

CAR T-Cell Therapy





Eligibility

Currently, CAR T-cell therapy is FDA approved as standard of care for some forms of aggressive, refractory non-Hodgkin lymphoma and for certain other blood cancers.

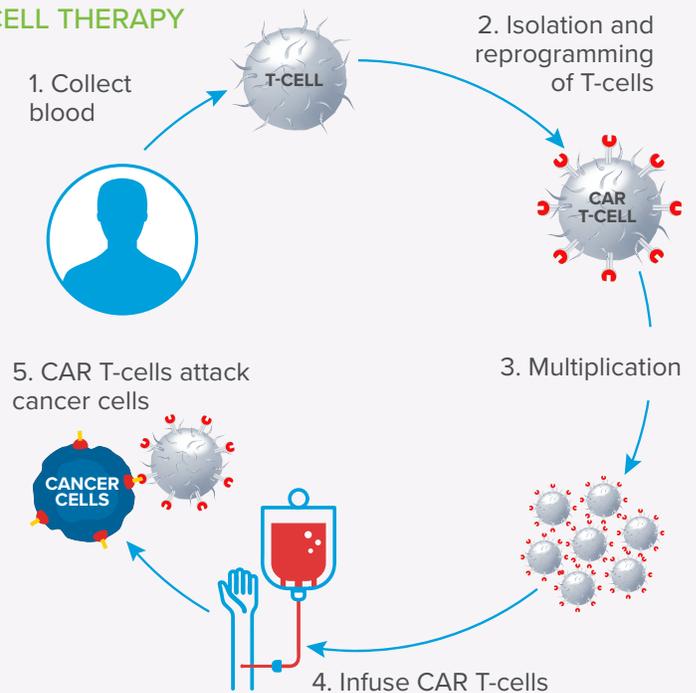
There are also many ongoing trials of CAR T-cell therapy for additional forms of blood cancer. Physicians can refer to our center for evaluation for CAR T-cell therapy. All patients must have a physician referral.

To learn more about this treatment, call 407-303-2070 or visit AdventHealthCancerInstitute.com/BMT

CAR T-Cell Therapy

Chimeric antigen receptor T-cell (CAR T-cell) therapy is a cancer treatment that uses a patient's own T-cells (a type of immune system cell) to fight the disease. CAR T-cells are made by removing white blood cells from a patient, genetically modifying them using a deactivated virus, and then infusing the modified cells back into the patient's bloodstream. The modification of the CAR T-cells causes them to attack cancer cells.

CAR T-CELL THERAPY



The Treatment Process

T-cells are called “the workhorses of the immune system” because of their critical role in the immune response. During CAR T-cell therapy:

- The patient’s blood is drawn.
- T-cells are separated from blood in the lab.
- The patient’s T-cells are genetically modified and multiplied to produce chimeric antigen receptors (CARs), allowing the T-cells to recognize and attach to a specific protein, or antigen, on tumor cells.
- All patients receive low-intensity chemotherapy shortly before CAR T-cell infusion. This helps to create space in the immune system for the infused CAR T-cells to expand and proliferate. Soon after chemotherapy, the patient will be admitted to the hospital and the CAR T-cells will be re-infused in a process similar to a blood transfusion. This is a one-time infusion, although the patient may remain in the hospital for several weeks to monitor the response to treatment, overall condition, and side effects.
- During the first 30 days after discharge from the hospital, the patient will be asked to remain close to our center for regular follow-up care. A resource specialist can assist in arranging for a place to stay during this time, if needed.
- During the first 2-3 months following the re-infusion, the patient will be evaluated for side effects and treatment response.

Possible Side Effects

Although most patients undergoing CAR T-cell therapy do not experience the common side effects associated with chemotherapy such as hair loss, nausea, and vomiting, there are risks of other side effects with CAR T-cell therapy. After re-infusion, some patients may stay in the hospital for up to several weeks so our care team can monitor response to the treatment.

Complications are generally temporary and resolve with treatment. Our care team is specially trained to identify and manage these side effects.

Possible side effects from CAR T-cell therapy include:

- Cytokine release syndrome: CAR T-cells can cause a release of substances in the body called cytokines, which could trigger an inflammatory condition known as cytokine-release syndrome (CRS). Symptoms may be flu-like, with a high fever and/or chills; low blood pressure; difficulty breathing; or confusion. These symptoms can be mild or severe.
- Neurologic difficulties: Patients may also experience confusion, difficulty understanding language and speaking, or stupor.
- Low blood cell counts: Patients may need blood or platelet transfusions, medicines to stimulate blood cell production, or medicine to prevent infection, but this depends on each individual case.
- Other: While patients do not suffer hair loss, they can experience nausea, vomiting and severe fatigue.





Cancer Institute

Blood and Marrow Transplant Program
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