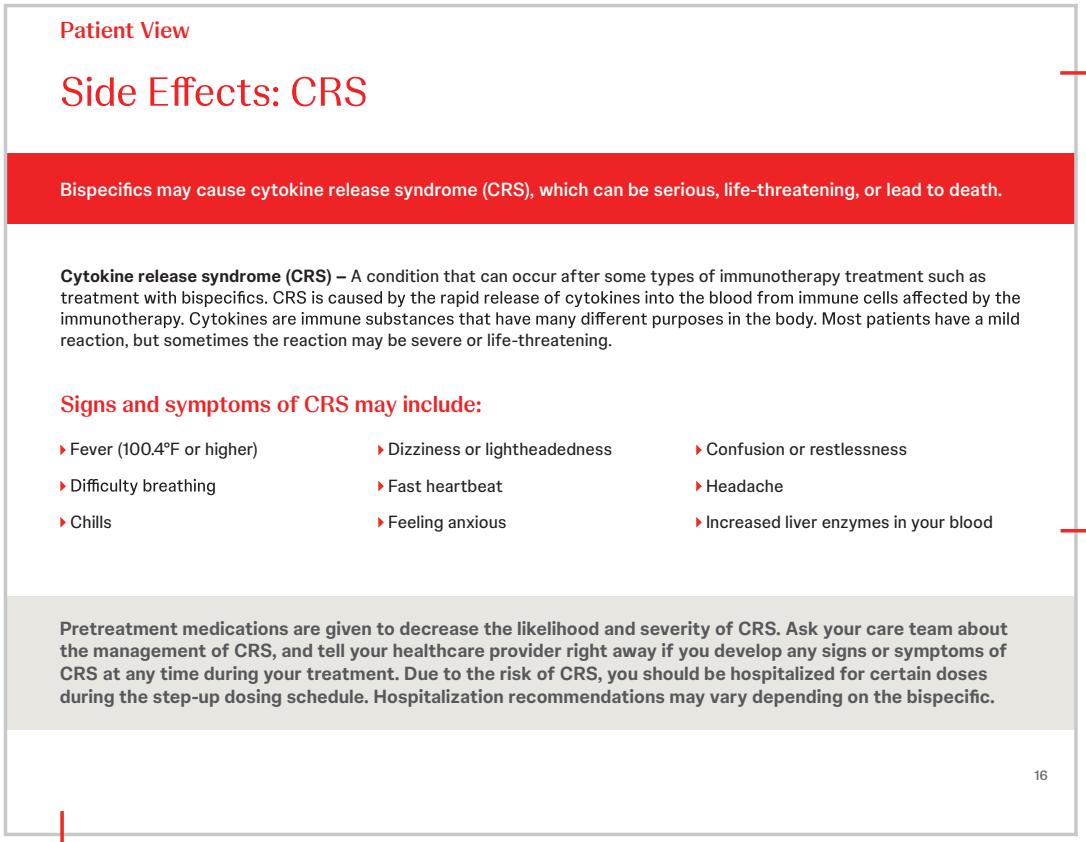
Signs and symptoms of CRS may include:

- Fever (100.4°F or higher)
- Difficulty breathing
- Chills
- Dizziness or lightheadedness
- Fast heartbeat
- Feeling anxious
- Confusion or restlessness
- Headache
- Increased liver enzymes in your blood

Pretreatment medications are given to decrease the likelihood and severity of CRS. Ask your care team about the management of CRS, and tell your healthcare provider right away if you develop any signs or symptoms of CRS at any time during your treatment. Due to the risk of CRS, you should be hospitalized for certain doses during the step-up dosing schedule. Hospitalization recommendations may vary depending on the bispecific.

Nurse View

Side Effects: CRS



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Patient View

Patients May Ask:

- What is the severity of CRS?
- How to monitor for signs and symptoms after administration

Discussion Points:

- Discuss how CRS may be managed by the care team
- Consider explaining how dose delays can occur because of CRS

Q&A:

Q: When is CRS most likely to occur with bispecifics during a patient's treatment journey?

A: Most patients experienced CRS during the step-up dosing schedule. If you develop signs and symptoms of CRS throughout treatment, call your healthcare provider or get medical help right away.

Patient View

Side Effects: Neurologic Problems

Bispecifics may cause neurologic problems that can be serious and may lead to death.

Neurologic problems – A side effect of some immunotherapies that may be attributed to the release of cytokines.

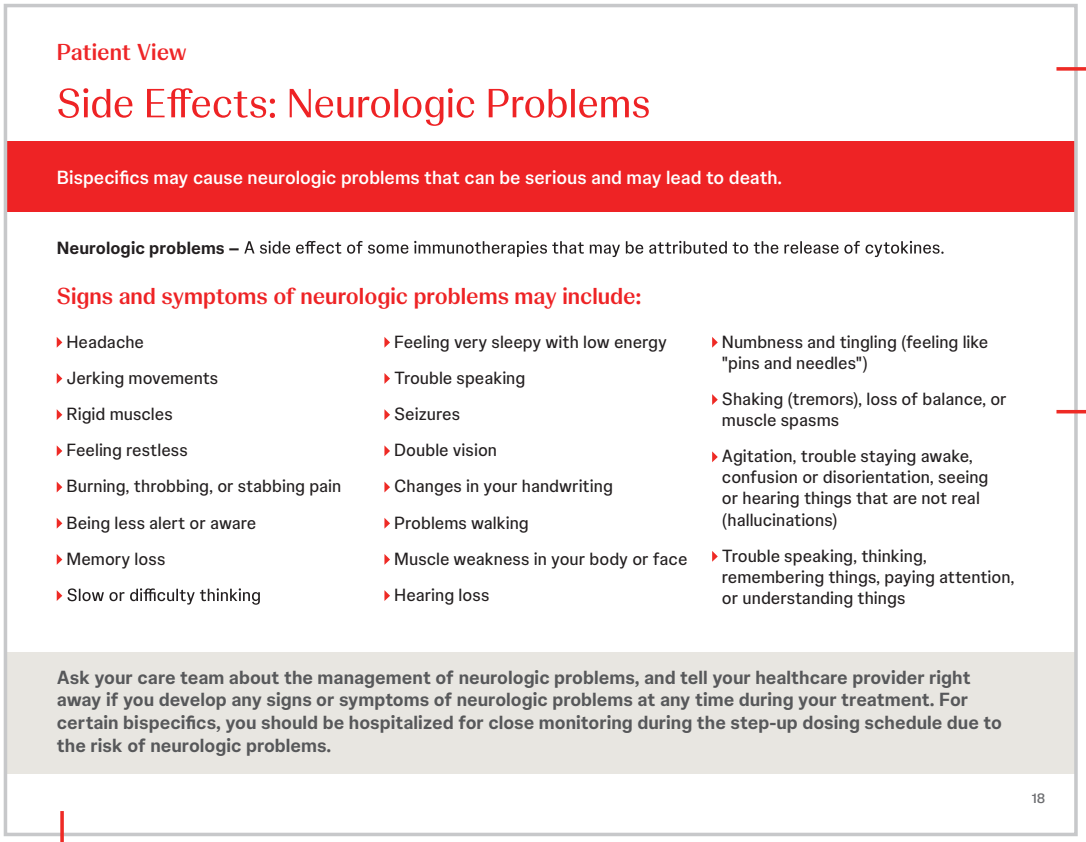
Signs and symptoms of neurologic problems may include:

- Headache
- Jerking movements
- Rigid muscles
- Feeling restless
- Burning, throbbing, or stabbing pain
- Being less alert or aware
- Memory loss
- Slow or difficulty thinking
- Feeling very sleepy with low energy
- Trouble speaking
- Seizures
- Double vision
- Changes in your handwriting
- Problems walking
- Muscle weakness in your body or face
- Hearing loss
- Numbness and tingling (feeling like "pins and needles")
- Shaking (tremors), loss of balance, or muscle spasms
- Agitation, trouble staying awake, confusion or disorientation, seeing or hearing things that are not real (hallucinations)
- Trouble speaking, thinking, remembering things, paying attention, or understanding things

Ask your care team about the management of neurologic problems, and tell your healthcare provider right away if you develop any signs or symptoms of neurologic problems at any time during your treatment. For certain bispecifics, you should be hospitalized for close monitoring during the step-up dosing schedule due to the risk of neurologic problems.

Nurse View

Side Effects: Neurologic Problems



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Patient View

Patients May Ask:

- How symptoms can be managed
- How to monitor for signs and symptoms after administration

Discussion Point:

It's important that you immediately seek medical attention if you experience any signs and symptoms of neurological problems.

Q&A:

Q: What activities should patients avoid when receiving a bispecific?

A: Due to the risks of developing neurologic problems, advise patients that they should not drive, operate heavy machinery, or do other dangerous activities during and for 48 hours after the step-up dosing schedule is completed or at any time during treatment if they develop any new neurologic symptoms.

Patient View

Side Effects: Infections

Bispecifics can cause infections that can be severe, life-threatening, or may lead to death.

Signs and symptoms of infections may include:

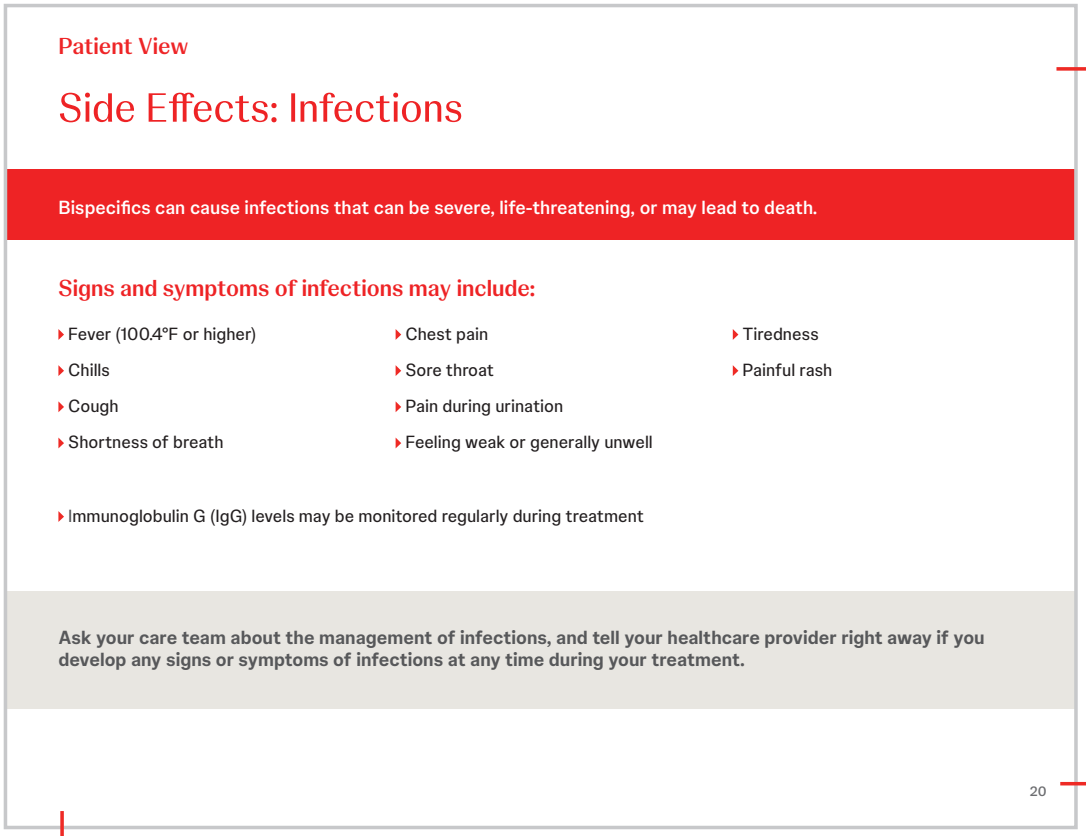
- Fever (100.4°F or higher)
- Chills
- Cough
- Shortness of breath
- Chest pain
- Sore throat
- Pain during urination
- Feeling weak or generally unwell
- Tiredness
- Painful rash

- Immunoglobulin G (IgG) levels may be monitored regularly during treatment

Ask your care team about the management of infections, and tell your healthcare provider right away if you develop any signs or symptoms of infections at any time during your treatment.

Nurse View

Side Effects: Infections



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Patient View

Patients May Ask:

- How long will an infection last?
- What is the most common type of infection?

Discussion Point:

Discuss with the patient the importance of contacting their healthcare provider right away if they develop any signs or symptoms of an infection during treatment.

Q&A:

Q: Will I have to receive any immunizations before going on bispecific therapy?

A: Your healthcare team can discuss your options with you. They may or may not recommend immunizations, depending on your situation.

Patient View

Other Possible Side Effects of Bispecifics

This list was developed based on some of the most common side effects listed in the Medication Guides of marketed bispecifics.*

Each bispecific can have additional unique side effects, which you will discuss with your care team.

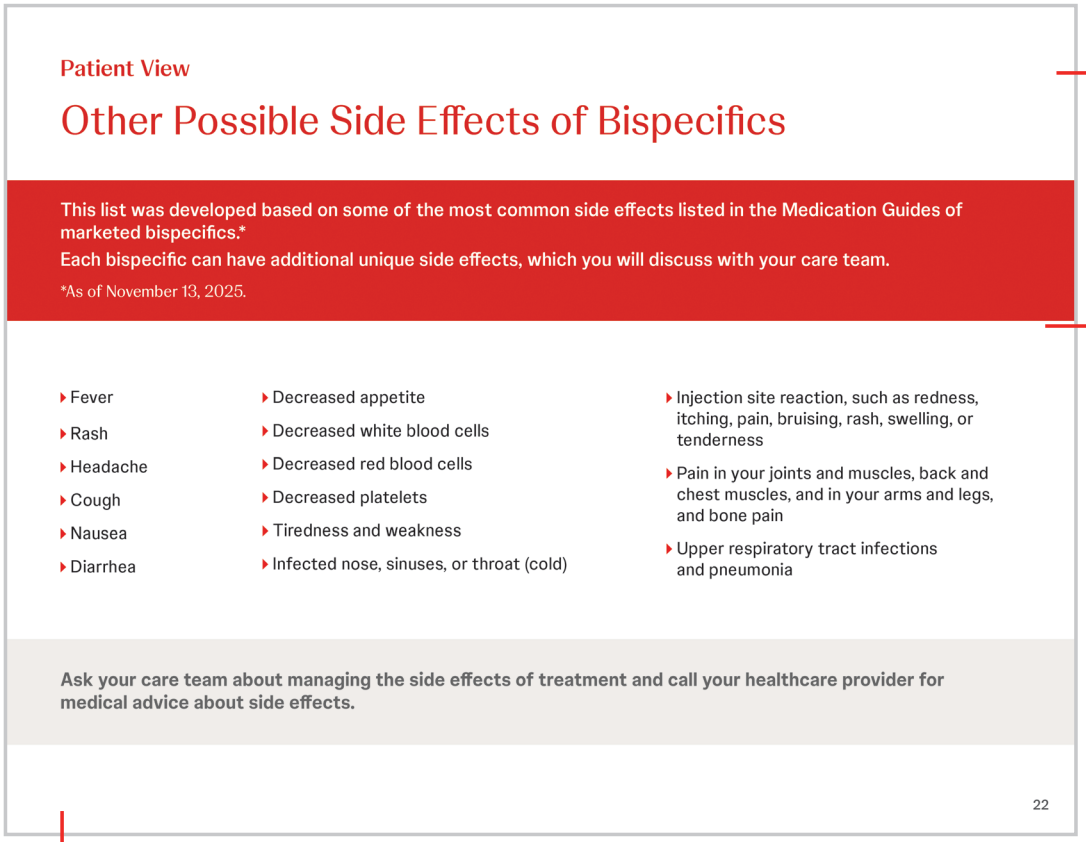
*As of November 13, 2025.

- Fever
- Rash
- Headache
- Cough
- Nausea
- Diarrhea
- Decreased appetite
- Decreased white blood cells
- Decreased red blood cells
- Decreased platelets
- Tiredness and weakness
- Infected nose, sinuses, or throat (cold)
- Injection site reaction, such as redness, itching, pain, bruising, rash, swelling, or tenderness
- Pain in your joints and muscles, back and chest muscles, and in your arms and legs, and bone pain
- Upper respiratory tract infections and pneumonia

Ask your care team about managing the side effects of treatment and call your healthcare provider for medical advice about side effects.

Nurse View

Other Possible Side Effects of Bispecifics



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Patient View

Discussion Point:

Discuss with the patient how these side effects can be managed.

Q&A:

Q: Could these side effects alter my course of treatment?

A: Your healthcare provider will closely monitor you for side effects during treatment. Some patients may need to temporarily stop or completely stop treatment based on side effects.

Patients May Ask:

- Which side effects are most common?
- Could I experience more than one side effect at a time?

Get the Support You Deserve

- Think about which aspects of the treatment journey are most important to you
- Bring any questions that you may have to your care team
- Talk to your provider about bispecific options that are available and if they may be right for you
- Make sure you utilize the advocacy groups and patient support programs that manufacturers provide

If you would like to receive personalized communications about your current disease and/or J&J medications that help treat it, please scan this QR code to tell us about yourself and consent and opt-in to receive emails from My Myeloma Journey.

Data rates may apply.

Nurse View

Get the Support You Deserve

Patient View

Discussion Point:

Discuss the importance of understanding multiple myeloma and the treatment options available, as well as sharing questions and concerns with the healthcare provider.

This journey should be a shared experience that results in a clearly communicated treatment plan for the patient.

Response to Treatment

Response refers to how well the multiple myeloma cells in your body are being controlled by therapy.

Your response to RRMM treatment will be evaluated and classified in one of the following response categories:

Stringent Complete Response (sCR)

A treatment outcome where there are no detectable plasma cells in the bone marrow or myeloma proteins in the blood or urine using very sensitive techniques.

Complete Response (CR)

A treatment outcome where there are ≤5% plasma cells in the bone marrow and no evidence of myeloma proteins in the blood or urine as measured by standard laboratory techniques.

Very Good Partial Response (VGPR)

Treatment outcome in which there is a greater than 90% decrease in M protein in the blood.

Partial Response (PR)

Treatment outcome where there is a greater than 50% decrease in M protein in blood and disappearance of some (but not all) signs and symptoms of cancer.

RRMM Glossary

Bispecific antibody – A monoclonal antibody that can simultaneously bind to two different cell surface proteins.

Cytokine release syndrome (CRS) – A condition that can occur after some types of immunotherapy treatment such as treatment with bispecifics. CRS is caused by the rapid release of cytokines into the blood from immune cells affected by the immunotherapy. Cytokines are immune substances that have many different purposes in the body. Most patients have a mild reaction, but sometimes the reaction may be severe or life-threatening.

Cytokines – Proteins that help guide immune response and help control inflammation in the body.

Immune system – Network of related cells, tissues, and organs that protect the body from disease organisms, other foreign bodies, and cancers.

Intravenous – Refers to giving medicines or fluids through a needle or tube inserted into a vein.

Neurologic problems – A side effect of some immunotherapies that may be attributed to the release of cytokines.

Relapsed disease – Myeloma that progresses after initially responding to therapy.

Relapsed or refractory multiple myeloma (RRMM) – A patient is diagnosed with RRMM when their myeloma progressed after initially responding to therapy (relapsed) and/or stopped responding to treatment (refractory).

Step-up dosing – A gradual dose increase given to a patient before they receive the full treatment dose. This is often done to reduce the risk of side effects.

Subcutaneous injection – An injection given under the skin, usually on the upper arm, thigh, or abdomen.

T-cell – A type of white blood cell also referred to as a T-lymphocyte. T-cells help your immune system fight germs and protect you from disease.

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