



Leukemia and Stem Cell Transplant: Why Your Donation Matters

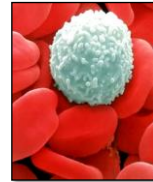
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What is leukemia?

- Leukemia is a malignant cancer affecting the bone marrow and blood
 - All leukemias develop from a stem cell in the bone marrow that grows and multiplies uncontrollably
 - Leukemia cells eventually crowd out normal bone marrow cells, causing problems with normal blood cell production

Leukemia treatment

- Treatment for leukemia is individualized for each patient and may include one or more of:
 - Chemotherapy
 - Radiation therapy
 - **Stem cell transplantation**



What are stem cells?

- Stem cells are cells that can mature and develop into many other kinds of cells
- Stem cells in the bone marrow generate all types of blood cells:
 - Red blood cells (carry oxygen)
 - White blood cells (fight infection)
 - Platelets (help clotting)



Stem cell transplant

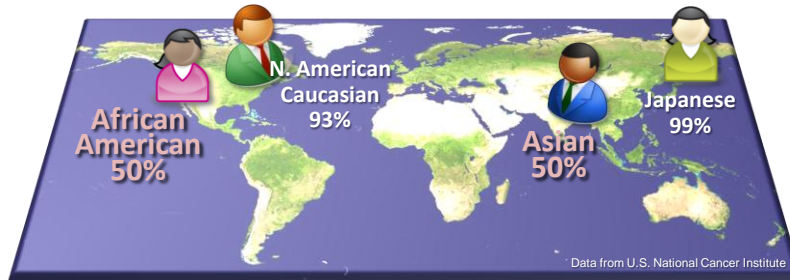
- In order to perform a stem cell transplant, a suitable source of stem cells must be found
- This means finding a donor whose stem cells are similar to ("**match**") the patient's cells
- "Matching" means having the same (or very similar) pattern of *HLA markers*



Facts about matching

- We inherit **half** our HLA markers from each parent (we share only **50%** of markers with each parent)
- Each full sibling has a **25%** chance of matching another (identical twins are 100% match)
- Only 30% of patients find a family match; **70% depend on unrelated matched donors**
- Patients are much more likely to find a stem cell match **within their own ethnic communities**

Matching in populations



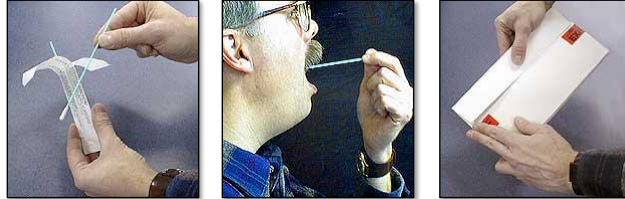
- South-Asians (and other minorities) are underrepresented in stem cell registries
- Patients from these ethnic groups are *much less likely* to find suitable donors

OneMatch registration

- Donors in Canada must be:
 - Between **17-50** years of age
 - In generally **good health**
 - Committed to donating to **any patient**
- Keep in mind that those who join the registry do so for **all patients in need**, not just one patient

OneMatch registration

- Swabs are used to collect cells from the inside of your cheek



- Cells are tested for HLA markers, results are put into the registry
- The process is **simple**, and takes about 10 minutes to complete

one match
stem cell and marrow network

Other ways to help

- **Consider:**
 - Blood and blood product donation
 - Financial gifts
- **1-888-2DONATE (236-6283)**
- www.blood.ca



Canadian Blood Services
it's in you to give