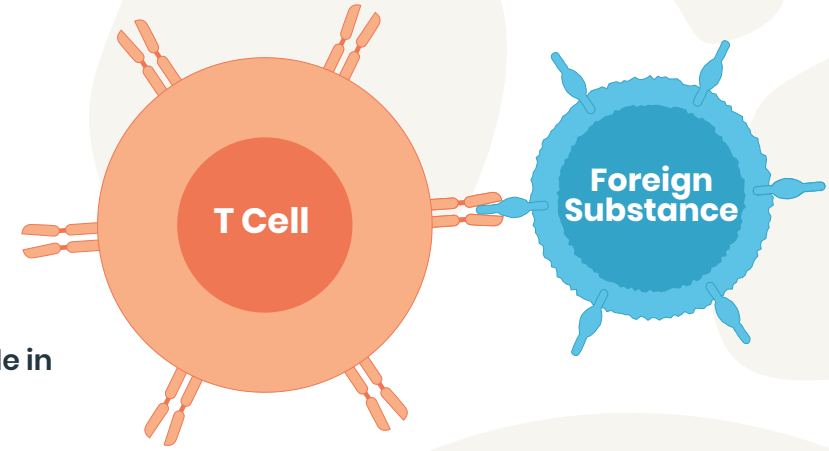
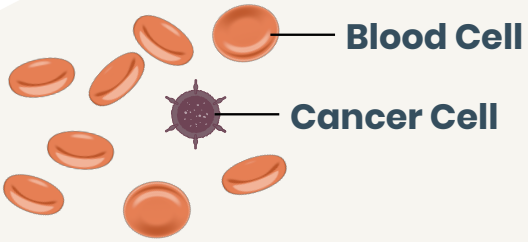
CAR T-cell Therapy

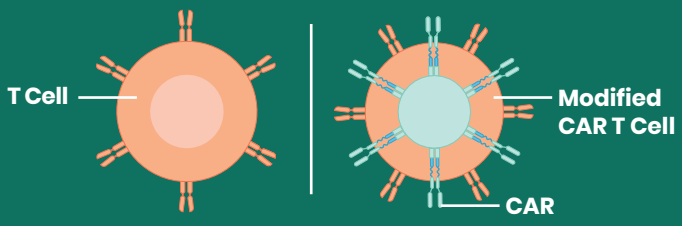


Challenge of Cancer Cells

White blood cells called T cells play a key role in our immune system by searching for and destroying antigens, which are foreign substances in our bodies.

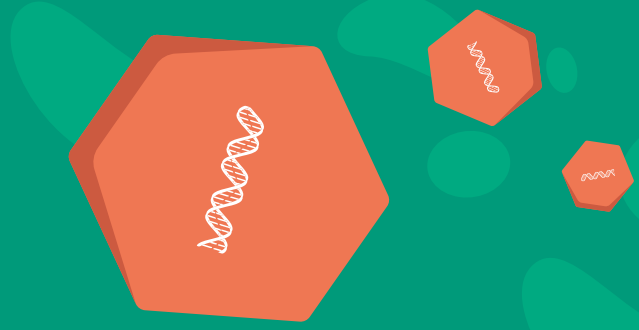
However, blood cancers like lymphoma and leukemia occur when normal blood cells change into cancer cells. Since these cells are mutated versions of a person's own normal cells, the immune system doesn't identify them as threats.





Modified T cells

A treatment approach called CAR T-cell therapy uses a multi-step process to modify a person's T cells. In short, T cells are drawn from a person's body and sent to a specialized lab. Then scientists add a gene that instructs the T cells to develop a chimeric antigen receptor (CAR). This receptor allows the cells to recognize and kill cancer cells.

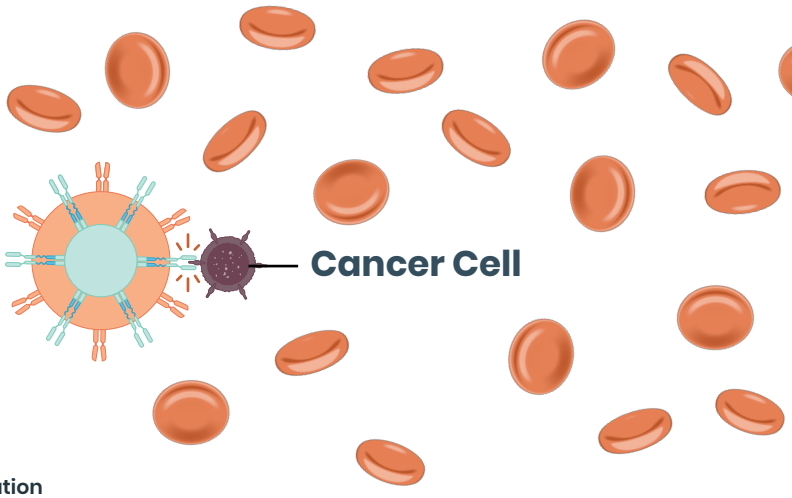


The Role of Vectors

The genetic instructions that allow a normal T cell to become a CAR T cell are delivered by vectors. Vectors are often derived from viruses with all viral genes removed.

Back in Action

The modified T cells are infused back into the person's bloodstream to bind to and destroy the cancer cells. Following treatment, the person is closely monitored through the recovery period with hopes treatment will result in remission.



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