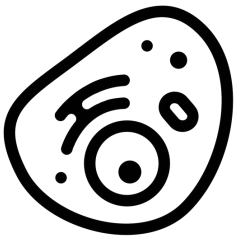
STEMMING EDU PRESENTS

CAR-T THERAPY

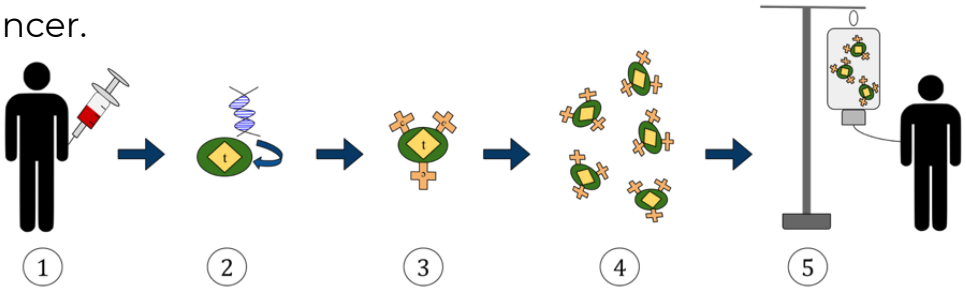
WHAT IS CAR-T THERAPY ?



CAR-T, which is the abbreviated form of chimeric antigen receptor T cell, is a special type of immune cell that has been genetically modified to exhibit a receptor to attach to cancer cells in the body. Chimeric means that the therapy will utilize both the functions of the T cell from the patient and the antigen that will be inserted into the cell.

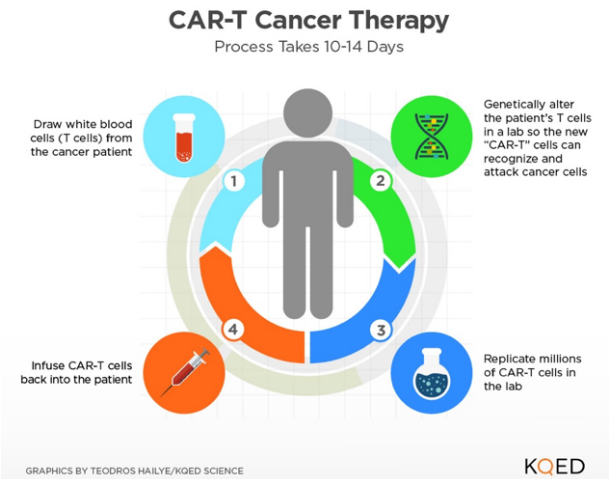
HOW DOES IT WORK?

The T cell from a patient is extracted and then modified in the laboratory to express the gene that will exhibit the receptor gene on the surface of the cell to attach to another special receptor on the cancer cells of the patient. The genetically engineered cells are then placed back into the patient to fight against cancer.



WHY IS IT IMPORTANT ?

Other types of therapies to cure cancer include chemotherapy and radiation therapy. Chemotherapy treats patients with drugs that not only harm the cancer cells but also other healthy cells in the body. Radiation therapy harms other healthy cells in the body as well. On the other hand, CAR-T therapy is more target-oriented. Less number of healthy cells are under danger from such therapy. Moreover, the T cells are taken from patient. Therefore, there are less immune rejection response when the cells are injected back into the patient.



McClurg, L. (2019, February 15). Gene Therapy Was Boy's Last Chance to Stop Leukemia. And It Worked. Retrieved from https://www.kqed.org/futureofyou/439584/new-gene-therapy-gives-teen-a-second-chance-after-cancer