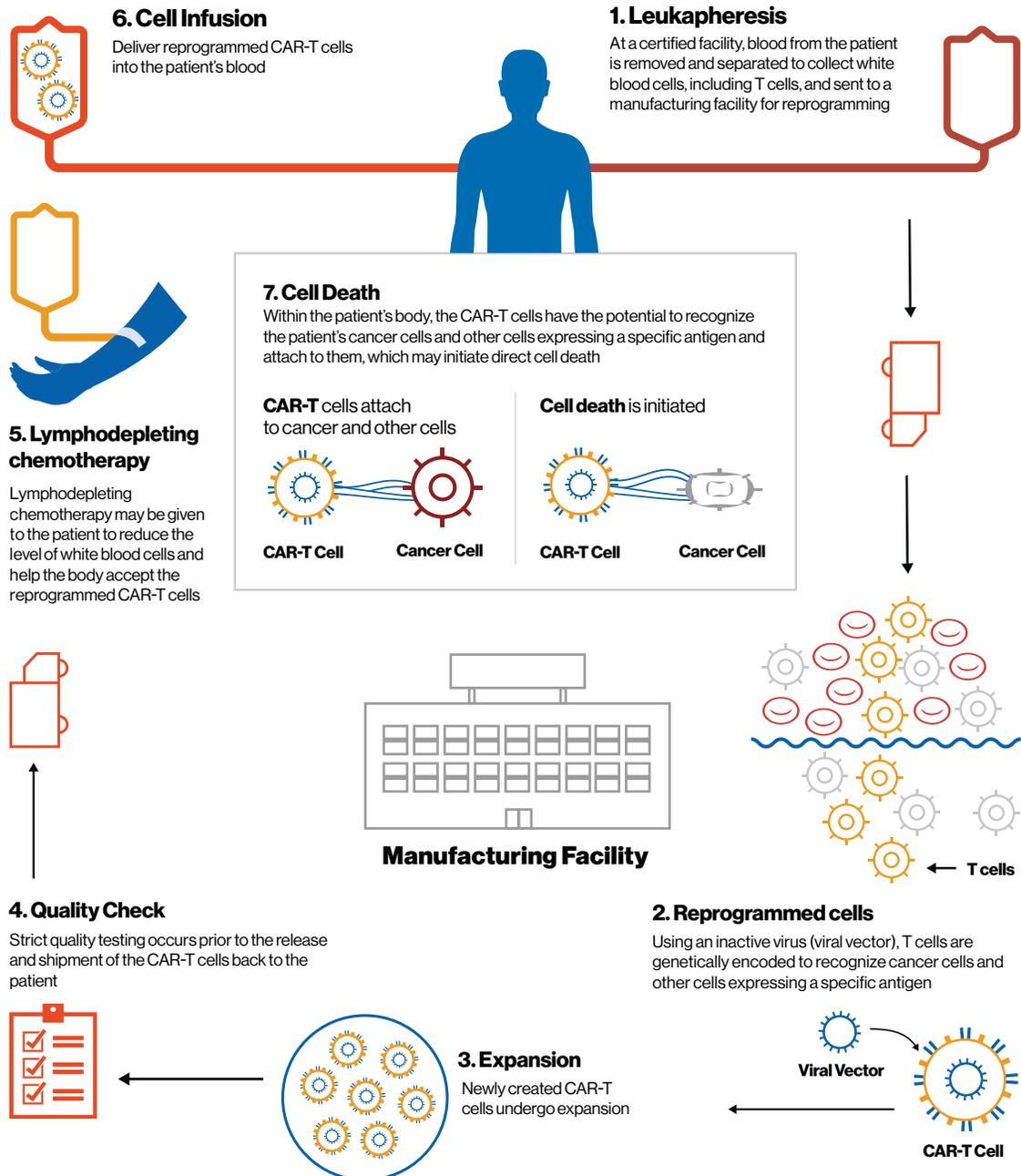


# Chimeric Antigen Receptor T (CAR-T) Cell Therapy

Individualized CAR-T therapy uses a patient's own immune system to fight certain types of cancers. A patient's T cells are extracted and reprogrammed outside of the body to recognize and fight cancer cells and other cells expressing a particular antigen.

## How CAR-T Cell Therapy Works



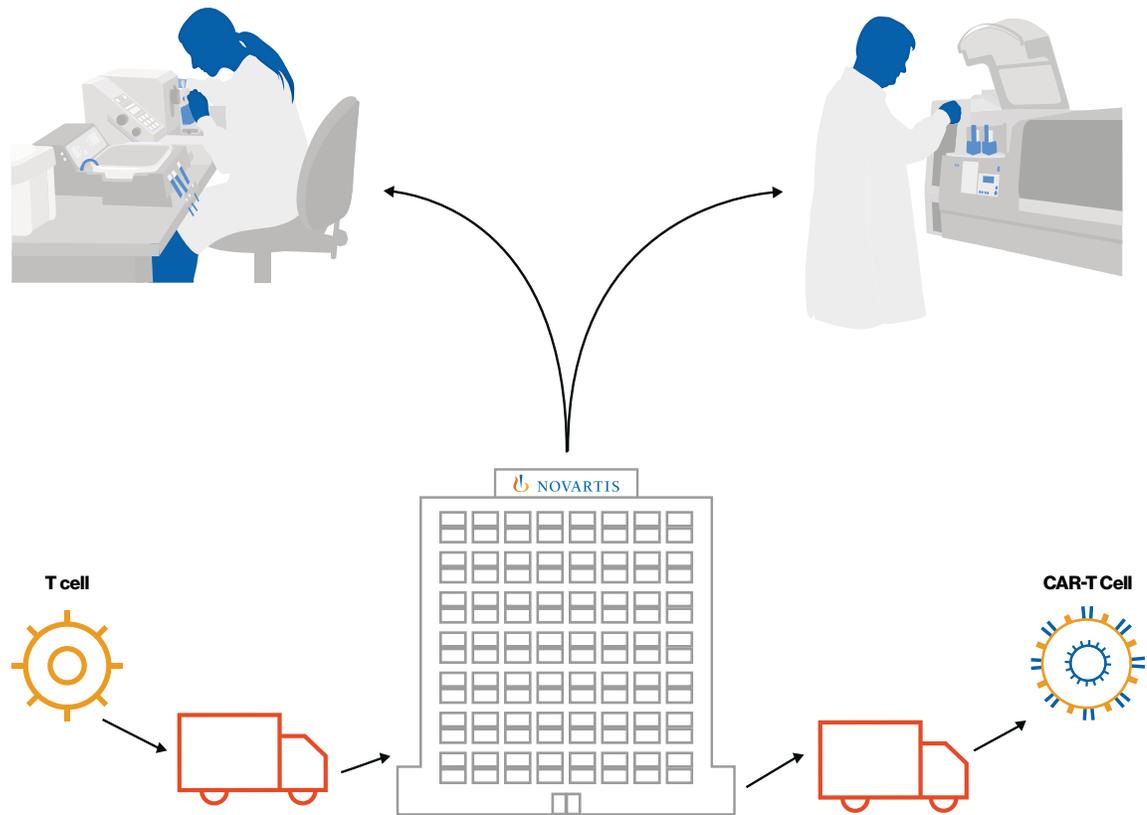


# CAR-T cell therapies are manufactured for each individual patient

For decades, researchers have pursued various ways to utilize the human immune system to fight cancer. Through these researchers' innovation and perseverance, autologous CAR-T cell therapies were discovered.

In contrast to typical small molecule or biologic products, autologous CAR-T cell therapies are specifically manufactured for each individual patient and require a paradigm shift in the approach to manufacturing, logistics, and administration.

Through a collaboration with the University of Pennsylvania (Penn), Novartis made an early commitment to the emerging field of CAR-T cell therapies. Its facility in Morris Plains, New Jersey, was the first manufacturing site approved by the US Food and Drug Administration for immunocellular therapy production in the United States, and it has manufactured CAR-T cells for hundreds of patients in global clinical trials.



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