



Stem Cell Donors
Australia

**A patient's journey
to receive a blood
stem cell transplant**

Going through a blood stem cell transplant is a milestone that usually happens towards the end of what can be a long journey for patients with blood cancer.

Most patients go through rounds of chemotherapy so they are in remission before they can consider a blood stem cell transplant. While not every patient with blood cancer or a disorder needs a blood stem cell transplant, for the ones who do, the transplant is usually their only curative option.



Hannah's journey with T-cell acute lymphoblastic leukaemia

Hannah's journey started with a routine blood test that turned out to be abnormal. She went in to see a specialist to review her blood tests, and that's when she found out she had T-cell acute lymphoblastic leukaemia. There are several types of blood cancers, and Hannah had an aggressive form that affected her T lymphocytes (aka T-cells). T-cells are found within the immune system and are made in marrow found within the bones. The purpose of T-cells is to look for and fight off infection. Hannah's only symptom was swollen lymph nodes on one side of her neck. Hannah had a bone marrow biopsy to confirm her diagnosis.

Hannah went through two rounds of chemotherapy within days of her diagnosis. Chemotherapy is designed to kill cells that are cancerous. It can be given as a pill or via intravenous injection. Hannah learnt that she wasn't responding well to the chemotherapy, so she was given three 'high risk' rounds of chemotherapy. Even after these rounds, Hannah was struggling to reach remission. Her medical team searched for a blood stem cell donor on the global database. Registries, including Australia, are linked to the global database to help widen the search for a potential match. In 2024, over 42 million donors and cord blood units were listed on the global database. Hannah found a match and had a blood stem cell transplant.

Sadly for Hannah, this wasn't the end of her journey. Over a year later, after her wedding, she relapsed. For some patients who relapse, another treatment is needed before they can consider a second blood stem cell transplant. In Hannah's case, she travelled to Singapore to receive CAR-T therapy (which was a trial treatment at the time). Hannah spent four months in Singapore receiving this treatment, which ultimately put her into remission. CAR-T therapy can help re-train and strengthen the immune system to look for invading abnormal cells, like cancer. It may not cure a patient with blood cancer, but it can put them into remission, with the aim of using another treatment, like a blood stem cell transplant, to cure them.

In Hannah's case, she was able to receive a second blood stem cell transplant. This meant she had to go through a process called conditioning again. This is where high doses of chemotherapy and/or radiation to remove her own blood stem cells and make way for the transplant. Once a patient starts conditioning, they have no choice but to have a blood stem cell transplant. Hannah had her donor's stem cells infused via an IV drip. She spent the next few weeks in hospital. This was to keep her safe from infection and monitor her white blood cell count to ensure it was increasing. It can take a couple of weeks for a donor's stem cells to take over and create a new immune system for their host, so the patient is monitored closely for complications from the transplant. Just like with organ donation, it's important the new stem cells aren't rejected by the patient. Having a compatible match reduces the risk of such complications.

For 100 days post-transplant, Hannah had to be in isolation. This meant her friends and family couldn't visit her - not until her immune system had developed and was strong enough to fight off infections. It can be a gruelling journey full of highs, lows and hope. While in isolation, Hannah was keen to spend quality time with her friends and family while treasuring the life she and her husband had built.

By being on the registry, registered donors are giving someone like Hannah a chance at the life they've worked so hard for. A diagnosis like this shakes a whole family and their community of friends. The impact of a bone marrow donation is so incredibly powerful. Hannah hopes she can live through this and continue enjoying her life, which is only possible thanks to the selfless, generous people like you who choose to join the registry and donate their blood stem cells.



More resources about the patient journey

[An overview of the donor and patient journey](#) | [Sophie's transplant story](#) | [James' transplant story](#)