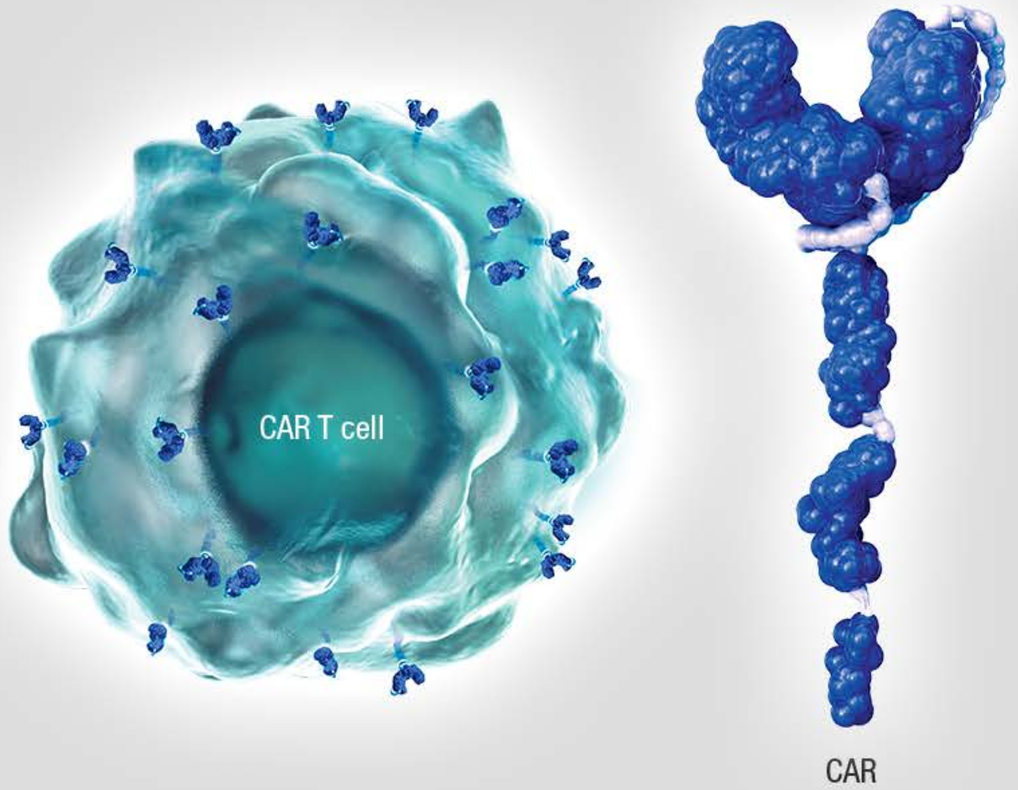
IMMUNOTHERAPY WITH ENGINEERED CHIMERIC ANTIGEN RECEPTOR (CAR) T CELLS

As seen in preclinical studies

Generally, CAR T cell therapies use a patient's own T cells, that are genetically engineered to recognize and target specific antigen-expressing cells.[1,2]



HOW THEY WORK

MECHANISTIC FEATURES & HIGHLIGHTS

RESEARCH & GOALS

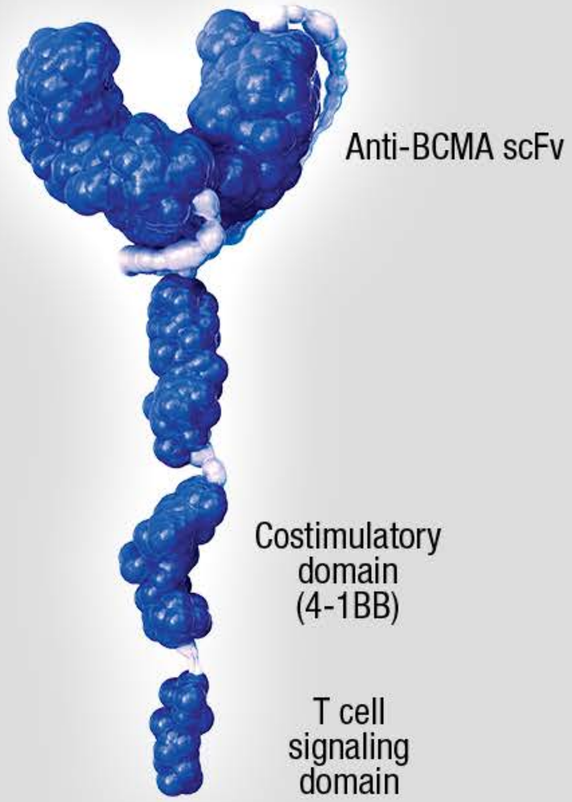
IMMUNOTHERAPY WITH ENGINEERED CHIMERIC ANTIGEN RECEPTOR (CAR) T CELLS

As seen in preclinical studies

CAR T cells are genetically engineered with three major molecular domains to facilitate target recognition and stimulate T-cell antitumor activity.[3,4]

- A single-chain variable fragment (scFv) which allows CAR T cells to bind cells expressing the target antigen (eg, BCMA)[3,4]
- Engineered costimulatory (eg, 4-1BB) and signaling (eg, CD3-zeta) domains facilitate anti-tumor activity[1,3,5-7]
  - Signaling domains lead to T-cell activation, while costimulatory domains increase CAR T cell proliferation, persistence, and cytokine secretion

CAR T cells do not depend on antigen presentation by major histocompatibility complexes (MHCs), and can directly target antigens expressed on the surface of cells.[7-9]



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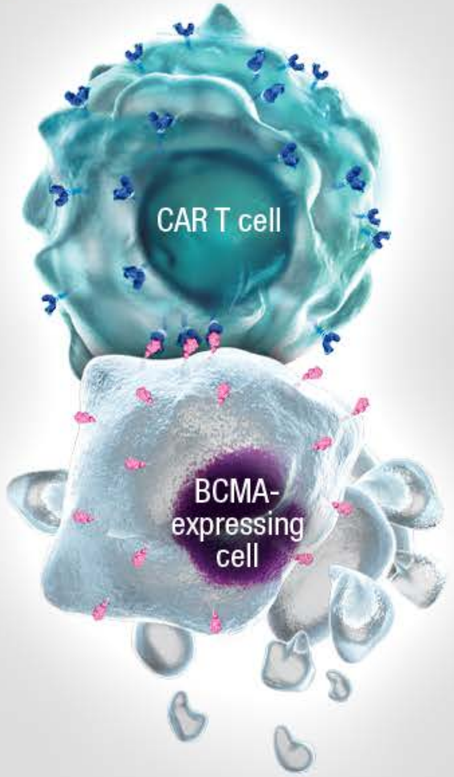
IMMUNOTHERAPY WITH ENGINEERED CHIMERIC ANTIGEN RECEPTOR (CAR) T CELLS

As seen in preclinical studies

Our research has focused on the potential of personalized CAR T cells to provide an additional treatment modality to patients.[9-13]

Preclinical studies are ongoing to optimize, improve, and assess the potential benefits and risks of CAR T cells, as a single agent therapy or in combination with other therapies in multiple myeloma.[14-18]



LEARN MORE ABOUT ONGOING CLINICAL TRIALS

The safety and efficacy of the agents and/or uses under investigation have not been established. There is no guarantee that any agent will receive health authority approval or become commercially available in any country for the uses being investigated.

HOW THEY WORK

MECHANISTIC FEATURES & HIGHLIGHTS

RESEARCH & GOALS

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