

An Introduction to Marrow & Cord Blood Transplant

June 10, 2009



Today's Agenda

- Betsy, Transplant Survivor
- Alanna Kurosky, Nurse Practitioner Karmanos Cancer Center, Detroit, Michigan
- Office of Patient Advocacy Case Managers
- Kay, Caregiver
- Question and answer time with speakers

Transplant Survivor Experience

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2

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Basics of Unrelated Marrow and Cord Blood Transplants

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- **Stem cells are blood-forming cells used in transplant**
 - Marrow
 - Peripheral blood stem cells (PBSC)
 - Cord blood

3

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Donor Type of Transplant

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Cell Source

Self



Type of Transplant

Autologous

Genetically Matched

Sibling



Related

Allogeneic

GENETICALLY
MATCHED UNRELATED
DONOR



UNRELATED
ALLOGENEIC

4

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Matching by HLA

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- **Human Leukocyte Antigens (HLA)** are proteins found on the surface of most cells in the body, but are found in greatest numbers on white blood cells

5

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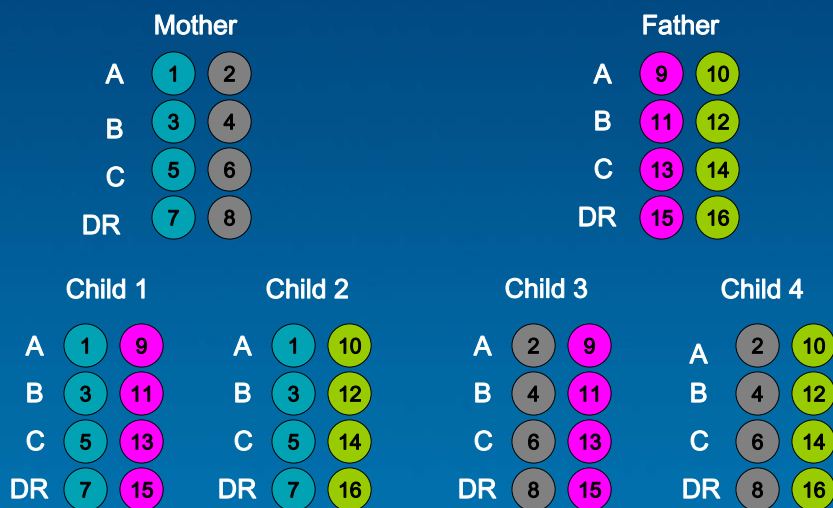
HLA Typing

- HLA typing of donor and patient is done to help find a stem cell match
- There are thousands of different types of HLA proteins
- Each person has a small unique set inherited from their parents

6

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HLA Inheritance



7

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What Do HLA Antigens Do?

- HLA helps the immune system recognize us as being different from foreign substances that may enter the body.
- If donor stem cells are not the same HLA type as the recipient they will recognize the recipient as being different and attack. This response is called graft versus host disease (GVHD).

How an Unrelated Donor is Found

- Your transplant center is responsible for searching for a donor
- NMDP's Be The Match RegistrySM
 - Pool of donors
 - Domestic and International donors
- The donor search process

Benefits and Potential Risks of Transplant

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Possible complications

- Treatment related complications
- Infections
- Graft vs. Host Disease (GVHD)

Benefits of BMT

- No longer have the disease - **REMISSION**
- Extension of a good quality of life
- Graft vs. Leukemia Effect

10

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The Conditioning Regimen

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- Radiation &/or chemotherapy given prior to transplant that destroy diseased cells and healthy stem cells
- Stem cells given after the conditioning regimen replace the destroyed stem cells and provide the recipient with a new immune system
- Given over 2-10 days and usually hospitalized
- Medications to prevent "GVHD" are started

11

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High Dose Transplant

- Higher doses of radiation/chemo administered with goal of killing ALL of the patient's stem cells and diseased cells
- Used in patient's with more aggressive diseases
- Usually experience more side-effects

Reduced Intensity or “Mini” Transplant

- Lower doses of radiation/chemo are given that kill SOME of the patient's stem cells and diseased cells
- Used in patients with slower growing diseases or who are less likely to tolerate the side effects of a high dose transplant

Day of Transplant

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- Stem cells from marrow or peripheral blood are collected from donor the day before and/or the day of transplant
- Transported to patient and administered like a blood transfusion
- Cord blood units are shipped to transplant center and stored before start of preparative regimen
- Side effects are the same as a blood transfusion and may include fever, chills and rash



14

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Recovery: Early Days after Transplant

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- 14-28 days of extreme immune suppression:
 - Very low white blood cell, red blood cell & platelet counts
- At risk for life threatening infections, bleeding, and organ damage from the preparative regimen
- Antibiotics given to prevent & treat infection
- Blood & platelet transfusions given as needed
- Closely monitored for organ damage and treated as needed

15

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Engraftment

- Term used to refer to growth of new stem cells within the bone marrow and the appearance of white blood cells, red blood cells and platelets in the bloodstream
- Occurs 14-28 days after transplant
- Risk for infection and bleeding decreases following engraftment

Getting Discharged

- You will be discharged from the hospital when:
 - You've engrafted – Absolute Neutrophil Count (ANC) > 500
 - No active infection
 - No active Graft Versus Host Disease (GVHD)
 - Able to take foods and meds by mouth



Life After Transplant

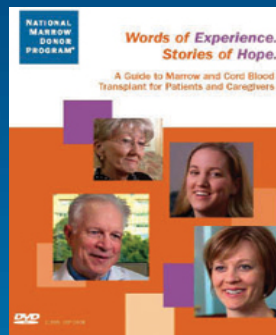
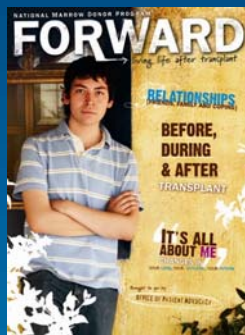
- **The first 100 days**
 - Closely monitored for complications such as “GVHD” and infection
 - Frequent clinic visits with possible readmission to the hospital for treatment of complications
 - Restriction of activities
 - Need caregiver for transportation, shopping, cooking
- **Moving forward**

How the Office of Patient Advocacy Can Help You

- **Resources**
- **Individual support**
- **Education**
- **Financial education and assistance**

Patient Materials

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Financial and Insurance Resources

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- *Mapping the Maze*
 - P.18-20 : be aware of your transplant benefits
- *Your Finance and Insurance Matters* fact sheet
- Help with insurance appeals
- Patient Assistance Program

21

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Caregiver Experience

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Questions?

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Contact a Case Manager

Phone: 1-888-999-6743

Email: patientinfo@nmdp.org

Website: www.marrows.org/patient

Recorded version of today's program:
1-800-670-7947

23

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