



Blinatumomab (Blincyto®)

Pronounced: blin-a-too-moo-mab

Classification: Bispecific T Cell Engager

About Blinatumomab (Blincyto®)

Blinatumomab is a type of medication called a bispecific T-cell engager (BiTE) antibody. This works by directing the body's T cells (part of the immune system) to target and destroy cells that have the CD19 protein on their surface. CD19 is found on the surface of B-cell leukemias and lymphomas.

How to Take Blinatumomab

Blinatumomab is given by continuous intravenous (IV, into a vein) infusion, over 24 hours a day. The number of cycles you receive will be determined by your provider. There are times you will have to be cared for in the hospital while receiving this medication, such as when you first start the medication, if you are having side effects that can't be managed at home, or if there is a change in the dose you are receiving. You will be given a steroid (dexamethasone) before you start treatment and as needed.

When you are able to tolerate this medication at home, you will have a home care nurse to help manage administration. You should have contact information about who to call should your infusion pump alarm at any time of day. It is important to follow the directions given to you by your home care nurse and provider regarding how you should manage the pump while you are at home. You should not change any settings or try to fix any issues with the pump.

While receiving this medication, you should not drive, operate heavy machinery or do any dangerous activities because of the risk of neurologic side effects. You also should not receive certain vaccines while taking this medication. Ask your care provider which vaccines are safe for you to receive and when you should get them.

Possible Side Effects

There are a number of things you can do to manage the side effects of blinatumomab. Talk to your care team about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

Cytokine Release Syndrome or Infusion Reactions

Cytokine release syndrome (CRS) can occur. T cells are activated by the medication prior to being destroyed, causing them to release many cytokines. The cytokines cause an inflammatory response in the body – similar to if the body had a severe infection. This reaction, if left untreated, can be very dangerous. Your care team will monitor you closely for CRS or an allergic reaction. During the infusion, if you experience difficulty breathing or swallowing, facial swelling, experience chest pain, "racing" heart, cough or wheezing, develop flushing, hives or rash, nausea or vomiting, lightheadedness, headache, fever, chills, or shakes, inform your nurse immediately. Additional medications may be given to alleviate your discomfort.

Neurologic Problems

Patients can experience serious neurologic complications, which can occur at any time, even a week or more into the infusion. These include seizures, confusion, disorientation, difficulty speaking or slurred speech, loss of balance, and loss of consciousness. Notify your care team right away if you develop any neurologic changes. Because of these possible side effects you should not drive or operate heavy machinery.

Infection and Low White Blood Cell Count (Leukopenia or Neutropenia)

This medication can cause life threatening infections, with or without a decrease in white blood cell counts.

White blood cells (WBC) are important for fighting infection. While receiving treatment, your **WBC count can drop**, putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4°F or 38°C), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

Tips to preventing infection:

- **Washing hands**, both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent **mouth care**.
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with, has any vaccinations.

Allergic Reactions

In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include: shortness of breath or difficulty breathing, chest pain, rash, flushing or itching or a decrease in blood pressure. If you notice any changes in how you feel during the infusion, let your nurse know immediately.

Low Red Blood Cell Count (Anemia)

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the **red cell count is low**, you may feel tired or weak. You should let your oncology care team know if you experience any shortness of breath, difficulty breathing or pain in your chest. If the count gets too low, you may receive a blood transfusion.

Headache

Your healthcare provider can recommend medications and other strategies to help relieve pain.

Low Platelet Count (Thrombocytopenia)

Platelets help your blood clot, so when the **count is low** you are at a higher risk of bleeding. Let your oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib) etc. as these can all increase the risk of bleeding. Please consult with your healthcare team regarding use of these agents and all over the counter medications/supplements while on therapy.
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

Less common, but important side effects can include:

- **Pancreatitis:** This medication can cause inflammation of the pancreas. Notify your care provider if you have bloating, indigestion, fatty stools, loss of appetite, sweating, abdominal pain, or weight loss.
- **Tumor Lysis Syndrome:** If there are a large amount of tumor cells in your body prior to treatment, you are at risk for tumor lysis syndrome. This happens when the tumor cells die too quickly and their waste overwhelms the body. You may be given a medication (allopurinol) and IV fluids to help prevent this. If you experience nausea, vomiting, diarrhea or become lethargic (drowsy, sluggish), notify your oncology team right away. TLS can affect your kidney function. Your provider will

monitor your kidney function with blood work. Notify your provider if you have little or no urine output.

- **Liver Toxicity:** This medication can cause liver toxicity, which your oncology care team may monitor for using blood tests called liver function tests. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown, or you have pain in your abdomen, as these can be signs of liver toxicity.

Reproductive Concerns

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment and for 48 hours after your last dose finishes. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should not breastfeed while receiving this medication.

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