



Engineered Cell Therapy Manufacturing

As a leader in engineered cell therapy, we have set a standard with our state-of-the-art global manufacturing network and robust clinical program. Kite demonstrates a median 16-day turnaround from leukapheresis to product release of chimeric antigen receptor (CAR) T cell therapy in the US.

Our commercial manufacturing facilities located in El Segundo, California and Amsterdam are complemented by clinical manufacturing in Santa Monica, California and Gaithersburg, Maryland, where we also produce investigational T cell receptor therapies for evaluation in solid tumors. We are currently building a third commercial cell therapy manufacturing facility in Frederick County, Maryland, which will significantly expand our ability to manufacture CAR T therapies.

Kite's engineered cell therapy technology is designed to harness the power of a patient's own immune system to effectively target and attack cancer cells.

The processing of CAR T therapy begins with the collection of the patient's white blood cells (leukapheresis). The cells are then sent to Kite's manufacturing facility at which time the T cells are isolated and activated. These cells are transduced with a retroviral vector to introduce the CAR construct into the patient's T cells and then stimulated to proliferate. The CAR T cells increase in number, and once a sufficient number of cells are available for infusion back into the patient, they are frozen and sent back to the CAR T-enabled clinical center where they can be administered to the patient.

At the CAR T-enabled clinical center, in preparation for administration of CAR T therapy, the patient undergoes a short chemotherapy conditioning regimen prior to infusion of the CAR T cells. Once infused, the CAR T cells replicate and expand in vivo and are designed to recognize and attack cancer cells.

CAR T Process

