CAR-T Therapy Highly Effective for People with High-Risk Non-Hodgkin Lymphoma

Yescarta led to complete remission in people with advanced non-Hodgkin lymphoma.

December 8, 2020 By Dana-Farber Cancer Institute

A CAR T-cell therapy known as axicabtagene ciloleucel (axi-cel) [Yescarta] drove cancer cells to undetectable levels in nearly 80% of patients with advanced non-Hodgkin lymphoma (NHL) in a phase 2 clinical trial, Dana-Farber Cancer Institute investigators report at the virtual 62nd American Society of Hematology (ASH) Annual Meeting.

While NHL tends to be a slow-growing disease, patients frequently relapse after standard treatment, underscoring the need for new therapies. Axi-cel's effectiveness in trial participants who had either relapsed or become resistant to other drugs is especially encouraging, according to investigators.

"We were very impressed with the magnitude of the responses, and also the durability," said Dana-Farber's Caron Jacobson, MD, MMSc, who led the trial and will present the findings at ASH. "This treatment has meaningfully impacted high-risk patients with these diseases. I was also struck early on by how favorable the safety profile was compared to what we've been seeing in the fast-growing lymphomas."

Axi-cel is made by collecting some of a patient's disease-fighting T cells and genetically altering them to deploy a specialized receptor on their surface. The receptor enables the modified T cells – called chimeric antigen receptor, or CAR T cells – to latch onto cancer cells and destroy them. The CAR T cells are then infused into the patient. In previous trials in patients with large B cell lymphoma, the therapy reduced cancer cells below detectable levels, achieving a "complete response," in many patients.

In the current trial, dubbed ZUMA-5, investigators administered axi-cel to 146 patients with follicular lymphoma or marginal zone lymphoma – two slow-growing forms of non-Hodgkin leukemia – at multiple U.S. medical centers. All the participants had active lymphoma despite undergoing multiple previous treatments.

A median of 17.5 months after treatment with axi-cel, 92% of the trial participants had an

objective response – a detectable reduction in their cancer – and 76% had a complete response. At the cutoff date for data collection, responses continued in 62% of all treated patients.

Almost all patients experienced adverse side effects, with 86% experiencing adverse events of grade 3 or higher. Seven percent experienced grade 3 or higher cytokine release syndrome and 19% experienced grade 3 or higher neurologic events. Response rates were slightly higher and adverse effect rates were slightly lower for patients with follicular lymphoma than for those with marginal zone lymphoma.

Jacobson presented findings on this study at the “Advancing New Frontiers: Genome Editing & Cellular Therapy” press briefing on Saturday, Dec. 5, at 12:30 p.m. EST. Further details were presented during Session 623, Abstract 700, on Monday, Dec. 7 at 4:30 p.m. EST.

This press release was originally published on December 5, 2020, by Dana-Farber Cancer Institute. It is republished with permission.

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