

# iTRANSPLANTFACTSHEET

## I NEED TO KNOW ABOUT CORD BLOOD TRANSPLANTS

VOLUME 2, NUMBER 1

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### What is special about cord blood?

Cord blood contains high concentrations of haemopoietic stem cells (HSC) – the cells from which all blood cells develop. Blood collected from adult whole blood donors has virtually no HSC at all.

### What is cord blood used for?

Cord blood can be used to treat patients with leukaemia, severe blood diseases and immune system diseases. The HSC in cord blood can rebuild a patient's blood and immune system after their own blood cells have been destroyed by chemotherapy or radiation therapy. This is called a "cord blood transplant" or "HSC transplant".

### Once collected, what happens to cord blood?

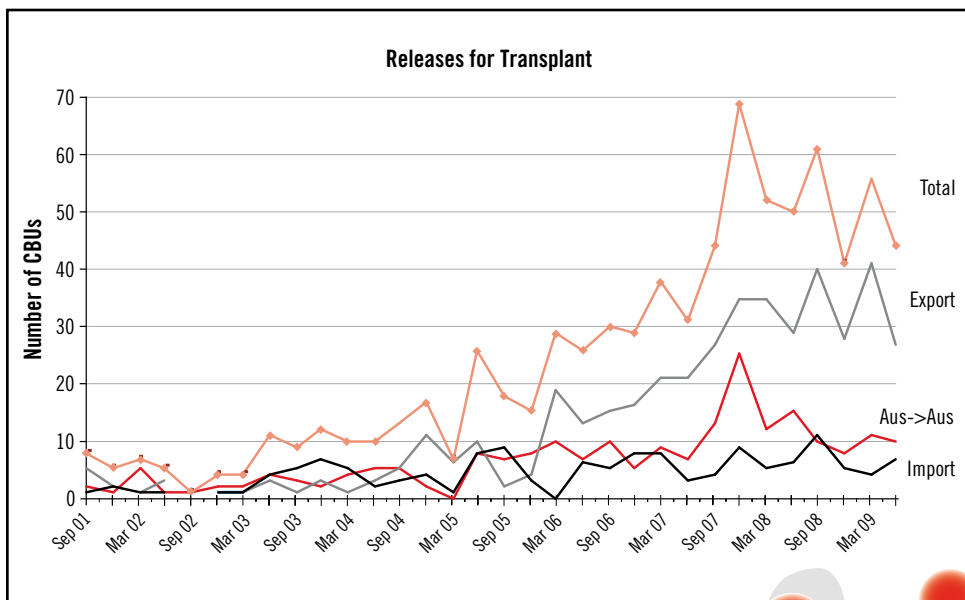
The cord blood cells, once collected from the placenta through the umbilical vein, are frozen and stored, often for several years, until needed. The storage facilities are called Cord Blood Banks.

### What type of cord blood banks are in Australia?

Public Cord Banks collect and store cord blood which is voluntarily donated and which is available to anyone in the world. In Australia there is no cost to either the donor or the recipient for the use of such cords. Private cord blood banks charge a fee to collect cord blood and store it for the exclusive use of the person from whom the cord blood was collected.

### Why are there public and private cord blood banks?

It is the opinion of the public cord banks that private cord banking is not a cost-effective option for providing blood stem cells for transplantation. Autologous



transplantation of such cord blood units for the treatment of leukaemias, cancer, bone marrow failure and genetic disease is unlikely to occur, as the HSC would be affected by the same genetic factors that contributed to the disease. Private cord banks claim that in the near future it may be possible to alter genetic factors in cord stem cells and use them for therapy.

### How does public cord banking work?

Australia now has three public cord blood banks that work together as AusCord. There are more than 20,000 cord blood units banked. AusCord is funded by Australian governments with some charitable support. Recently Rotary International (WA) raised nearly \$6M to support the creation of another public cord bank. This will be in Perth and run by the Blood Service. This bank will have a strong focus on the collection of cord blood from indigenous and mixed race donors to further improve the diversity of the cord bank registry. It is planned to open in late 2010.

## CELLTALK

More than 170 cord blood units are provided by the three Cord Banks for transplantation each year. These are sent to Australian and international transplant centres.



### What is the role of the Blood Service?

The Blood Service hosts the Australian Bone Marrow Donor Registry which manages AusCord, provides infectious disease screening and tissue typing services to two of three AusCord banks and operates search centres in four Australian states.

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