

WHAT YOU SHOULD KNOW ABOUT ADVANCES IN CAR T-CELL THERAPY FOR MYELOMA



Program Resource Guide

What Is CAR T-Cell Therapy?

CAR (Chimeric Antigen Receptor) T-Cell Therapy: Treatment in which the T cells (a type of immune system cell) of a patient are laboratory-altered to attack cancer cells in the body.

FDA-Approved CAR T-Cell Therapies for Myeloma

Idecabtagene Vicleucel (Abecma) or Ide-cel
Ciltacabtagene Autoleucel (Carvykti) or Cilta-cel

Myeloma Therapy Targets

BCMA (B-cell maturation antigen): Protein found on the surface of plasma cells in multiple myeloma.

GPRC5D (G protein-coupled receptor 5D): Receptor that has been identified as a target for multiple myeloma treatments. GPRC5D is expressed in myeloma cells and in the bone marrow.

Common Side Effects of CAR T-Cell Therapy

Cytokine Release Syndrome (CRS): Occurs when the immune system responds to infection or immunotherapy drugs by releasing a large number of cytokines into the blood. Symptoms include fever, nausea, fatigue, and body aches.

Neurotoxicity: The tendency of some treatments to cause damage to the nervous system. These neurologic adverse events that may cause confusion, delirium, difficulty with communication, headache, impaired motor skills, seizure, or tremors.

Low blood counts: This can increase the risk of infections, fatigue, and bruising or bleeding.

Possible Reasons CAR T May Stop Working

- T cells can stop working or disappear from circulation.
- Myeloma cells may mutate.
- Tumor microenvironment.

Challenges Facing CAR T-Cell Therapy

- Access to CAR T-cell therapy centers.
- The lengthy manufacturing process.
- The therapy is not a cure.

Patient Advocacy Resources

CancerGRACE
Cancer Hope Network
Myeloma Patients Europe

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Glossary

Bispecific Antibodies (Bispecific T-cell engagers or BiTEs): Class of bispecific monoclonal antibodies that harness the power of the immune system to treat myeloma by binding to two different antigens at the same time.

CARTITUDE-4 Study: Evaluating the efficacy and safety of ciltacabtagene autoleucl (cilta-cel) versus standard of care in patients with progressive multiple myeloma (MM) after 1 to 3 prior lines of therapy.

Immunomodulatory therapies (iMiDs): Group of drugs that treat myeloma by modifying the response of the immune system by increasing or decreasing the production of serum antibodies.

Intravenous Immunoglobulin (IVIg): Treatment that infuses a patient with a pooled antibody solution to help strengthen a weakened immune system and to help fight infection.

KarMMa study: Randomized clinical trial to evaluate the CAR T-cell therapy Ide-cel (Abecma) as compared with standard regimens in patients with triple-class–exposed relapsed and refractory multiple myeloma who had received 2 to 4 lines of prior therapy.

Proteasome Inhibitor: Target cancer cells by blocking the breakdown of proteins by the proteasome. Without functioning proteasomes, proteins build up and kill the myeloma cells.

Maintenance therapy: Refers to treatment given to myeloma patients after initial therapy that is meant to maintain a remission or to prevent return of the disease.

Monoclonal antibodies (mAb): Proteins made in a laboratory meant to stimulate your immune system to fight a particular disease or infection.

MRD (measurable residual disease): Measurement of the number of myeloma cells found in the bone marrow of patients in remission after a clinical response to treatment. MRD is relevant as the residual myeloma cells may indicate progression or relapse.

M-Protein (M-Spike): Abnormal protein secreted by plasma cells that usually indicate disease when found in the blood or urine. This M-protein is commonly associated with multiple myeloma.

Remission: A decrease in or disappearance of signs and symptoms of cancer.

Relapse: Return of a disease or the signs and symptoms of a disease after a period of improvement.

Stem Cell Transplant: A procedure, also called a bone marrow transplant, in which healthy blood stem cells are used to replace damaged or diseased bone marrow. This procedure can be used to treat certain types of blood cancers.

Evolve CAR T-Cell Therapy is brought to you by the Patient Empowerment Network. It is sponsored by AstraZeneca, Janssen Oncology and Legend Biotech, Parexel, and through generous donations from people like you.

The logo for EVOLVE, with the word "EVOLVE" in a bold, sans-serif font. The letter "O" is replaced by a stylized circular graphic containing a network of nodes and lines.

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