

T-cell therapy offers cancer cure

Rare white blood cells in the immune system known as T-cells could be programmed to stop cancers forming. Dubbed a “living drug” treatment, T-cells would seek and destroy cancerous tumour cells

How T-cell therapy works

- 1** T-cells are extracted from patient's blood

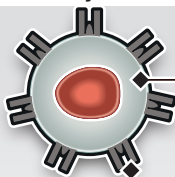
Plasma (55%)

White blood cells and platelets (<1%)

Red blood cells (44%)

- 3** Engineered T-cells are returned to patient intravenously.

Receptors activate T-cells, instructing them to attack cancerous cells that contain CD19



T-cells: Cannot recognize cancer cells as foreign intruders as they can with other forms of infection. Cells need to be “specially trained”

Receptors

- 2** **T-cell engineering:** Synthetic genes are inserted into T-cell DNA. Genes enable receptors projecting from cell wall to identify protein called CD19



T-cell replicates itself and recruits other parts of immune system to fight cancer

Cancer cell

