CAR T-cell Therapy Timeline

Initial cellular therapy consultation:

- Meet your cellular therapy physician (doctor)
- Meet your cellular therapy nurse coordinator
- Complete lab work after your appointment
- After appointment: Set up an appointment to see your dentist locally as soon as possible if you have not seen a dentist within the past year

A few weeks after consult: Required testing and consultations for insurance authorization

- Echocardiogram (an ultrasound of the heart)
- PFT – Pulmonary Function Test (lung/breathing test)
- Social work evaluation
- Possible additional labs or test

Weeks to months after initial consult: Chemotherapy

- Chemotherapy is decided by your referring physician and your cellular therapy physician, if needed.
- You will have a specified number of cycles of chemotherapy according to the physician's recommendations.
- The cellular therapy nurse coordinator will follow up to check your response. You might need more scans/lab work.
- This chemotherapy can last several weeks to months.
- Let your cellular therapy nurse coordinator know each time you begin a new cycle.

A few weeks before cellular therapy collection:

Remainder of Pre–cellular therapy testing

- This is set up when it is determined that you are ready to proceed with T-cell collection (apheresis). The testing you will undergo is specific to your disease.
- Apheresis Evaluation, specific labs to be drawn
- Testing is usually done here at Michigan Medicine over 1-3 days.
- You may have consults with specialists depending on your health status.
- Some chemotherapy regimens require you to be off chemotherapy medications for 2 or more weeks before collecting your T-cells (apheresis).

Preparing for Apheresis (T-cell collection)

- If you need a central venous catheter for your collection, it will likely be inserted the morning of Apheresis and removed after collection is completed.
- It will take 1 day to complete your collection. This is done as an outpatient so you will want to find a place to stay locally if you live far away.
- Your cellular therapy Nurse coordinator will update you on the plan.
- Cells are sent to the manufacturing company after collection is completed.

2-3 weeks before cellular therapy infusion:

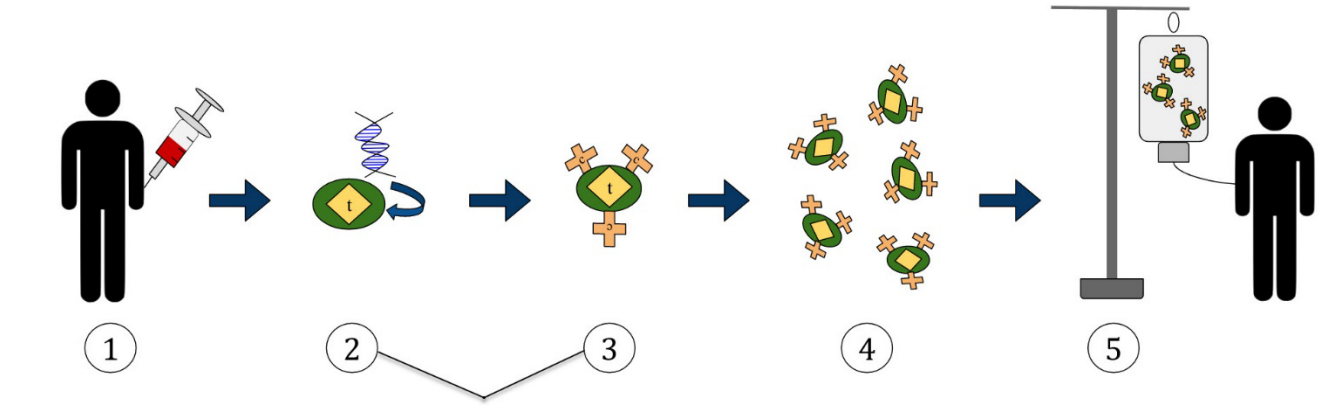
Visit with Physician/Nurse to receive education about admission:

- Manufacturing cells can take 3-5 weeks after apheresis.
- You may need to go back to your oncologist for another cycle of chemotherapy during this time.
- You may need to repeat some testing, especially if you receive chemotherapy after apheresis.
- You may need lab work, Computed Tomography (CT), Positron Emission Tomography (PET) scans, or a Lumbar Puncture to reassess your disease before your return appointment with the cellular therapy physician.

- You will receive a calendar of the treatment plan and education regarding the admission process from your cellular therapy nurse coordinator.
- You will also meet with the physician to review admission information, a calendar and assess your disease response/readiness to proceed with treatment.
- You may receive these treatments:
    - Chemotherapy outpatient over 2-4 days, to reduce the number of normal T-cells in the body to make space for the cellular therapy infusion. This is called, “Lymphodepleting chemotherapy” or “LD Chemo”.
    - Pentamidine Inhalation/IV before admission to help prevent pneumonia
    - A dose of IVIG before admission to boost your immunity may be necessary. Your doctor will provide more detail if you require this treatment.

Admission for cellular therapy infusion:

- You will have labs and see your cellular therapy physician the day of admission to get final clearance to proceed with cellular therapy infusion.
- You will have a central line catheter or a Peripherally inserted central catheter (PICC) line placed as an outpatient, usually on the day of admission.
- You will get admitted to the hospital.
- Plan on spending approximately 2 weeks’ inpatient on the BMT and cellular therapy unit.



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Overview of CAR T-cell therapy:

Step 1: T-cells (labeled as 't' in the image above) are removed from your blood

Steps 2-3: CAR T cells are made by adding a protein to the T-cell's surface to help them identify specific antigens (cancer cells). This protein is called a chimeric antigen receptor, or CAR.

Step 4: The newly modified T-cells are then further harvested and grown in the lab.

Step 5: After a certain time period, the engineered T-cells are infused back into your blood.