ABSTRACT

Chimeric Antigen Receptor (CAR) T Cell Therapy for Glioblastoma.

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Glioblastoma (GBM) are the most common and aggressive primary brain tumors in adults. Current mainstay treatments include surgery, chemotherapy, and radiation; however, these are ineffective. As a result, immunotherapy treatment strategies are being developed to harness the body's natural defense mechanisms against gliomas. Adoptive cell therapy with chimeric antigen receptor (CAR) T cells uses patients' own T cells that are genetically modified to target tumor-associated antigens. These cells are harvested from patients, engineered to target specific proteins expressed by the tumor and re-injected into the patient with the goal of destroying tumor cells. In this mini review, we outline the history of CAR T cell therapy, describe current antigen targets, and review challenges this treatment faces specifically in targeting GBM.