T cells (the workhorse of the immune system) are collected from the patient's blood.

While the T cells multiply in the lab, the patient receives chemotherapy to reduce the number of cancer cells.

CHIMERIC ANTIGEN RECEPTOR (CAR) T-cell therapy uses re-engineered versions of a patient's cells to find tumor cells and defeat them with minimal damage to healthy cells.

WHAT IF OUR IMMUNE SYSTEM COULD TREAT CANCER CELLS LIKE THEY WERE JUST GERMS?

A cancer breakthrough is making news and helping people here in Chicago. Clinical trials at UChicago Medicine were key in developing CAR T-cell therapy. By removing, supercharging and returning white blood cells into the bloodstream – with instructions to find and attack cancer cells – this “living drug” has often resulted in full remission in clinical trials.

1 T cells (the workhorse of the immune system) are collected from the patient's blood.

2 Scientists insert instructions that enable those T cells to find specific cancer cells.

3 While the T cells multiply in the lab, the patient receives chemotherapy to reduce the number of cancer cells.

4 The engineered T cells are returned to the patient's bloodstream, where they seek out and kill remaining cancer cells.