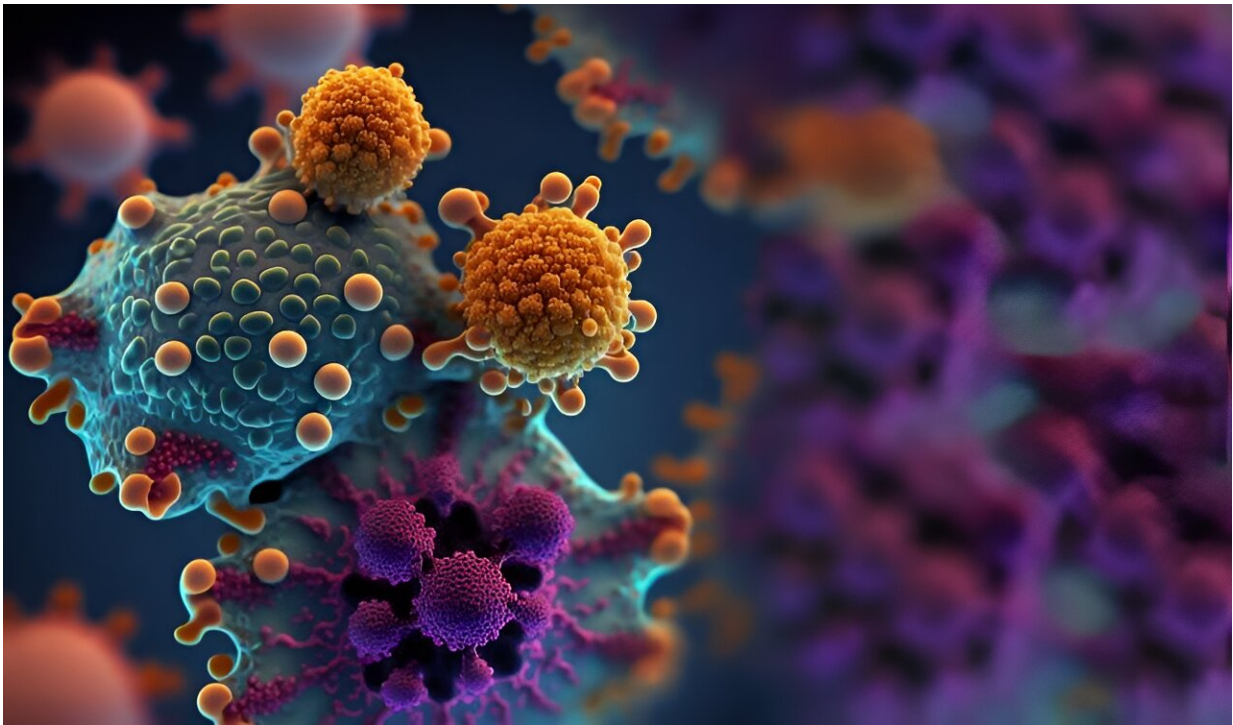


# CAR T-cell therapy appears to be feasible, safe for autoimmune diseases

February 22 2024, by Elana Gotkine

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CD19 chimeric antigen receptor (CAR) T-cell therapy seems feasible, safe, and efficacious for patients with different autoimmune diseases, according to a [study](#) published in the Feb. 22 issue of the *New England Journal of Medicine*.

Fabian Müller, M.D., from the Friedrich-Alexander University Erlangen-Nürnberg in Germany, and colleagues examined patients with severe systemic lupus erythematosus (SLE), idiopathic inflammatory myositis, or systemic sclerosis (eight, three, and four patients, respectively) who received a single infusion of CD19 CAR T-cells after fludarabine and cyclophosphamide preconditioning.

Efficacy was assessed up to two years after CAR T-cell infusion, measured using the Definition of Remission in SLE (DORIS) [remission](#) criteria, American College of Rheumatology-European League against Rheumatism (ACR-EULAR) major clinical response, and the score on the European Scleroderma Trials and Research Group (EUSTAR) activity index.

Patients were followed for a median of 15 months. The mean duration of B-cell aplasia was  $112 \pm 47$  days. The researchers found that all patients with SLE had DORIS remission, all patients with idiopathic inflammatory myositis had an ACR-EULAR major clinical response, and a reduction in the score on the EUSTAR activity index was seen for all patients with [systemic sclerosis](#). In all patients, immunosuppressive therapy was completely stopped. In 10 patients, grade 1 cytokine release syndrome occurred.

"Even though it is premature to judge whether these patients are indeed cured from their autoimmune disease, CD19 CAR T-cells at least appear to be able to achieve sustained disease- and drug-free remission," the authors write.

**More information:** Fabian Müller et al, CD19 CAR T-Cell Therapy in Autoimmune Disease—A Case Series with Follow-up, *New England Journal of Medicine* (2024). [DOI: 10.1056/NEJMoa2308917](https://doi.org/10.1056/NEJMoa2308917)

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