Engineering Facility, proved that this approach can be effective against some blood cancers and are investigating its use in other cancers.

CAR T cell therapy involves removing immune cells called T cells from the blood and introducing a new gene into those cells that enables them to recognize the cancer. After the gene is inserted, the T cells are infused back into the bloodstream, where they multiply and initiate a variety of immune responses aimed at attacking the cancer cells.

CAR T cell therapy is used to treat certain kinds of lymphoma, pediatric leukemia, and adult leukemia. It is also being investigated for the treatment of other cancers, including some solid tumors that appear in the chest.

Patients Receiving CAR T Cell Therapy

We usually only recommend CAR T cell therapy if chemotherapy has not been sufficiently effective and the disease has returned or if you've developed resistance to your initial treatment.

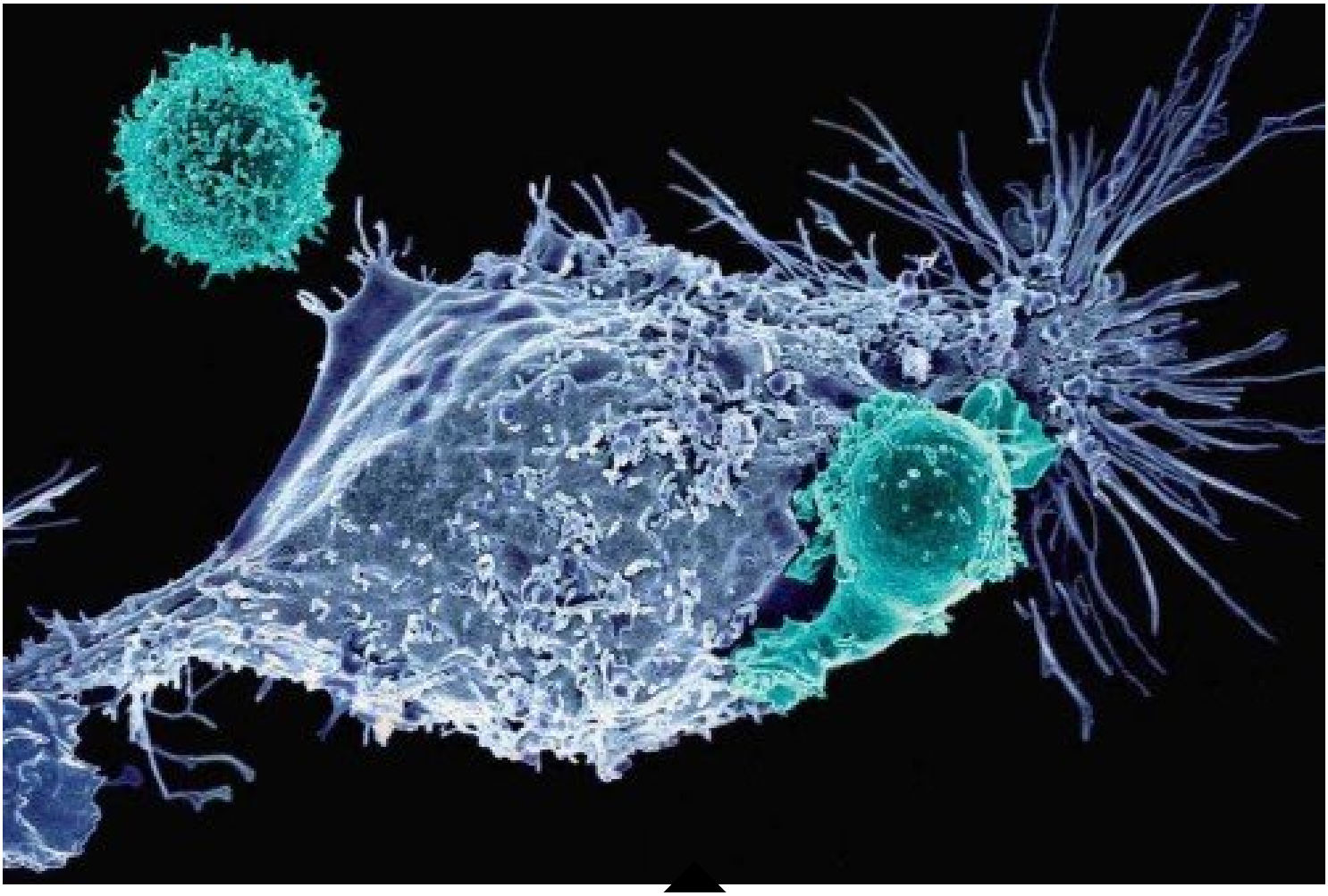
CAR T cell therapy involves several steps. First, your blood will be run through a specialized machine that extracts T cells and returns the rest of the blood to your body. This process is painless — similar to donating blood — but takes several hours.

After the T cells have been collected, you'll receive what is called "salvage" chemotherapy to bring the disease temporarily under control. You'll remain in the hospital during this period, usually for several weeks, while the T cells that were removed from you are genetically modified to recognize the cancer cells and then expanded in number to be effective against the disease.

The modified T cells are then infused back into your body (usually done over a two-day period for 45 minutes a day). After the infusion, our doctors will monitor you closely in the following days for side effects and to ensure that your condition is stable before discharging you to go home.

Once your cancer is in remission, we may recommend that you have a stem cell transplant (also called a bone marrow transplant), depending on your condition. In a stem cell transplant, blood-forming stem cells are replaced by infusing new ones into your bloodstream. The aim of the transplant is to cure your disease, and we're able to achieve excellent results for our patients.

Call 1-888-MSK-CART to learn more about treatment for certain blood cancers.



What is CAR T?

Explore how MSK scientists and clinicians are using an immunotherapy called chimeric antigen receptor (CAR) T cell therapy to beat cancer.

Learn more

PREVIOUS

Immune Checkpoint Inhibitor Cancer Treatment

NEXT

Cancer Vaccines: The Types, How They Work, and Which Cancers They Treat