The FDA approves the first anti-BCMA CAR-T Cell Therapy for myeloma, idecabtagene vicleucel (Abecma)

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Idecabtagene vicleucel (Abecma) is a B-cell maturation antigen (BCMA)-directed chimeric antigen receptor (CAR)-T immunotherapy and has been approved for the treatment of adult patients with relapsed or refractory multiple myelom after four or more prior lines of therapy, including an immunomodulatory agent, a proteasome inhibitor, and an anti-C monoclonal antibody.

As an anti-BCMA CAR-T cell therapy, this drug recognises and binds to BCMA, a protein that is nearly universally expressed on cancer cells in myeloma. By binding to the BCMA protein, the CAR T cell therapy can kill cancerous myeloma cells.

"Having the first CAR-T cell therapy approved in myeloma is wonderful news for the patient community. We will still h to wait some time to have this therapy approved here in Europe and also to overcome some of the challenges of CA therapy, such as price and equal access to these therapies in all European countries", said **Ananda Plate, CEO of Myeloma Patients Europe (MPE).**

CAR-T cell therapy genetically programmes, through a complex manufacturing process, immune cells known as T ce find the BCMA protein on myeloma cells. Prior to receiving the genetically programmed CAR-T cell therapy, the patie receive a treatment with high-dose chemotherapy to reduce the amount of white blood cells in preparation for the CA cell intravenous infusion. Once manufacturing has been completed, the SLAMF7 CAR-T cells are 'packaged' into an infusion bag (like a blood transfusion) and infused back into the patient.

“The approval of the first CAR-T treatment in myeloma is very good news. The significant response rates in the relapsed/refractory myeloma population are encouraging. There are still challenges to face for myeloma patients such as the long and complex manufacturing process where myeloma patients may risk eligibility for infusion with CAR-T. Along with the potential need for hospitalization in centres of excellence while receiving treatment with CAR-T. Also, safety must be assured with CAR-T administration as side effects like cytokine release syndrome (CRS) and neurotoxicity, which typically appear within two weeks of administration of the CAR-T cell therapy are closely monitored”, said **Tamika Lang, Head of Research and Clinical at MPE.**

For more information about CAR-T cells in myeloma check “The Reality of CAR T-cell Therapy: Am I Eligible?” and “Myeloma Pipeline: CARAMBA clinical trial, a Horizon 2020 project”.