UC San Diego
UC San Diego News Center

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UC San Diego Health is First in San Diego to offer CAR T-cell Therapy for Some Cancers

Following the Food and Drug Administration's approval of chimeric antigen receptor (CAR) T-cell therapies for the treatment of certain types of non-Hodgkin lymphomas, UC San Diego Health was the first medical center in San Diego to be certified to offer this type of immunotherapy outside of a clinical trial.

Lawrence Gediman was treated successfully with CAR T-cell therapy for stage III diffuse large B-cell lymphoma and has been in remission for 18 months.
Photo credit: Lawrence Gediman

UC San Diego Health has a strong tradition of advancing personalized cancer therapies and is one of a select number of medical centers involved in the clinical studies that established the effectiveness of CAR T-cell therapy in this patient population.

"We have a team of physicians who have already treated clinical trial patients with this therapy and the responses we have seen give us hope that CAR T-cell therapy can help a select group of people get disease remission, at least for some time," said Edward Ball, MD, director of the Blood and Marrow Transplant Program, who treats individuals with blood-related cancers and who has been leading these trials.

Lawrence Gediman, 53, is one of those people. In 2016, Gediman was diagnosed with stage III diffuse large B-cell lymphoma, the most common subtype of non-Hodgkin lymphoma. In one year, he was treated with four different chemotherapies, but none pushed his lymphoma into remission.

"My doctors wanted me to get a blood and marrow transplant, but I couldn't qualify because I couldn't get healthy enough to force my cancer into remission. I just kept getting sicker," said Gediman.

It was then that a CAR T-cell therapy clinical trial offering axicabtagene ciloleucel (Yescarta) opened at UC San Diego Health. Gediman enrolled and a month later he was in remission.

“I underwent a PET (positron emission tomography) scan and it showed complete remission,” said Gediman, who has remained in remission for 18 months. “I was amazed — overjoyed. I had already been through so many treatments and scans that were unsuccessful. Seeing these results was a miracle to me.”

CAR T-cell therapy involves genetically modifying a patient's T-cells (white blood cells) to recognize a specific protein (antigen) found on tumor cells and kill them.

Most of the 11 patients treated with CAR T-cell therapy through clinical trials at UC San Diego Health thus far have seen their disease go into remission for at least six months, said Ball. But he cautions that not all patients will experience a long disease-free survival and some may still require a blood or marrow stem cell transplant.

Approximately 40 percent of patients treated with CAR T-cell therapy are in remission for at least one year, according to Ball. Because the treatment is relatively new, typical length of remission remains unknown.

“Patients receiving this therapy are often quite sick and have no other option,” said Ball. “For people who have had no response to chemotherapy or who have had an aggressive recurrence of their cancer, this is the next step.”

Only 10 percent of people with lymphoma will meet the requirements necessary to receive CAR T-cell therapy, but those who do not qualify may be candidates for other therapies or clinical trials, said Ball.

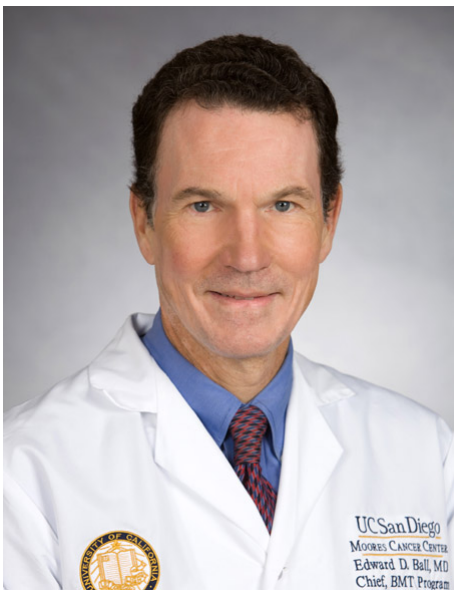
UC San Diego Health currently has clinical trials open for CAR T-cell therapy of non-Hodgkin lymphoma, multiple myeloma, acute lymphoblastic leukemia and chronic lymphocytic leukemia. UC San Diego Health provides cancer care at multiple locations through San Diego, including Moores Cancer Center, San Diego’s only National Cancer Institute-designated Comprehensive Cancer Center, giving patients access to more than 170 clinical trials.

During his earlier chemotherapies, each round of treatment left Gediman feeling more depleted. He was forced to take medical leave from his job as a special education teacher. At times, he could barely walk to the end of his block. He spent most of his time on bed rest, dreaming of being able to walk again.

“Walking and hiking are among the things I missed most,” said Gediman. “During chemo, I would try walking and I would build up to 15 to 20, minutes then chemo would knock me down. But walking is what got me through it.”

Then came CAR T-cell therapy. Gediman had a blood draw through a process called leukapheresis which separates lymphocytes, a type of white blood cell or T-cell. In a lab, the T-cells were engineered to recognize his particular cancer cells and multiplied. After three days of a mild chemotherapy to reduce the number of cancer cells in his body, Gediman received an infusion of his re-engineered and multiplied T-cells.

Gediman spent two weeks on the sixth floor of Jacobs Medical Center at UC San Diego Health, specially designed for immunocompromised patients. There, he was monitored for side effects of treatment.



Edward Ball, MD, director of the UC San Diego Health Blood and Marrow Transplant Program, has been leading clinical trials for CAR T-cell therapy and is now treating individuals with blood-related cancers with this immunotherapy.

“Chemotherapy was a rollercoaster that was much tougher than CAR-T,” said Gediman. “I wish I had the option to do CAR T-cell therapy first. With CAR-T, I had an initial reaction but then I got progressively better. Within a few months, I started to feel normal. I went back to work six months later and I started to build back up to walking three hours at a time.”

When school let out this past summer, Gediman was feeling well enough to tackle the Mission Trails Regional Park’s five-peak challenge in which hikers must summit all five mountains within the park. They have as much time as they want to complete the challenge.

Gediman completed it in two weeks. He did it in preparation for a much-anticipated family trip. Over the Thanksgiving break, Gediman joined his extended family to trek Yosemite National Park’s Mist Trail, a spectacular five-mile hike that meanders along the Merced River and climbs 2,000 feet along steep, rocky paths that lead adventure-seekers to postcard-worthy views of two grand waterfalls.

A visit to Yosemite has been a yearly family ritual for the Gediman family. It became a way of life, so much so that one of his brothers became an assistant superintendent at the renowned park and another brother held his wedding there.

“I love being outdoors,” said Gediman. “It gives you a sense of freedom and reprieve.”

For more information about CAR T-cell therapy visit health.ucsd.edu or call 858-822-6600.

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