

CAR-T for More Cancers

Customized treatments demonstrate good response rates for mantle cell lymphoma and chronic lymphocytic leukemia.

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Chimeric antigen receptor T-cell therapy, better known as CAR-T, reprograms patients' T cells to attack their cancer. The first two CAR-Ts were approved in 2017 to treat children with acute lymphoblastic leukemia and adults with large B-cell lymphoma (see "[Pioneering Patient](#)"). But the customized immunotherapy holds promise for more types of blood cancer, researchers reported at the American Society of Hematology Annual Meeting in December.

The experimental CAR-T liso-cel led to cancer regression in 82% of study participants with previously treated chronic lymphocytic leukemia in a Phase I/II trial. Liso-cel also shows promise for large B-cell lymphoma and appears safe for people treated as outpatients, suggesting it may not have to be administered in a hospital.

In the Phase II ZUMA-2 study of KTE-X19, a CAR-T candidate for mantle cell lymphoma, 93% of patients saw their tumors shrink, including 67% with complete responses. Kite, a Gilead company, has submitted an application for Food and Drug Administration approval.

Finally, two dual-target CAR-Ts produced good response rates in people with relapsed or nonresponsive multiple myeloma. JNJ-4528 uses two synthetic receptors to target the BCMA antigen on myeloma cells. In the Phase I/II CARTITUDE-1 study, all of the first 29 participants experienced cancer regression, yielding an overall response rate of 100%. A CAR-T dubbed BM38, which targets both BCMA and the CD38 receptor on myeloma cells, had a response rate of 90%.

"To see some patients in this heavily pretreated population surviving for a year or more with a one-time treatment and a manageable safety profile is remarkable," said CARTITUDE-1 lead investigator Deepu Madduri, MD, of the Tisch Cancer Institute at Mount Sinai in New York City. "These patients feel that they have their quality of life back."