

# CAR T-CELL THERAPY

## INTERMOUNTAIN BLOOD & MARROW TRANSPLANT CENTER

### WHAT IS CAR T-CELL THERAPY?

CAR T-Cell (chimeric antigen receptor T cell) therapy is a personalized treatment for hematologic cancer in which a patient's own immune cells are removed from the patient's body, genetically reprogrammed, and infused back into the patient's body to fight certain types of blood cancer cells.

The Intermountain Blood and Marrow Transplant Program recently added Car T-Cell therapy for patients with some types of leukemia and non-Hodgkin lymphoma.

### TREATMENT PROCESS

Once a patient is approved for CAR T Therapy, there is a multi-step treatment process.

- Collection - Patient's T-cells are isolated and collected
- Reprogramming - T-cells are sent to the laboratory where they are genetically modified with chimeric antigen receptors (CARs).
- Multiplication - The cells are multiplied until there are millions of these new cells.
- Infusion - Modified cells are infused through an IV back into the patient's blood.
- Cancer Cell Death - Car T-cells track down and kill patient's tumor cells.



## ELIGIBILITY

Currently, CAR T cell therapy is FDA approved as standard of care for some forms of non-Hodgkin lymphoma and a type of leukemia. These include acute lymphoblastic leukemia (only available for patients up to age 26), and certain types of large B-cell lymphoma.

### Other Criteria:

- No history of or active CNS lymphoma or other CNS disease
- Adequate organ function
- Adequate cardiac function
- Adequate pulmonary function
- Absence of malignancy in the past 3 years other than non-melanoma skin cancer
- No history of allogenic stem cell transplant
- No history of autoimmune disease requiring systemic immunosuppression in the past 2 years
- No history of HIV or active hepatitis B or C patients



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