

CAR T-Cell Therapy Basics

A possible treatment option
for blood cancers



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Jason Carter

Clinical Trials Search and Support

What is CAR T-cell therapy?

CAR T cells treat some cancers using gene therapy. This treatment helps your own immune system find and destroy cancer cells.

CAR T cells are unique because they:

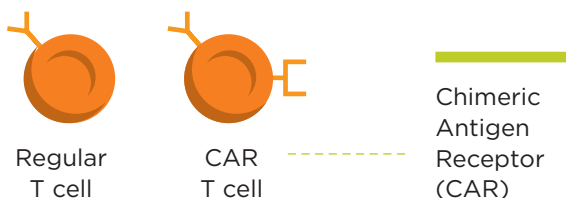
- Can be programmed to target and attack specific cancer cells.
- Help overcome the resistance that cancer cells may develop to other standard treatments.
- May stay in your body up to several years and keep fighting cancer cells.

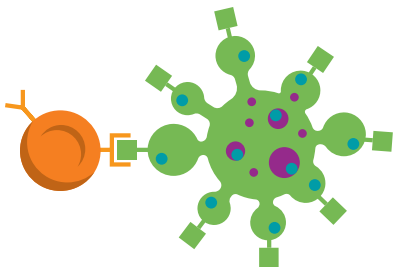
How are CAR T cells made?

T cells are a type of immune cell in your blood. Your T cells are collected from your bloodstream through a process called apheresis. This process is similar to donating blood and takes a few hours in the clinic.

Then, your T cells are sent to a lab to be treated with gene therapy. Your T cells' genes are reprogrammed so that they make special proteins called CARs. CAR stands for **C**himeric **A**ntigen **R**eceptor. The CAR T cells are grown in a lab until there are millions of them. During this time you'll be at home or getting other treatments.

The CARs on the surface of your T cells help them find the cancer cells. While normal T cells may not be able to see cancer cells, once in your body, the CAR T cells will multiply, find and destroy cancer cells.





A CAR T cell attaching to a cancer cell.

What is the treatment like?

About 1-2 weeks before the CAR T cells are given to you, you'll go to the clinic or hospital to get standard chemotherapy infusions. These drugs are given to remove your regular T cells to make room for the CAR T cells.

You'll be in the hospital or clinic on the day of your CAR T-cell infusion. The infusion takes about an hour. You'll be closely monitored for several hours afterwards. You'll go home if the doctors think you're doing well enough.

Most people need bone marrow biopsies over the next few weeks to monitor how the treatment is working. You may even get more infusions of CAR T cells. Doctors will continue to monitor your health for many years.



CAR T cells are given through an intravenous (IV) infusion.

What are the risks?

There are serious potential side effects from CAR T cells. Your doctor will watch you closely for new symptoms and treat you right away.

- **Cytokine release syndrome (CRS)**

- The CAR T cells attack cancer cells, and in response your body releases chemical signals called cytokines. Cytokines cause a strong immune reaction, similar to a severe allergy or serious infection.
- CRS can happen anytime during the first few weeks after treatment. Most people have some CRS and it ranges from mild to life-threatening. Some signs of CRS include fevers, chills, sore throat, headaches, rash and worsening fatigue.

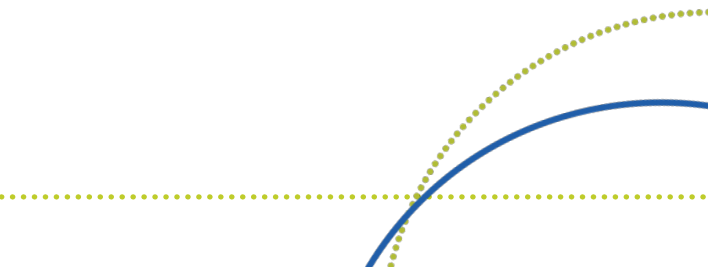
- **Neurotoxicity**

CAR T-cell therapy can affect your brain. Some people have had seizures, confusion or forgetfulness after CAR T-cell infusions. You may also hear your doctor refer to this as Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS).

Call your doctor right away if you have any signs of CRS or mental changes. You may need to go back to the hospital so the doctors can watch you closely, even if your symptoms are mild.

Could CAR T-cell therapy help me?

CAR T cells are primarily for people who have had other standard treatments, like chemo or transplant, but the disease has come back or didn't get better.



How can I get CAR T-cell therapy?

CAR T-cell therapy is available at some large academic hospitals. It's been approved by the Food and Drug Administration (FDA) to treat some blood cancers. But, it's still only available through a clinical trial to treat many diseases.

What does it cost?

The FDA approved CAR T-cell therapies are very expensive. Your care team can work with your health insurance company to make sure you have the appropriate coverage.

If you're part of a CAR T-cell clinical trial, you typically won't pay for the CAR T-cell part of the trial. But, it's important to check with your insurance company to see what other costs you may have to pay.

Questions to ask

Ask your doctor questions to help you decide if CAR T-cell therapy is right for you. Some questions you might ask include:

- Is CAR T-cell therapy the best option for me?
- Would this be a clinical trial, or is this an FDA approved CAR T-cell therapy?
- What are the risks for this treatment? What problems have other people who've gotten this treatment had? How well has this worked for other people?
- Will I need to be in the hospital? If so, for how long?
- Will my insurance cover the costs of this treatment? If not, will a clinical trial pay for the costs?

If your doctor doesn't know the answers, they can refer you to a CAR T-cell specialist.

Every individual's medical situation, transplant experience and recovery is unique. You should always consult with your own transplant team or family doctor regarding your situation. This information is not intended to replace, and should not replace, a doctor's medical judgment or advice.

Get help finding CAR T-cell clinical trials

Finding the right clinical trial for you or your loved one can be challenging. We can help.



BRENNA O'BRIEN,
MPH, RN, ONN-CG

Clinical Trials Navigator

We offer:

- One-on-one support for you and your family
- A simple search tool to find CAR T-cell clinical trials in the U.S. that are recruiting patients
- Resources to help you learn about and find CAR T-cell clinical trials
- Access to financial help for eligible patients with clinical trial travel expenses

Find CAR T-cell therapy clinical trials:

Call: [1 \(888\) 814-8610](tel:18888148610)

Email: contact@ctsearchsupport.org

Learn: CTSearchSupport.org

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Clinical Trials Search and Support

At every step, we're here to help

The Be The Match® Patient Support Center offers free one-on-one support, information and resources for you and your loved ones from diagnosis through survivorship.

Get support:

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