For us, cancer is personal

What is Tissue Typing?
In the same way a blood transfusion needs to be matched for a particular blood group, stem cell/bone marrow transplants need to be matched for their tissue types. What is tissue typing?

We each have several proteins or markers located on the surface of our white cells. One particular protein or marker is called HLA or Human Leukocyte Antigen. **Tissue typing** is the name given to the test which identifies your HLA.

These markers have the ability to tell the difference between normal body tissue and foreign tissue (e.g. tissue from another person's body). The white blood cells from a blood sample are a convenient source of tissue that the laboratory can use to determine your HLA.

**HLA matching**

In the same way a blood transfusion needs to be matched for a particular blood group, stem cell/bone marrow transplants need to be matched for their tissue types. A well-matched donor is essential to minimise potential complications after a transplant. The best match is usually found from a family member. HLA matching is not related to blood group or the sex of family members.

Because HLA antigens are inherited, your best chance of finding a match is with a brother or sister. You inherited half of your HLA antigens from your mother and half from your father, so each brother or sister who has the same parents as you has a 25% chance of matching you.

Blood relatives are more likely to have similar tissue types than people who are not related to you. However, it is unlikely that other family members will match you. If a match to a brother or sister cannot be found, a search of extended family members or an unrelated donor may be considered.

There are a great number of tissue types; therefore, national and international registers of volunteer donors (many thousands) can be searched to find an unrelated matched donor.

Compatibility between you (the recipient) and the donor is essential to minimise the potential for post-transplant complications. The potential for complications increases as the number of mismatched antigens increases. The closer the match between you and your donor, the lower the chance that ‘Graft versus Host Disease’ (GvHD) may develop. Your doctor will explain this in more detail.

Who will arrange tissue typing blood tests for my siblings?

The Apheresis and Stem Cell Transplant Coordinator will organise tissue typing blood tests for your siblings at the request of your doctor. Please provide the Apheresis and Stem Cell Transplant Coordinator with the full name,
address, phone number and date of birth of all siblings. You should notify your siblings of the need to have a tissue typing blood test collected.

**When should I have the tissue typing blood test collected?**

It is essential that you and your siblings have the tissue typing blood test collected at the earliest convenience.

The tissue typing blood test needs to be performed on Monday, Tuesday or Wednesday. Please contact your nearest public hospital or private pathology centre (e.g. Sullivan Nicolaides Pathology) to arrange a suitable time for the tissue typing blood test.

If the pathology centre is unsure of the tissue typing procedure, please instruct them to contact the Apheresis and Stem Cell Transplant Coordinator (prior to the collection day) on 07 3737 4500.

**What should I take to the pathology collection centre?**

You will be supplied with a request form which must be presented to the pathology centre for the tissue typing blood test to be collected. Please check that all personal details on the form are correct.

**How much blood is collected?**

A 50ml blood sample is collected to perform the tissue typing blood test.

---

**Because HLA antigens are inherited, your best chance of finding a match is with a brother or sister.**

You inherited half of your HLA antigens from your mother and half from your father, so each brother or sister who has the same parents as you has a 25% chance of matching you.

---

**Do I need to fast for a tissue typing blood test?**

No, you do not need to fast for a tissue typing blood test. You should eat and drink as normal.

**How long will it take to get the tissue typing results?**

Preliminary tissue typing results take about three (3) weeks. Further high resolution (more detailed) tissue typing performed on your blood and any potential sibling donor samples may take another two (2) to four (4) weeks. Your doctor will advise you of the results.

**Are there any costs?**

There may be some cost associated with this blood test. Please discuss this with the collection centre prior to collection of your tissue typing blood test.

**What happens when a donor is identified?**

Your doctor will determine the timing of a stem cell transplant, depending on your clinical condition and disease. When a date has been scheduled, the donor will be required to undergo a series of medical tests and appointments to determine their suitability to donate stem cells.
Icon Cancer Care locations

Adelaide
First Floor, Tennyson Centre
520 South Road
Kurralta Park SA 5037
P 08 8292 2333 | F 08 8292 2287

South Brisbane
Level 5, Mater Medical Centre
293 Vulture Street
South Brisbane QLD 4101
P 07 3737 4500 | F 07 3737 4701

Townsville
9–13 Bayswater Road
Hyde Park QLD 4812
P 07 4795 7100 | F 07 4795 7101

Chermside
Level 1, Chermside Medical Complex
956 Gympie Road, Chermside QLD 4032
P 07 3737 4500 | F 07 3737 4801

Southport
Level 9, Premion Place, 39 White Street
(Corner Queen and High Streets)
Southport QLD 4215
P 07 5657 6400 | F 07 5657 6401

Wesley
Level 1, Wesley Medical Centre
40 Chasely Street
Auchenflower QLD 4066
P 07 3737 4500 | F 07 3737 4601

This information was current at the time it was published and is intended as a guide only. It is not intended to replace information provided by your doctor or nurses. Each patient is an individual and responses may vary. If you have any questions, please talk to your doctor or clinic nurse.