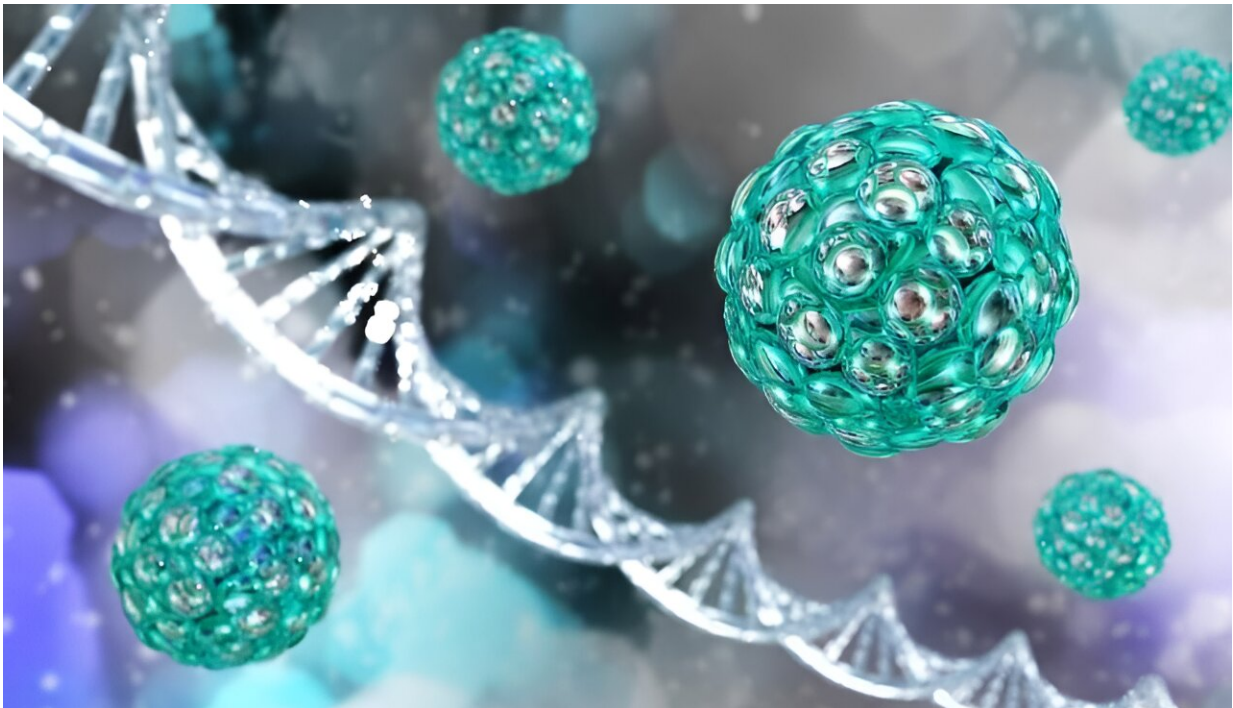


# CD7 CAR T-cell therapy, stem-cell transplant beneficial for CD7-positive tumors

April 25 2024, by Elana Gotkine

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For patients with relapsed or refractory CD7-positive leukemia or lymphoma, sequential CD7 chimeric antigen receptor (CAR) T-cell therapy followed by haploidentical hematopoietic stem-cell transplantation (HSCT) is safe and effective, with remission seen for most patients, according to a study published in the *New England*

*Journal of Medicine.*

Yongxian Hu, M.D., Ph.D., from the Zhejiang University School of Medicine in Hangzhou, China, and colleagues tested a novel all-in-one strategy comprising sequential CD7 CAR T-cell therapy and haploidentical HSCT in 10 patients with relapsed or refractory CD7-positive leukemia or lymphoma. Patients received haploidentical HSCT without pharmacologic myeloablation or graft-versus-host-disease (GVHD) prophylaxis drugs after CAR T-cell therapy led to complete remission with incomplete hematologic recovery.

The researchers found that all 10 patients had complete remission with incomplete hematologic recovery and grade 4 pancytopenia after CAR T-cell therapy. One patient died of septic shock and encephalitis on day 13 after haploidentical HSCT; eight patients had full donor chimerism, and one had autologous hematopoiesis. Grade 2 HSCT-associated acute GVHD occurred in three patients.

During a median of 15.1 months of follow-up after CAR T-cell therapy, six patients remained in minimal residual disease-negative complete [remission](#), two had CD7-negative leukemia relapse, and one died of [septic shock](#) (at 3.7 months). Estimated one-year overall survival and one-year disease-free survival were 68 and 54 percent, respectively.

"Our integrated strategy maximized antileukemic efficacy from both persisting CAR T cells and graft-versus-leukemia potential, providing a feasible approach for patients with relapsed or refractory CD7-positive cancers who are ineligible for conventional allogeneic HSCT," the authors write.

**More information:** Yongxian Hu et al, Sequential CD7 CAR T-Cell Therapy and Allogeneic HSCT without GVHD Prophylaxis, *New England Journal of Medicine* (2024). [DOI: 10.1056/NEJMoa2313812](https://doi.org/10.1056/NEJMoa2313812)

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