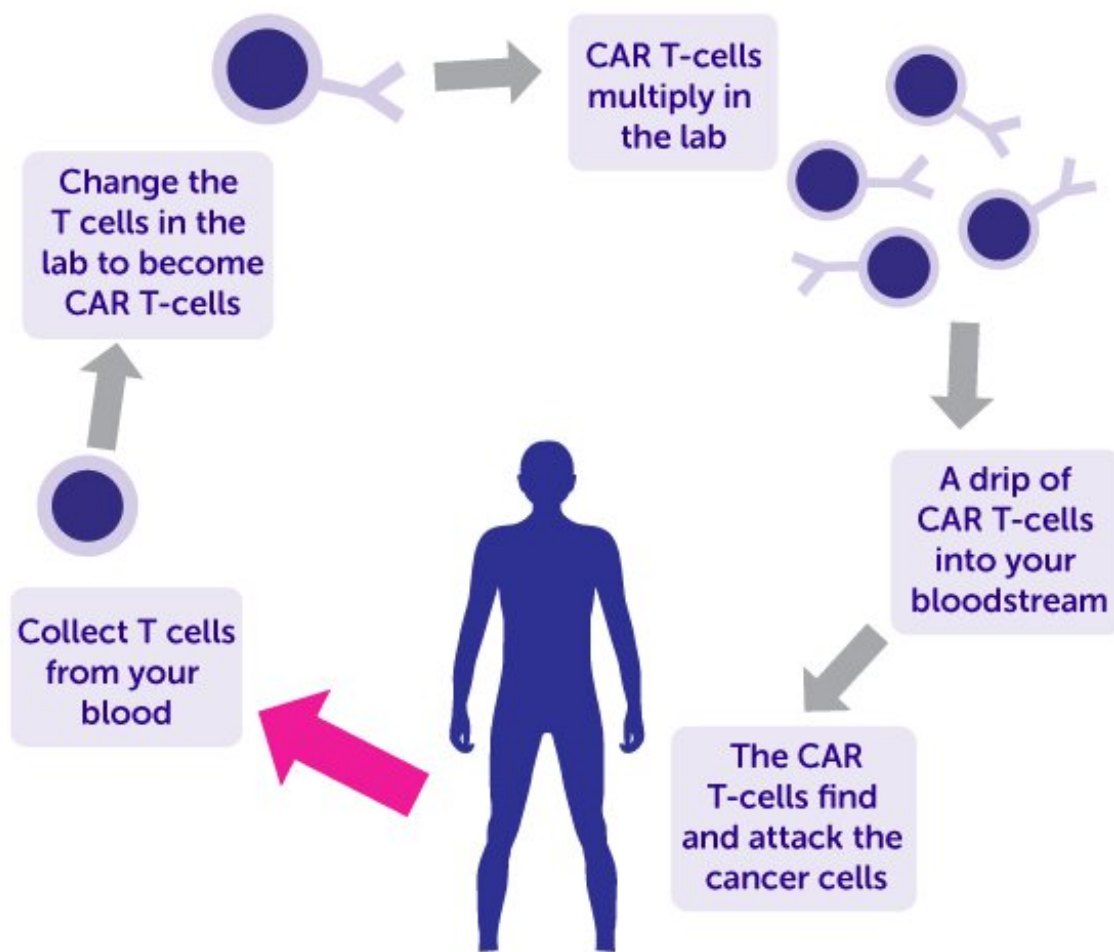


Scientists trial new way to boost CAR T-cell therapy

June 25 2021



Cancer Research UK

Diagram showing CAR T-cell therapy

Cancer Research UK is collaborating with [Aleta Biotherapeutics](#) (Aleta) to trial a new therapy that 'reboots' a treatment for some people with blood cancer whose cancer starts to come back.

The [new therapy](#), called ALETA-001, aims to boost a treatment called [CAR T-cell therapy](#), which takes some of a patient's immune cells and alters them to attack cancer.

Cancer Research UK's Center for Drug Development will fund, sponsor and conduct the clinical trial of ALETA-001, which will involve people with B cell lymphoma and leukemia.

Nigel Blackburn, Cancer Research UK's director of [drug development](#), said this is a landmark collaboration for Cancer Research UK.

"It's the first-in-human trial for a new drug that reboots CAR T-cell therapy, and we look forward to progress its early clinical development with Aleta."

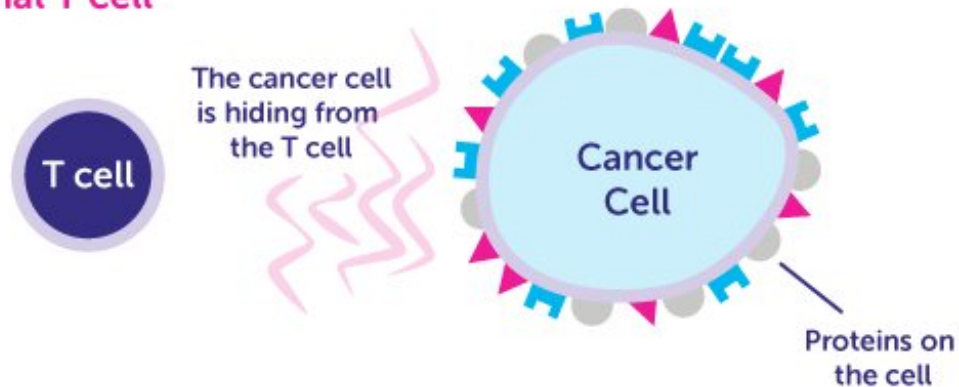
Rebooting CAR T-cell therapy

"CAR T-cell therapy has been [transformative in treating patients](#) with hard-to-treat blood cancers, but many will see their cancer return and treatment options begin to run out," said Blackburn.

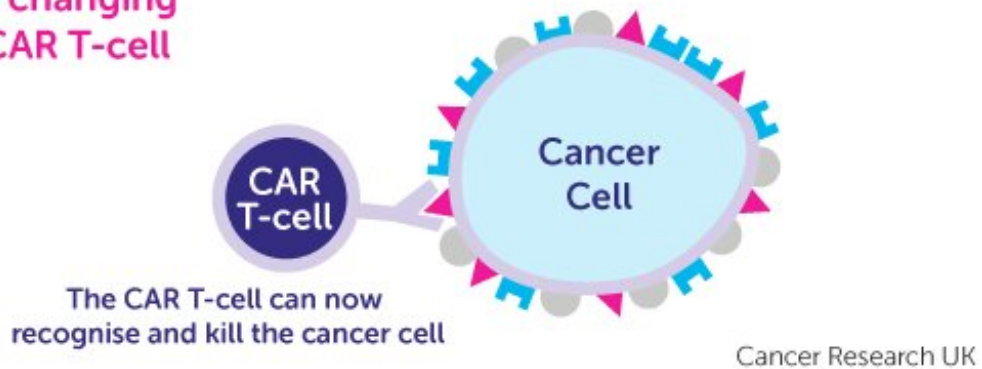
Around half of the patients treated with CAR T-cell therapy relapse, mostly because their [cancer cells](#) stop producing the CD19 protein that CAR T-cells are looking for.

When this happens, patients have few other options.

1. Normal T cell



2. After changing into a CAR T-cell



There are different types of CAR T-cell therapy made by different companies. Examples include: tisagenlecleucel (Kymriah) axicabtagene ciloleucel (Yescarta) brexucabtagene autoleucel (Tecartus)

ALETA-001 acts as a 'reboot' for CAR T-cell therapy, attaching to a different protein called CD20 and 'recoating' the cancer cell with CD19. The CAR T cells can then recognize and attack the cancer cells again.

"ALETA-001 uses a simple yet elegant method to redirect a patient's circulating CD19 CAR T cells against cancer cells expressing CD20, and we hope this could be a new treatment avenue for [blood cancer](#)," said Blackburn.

Taking ALETA-001 to the clinic

The first trial will enroll patients with B cell lymphoma or leukemia who have received CD19 CAR T-cell therapy but did not achieve a complete response or whose cancer has come back.

Led by a team at The Christie NHS Foundation Trust in Manchester, it will be the first time that this type of therapy has ever been tested in humans.

A key aim of the trial is to find out the right dosage of ALETA-001. After this, it will be move into a much bigger trial in the US involving people with [diffuse large B cell lymphoma](#).

This second trial will be designed to support potential accelerated approval of ALETA-001 for cancer patients.

Paul Rennert, President, co-founder and chief scientific officer of Aleta Biotherapeutics, said: "There is an urgent need to develop new therapies that can help people with B cell cancers, such as lymphoma and leukemia, whose [cancer](#) has progressed after treatment with CD19 CAR T-cell [therapy](#)."

"We look forward to working with Cancer Research UK's exceptional network of experienced clinical trial investigators and researchers to conduct the trial."

Provided by Cancer Research UK

Citation: Scientists trial new way to boost CAR T-cell therapy (2021, June 25) retrieved 21 July 2023 from <https://medicalxpress.com/news/2021-06-scientists-trial-boost-car-t-cell.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.