Children's National ™
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ChildrensNational.org

To start the HLA typing process:

HLA typing is a blood test that requires approximately 10mL of blood. The results typically take two to three weeks to return and be processed, so please allow for this time in the planning process. The blood sample can be collected in the Bone Marrow Transplant Clinic at Children National Health System.

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If there are any issues regarding your appointment, please call 202-476-5251 to reschedule.

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Human Leukocyte Antigen (HLA) Typing

Human Leukocyte Antigens (HLA)

Human leukocyte antigens (HLA) are proteins found on the majority of your body's cells.

They specifically help your body identify precise types of tissue including those in your immune system that recognize cells as either belonging to your body or not. The HLA proteins play an important role in the matching process for bone marrow transplant (BMT).

Inheritance

Everyone inherits one set of HLA proteins from their mother and one set from their father. These two sets of HLA antigens are used to compare the recipient tissues and the donor tissues.

The five specific antigens of BMT donors and recipients that are compared prior to transplant are A, B, C, DRB1, and DQB1. When a patient HLA typing has been completed, the search for a donor begins.

Donors

The initial search for a suitable donor starts in one's own family. HLA typing of parents and siblings plays a vital role as each full sibling has a 25 percent chance of matching the recipient. However, given that 70 percent of families do not have a matched related donor, the next step is to search for a suitable donor or umbilical cord blood unit in the National Marrow Donor Program's Be The Match Registry or other registries around the world.

Example of HLA typing results show a patient and a sibling that are completely matched:

Patient	Sibling
A: 23:01, 32:01	A: 23:01, 32:01
B: 06:02, 05:01	B: 06:02, 05:01
C: 57:03, 58:01	C: 57:03, 58:01
DRB1: 01:03, 07:02	DRB1: 01:03, 07:02
DQB1: 05:TM, 03:RAUC	DQB1: 05:TM, 03:RAUC