

Side Effects of CAR T-Cell Therapy

What is CAR T-Cell therapy?

Chimeric antigen receptor (CAR) T-cell therapy is a treatment for some types of leukemia and non-Hodgkin lymphoma—two kinds of blood cancer. T cells are part of your immune system.

Leukapheresis is the process in CAR T-cell therapy that removes T cells from your blood. The cells are then genetically engineered. You get the CAR T cells back through an infusion into a vein. The CAR T cells find, attack, and kill the cancer cells in your body.

Side Effects of CAR T-Cell Therapy

CAR T-cell therapy can have serious side effects. These can appear days or weeks after infusion. Your transplant team will watch for them and may give you medicine to help. It's important that you and your caregivers know the signs of these side effects. Treating the side effects early can help you recover. You may need to stay in the hospital to treat the side effects.

Cytokine Release Syndrome (CRS)

Cytokine Release Syndrome (CRS) is the most common side effect of CAR T therapy. When the CAR T cells grow rapidly and become activated, they can release proteins called cytokines. Release of large amounts of certain cytokines can cause a "cytokine release syndrome" that can result in mild, moderate or severe reactions. It typically occurs between 1 and 30 days after your CAR T infusion, with the median time to onset being 2-3 days. CRS may go away quickly or last weeks.

Infections

Severe or life-threatening infections can happen after CAR T-cell therapy. For this reason, our doctors closely monitor patients receiving CAR T-cell therapy. Our care team can help treat any possible infections that may occur from this treatment. If you are concerned you have developed an infection contact your doctor right away.

Mental Changes

CAR T cells can cause temporary changes in your brain. These changes can make you feel and act differently.

This can happen within the 8 weeks after your infusion. The changes may last for days or weeks. They usually go away on their own with no long-term problems.

Graft-versus-Host Disease

If you had an allogeneic stem cell transplant and get CAR T cells from a donor, you have a risk to get graft-versus-host disease (GVHD). GVHD can affect your skin, liver, and gastrointestinal (GI) tract. Signs of GVHD can appear days, months, or years after your CAR T-cell therapy.

Side Effects to Watch For

The people closest to you are often the first to notice any changes. It is important to call your care team right away if you have any of the signs below.

You may have different side effects than those listed below. Talk to your care team right away if you have questions or concerns.

Signs of CRS or Infection

- Bleeding
- Body aches, chills, or shivering
- Fever of 100.4°F or greater
- Fast or irregular heartbeat
- Hard time breathing
- Sore throat or coughing
- Nausea, vomiting, or diarrhea
- Pain when urinating
- Dizziness
- Rash, red, or swollen place on the body

Signs of Mental Changes

- Anxiety
- Confusion
- Hard time sleeping
- Hard time speaking
- Feeling very tired or weak
- Dizziness
- Hallucinations
- Headache
- Seizures
- Uncontrollable shaking

Signs of Graft-versus-Host Disease

- Rash
- Diarrhea
- Yellowing of skin or eyes

To watch for signs of mental changes, write the date, your name and birthdate in the form on the next page once a day. Call your care team right away if you have trouble with this task.

Call immediately if you experience side effects or have concerns:

Nurse lines:

Monday–Friday, 8 a.m.–5 p.m.

Multiple Myeloma diagnosis: 801-587-4687

All other diagnoses: 801-587-4686

Weekdays after 5p.m., weekends and holidays:

801-587-7000-- ask for BMT hospitalist

You will be given a Patient Wallet Card. Carry this with you at all times. Present the card if you are admitted to the ED or seen by a physician other than your CAR T-cell provider.