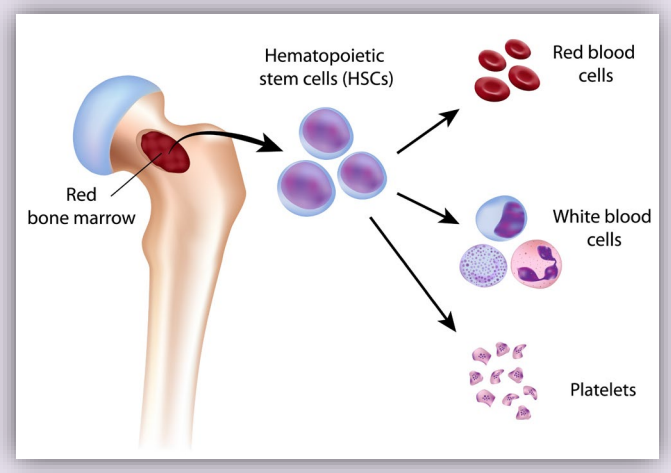
Autologous Stem Cell Transplant

Stem cells are special cells that live in your bone marrow. Stem cells make other blood cells for your body. Some types of cancer are best treated with high dose chemotherapy. But such a high dose of chemotherapy can reduce the number of stem cells growing in your bone marrow.

We can give people higher doses of chemotherapy if we collect and freeze their bone marrow stem cells first. A few days later, when the chemotherapy is gone from the body, we can thaw the cells and reinfuse them into the patient's body. The transplanted stem cells start to grow in the bone marrow. After a few weeks, the bone marrow stem cells make normal amounts of blood cells.

Stem cells live in your bone marrow. They make blood cells.



Red blood cells carry oxygen.

White blood cells fight infections.

Platelets help blood to clot and stop bleeding.

Steps in the Transplant Process

1. Pre-Transplant Evaluation

At your pre-transplant evaluation appointment, a transplant doctor will talk to you about your medical history and your preferences. This information will help you and your transplant doctor decide if an autologous stem cell transplant will help you.

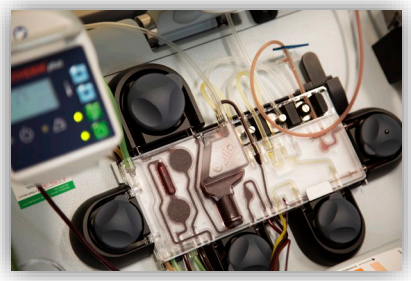
If you and your doctor decide the treatment is right for you, we will give you tests to make sure you are healthy enough to go through the transplant. We will test how well your heart, lungs, liver, and kidneys work, and we will test to see if you have any infections. We will also ask you about staying close to the UNM Cancer Center and about whether you can get regular support from caregivers while you are being treated in the outpatient clinic.

2. Stem Cell Collection

Once we have decided it is okay for you to get an autologous stem cell transplant, we will start treatment by collecting bone marrow stem cells from your blood.

To collect these cells:

- We will put a flexible tube called a central venous catheter into one of your veins.
- We will give you medicine that makes your bone marrow stem cells leave your bone marrow and flow into your blood.
- We will collect your bone marrow stem cells using an **apheresis** machine. This machine will take out the stem cells and put the rest of your blood back into your body.



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3. Storing Your Cells

We will send your bone marrow stem cells to a special lab. The lab will count your bone marrow cells and then freeze them. Freezing your cells lets us store them for a long time.

4. Chemotherapy and Stem Cell Transplant

When your bone marrow cells are safely frozen and stored, you are ready to get chemotherapy.

Once you finish chemotherapy, we will thaw your bone marrow stem cells and put them back into your body through an IV catheter. These cells will help your bone marrow start making blood cells.

5. Recovery

Once your stem cells go back into your blood, they find their way back into your bone marrow. When the cells are in your bone marrow, they start to grow and make blood cells again.

This process usually takes several weeks. Often people need to stay in the hospital for 2 to 3 weeks after their transplant.

6. Long Term Follow-Up

It may take several months to recover your strength and energy.
Your transplant doctor will talk to you and your cancer doctor about your long-term health.

HLO Approved
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