The Value of Community-Based Initiatives

Saving Lives Through Blood and Marrow transplantation

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What is Bone Marrow?

• The blood-forming cells in the hollow portion of our bones
• Looks just like blood
• Manufactures
  – Red Cells – Carry Oxygen
  – White Cells – Fight Infection
  – Platelets – prevent excessive bleeding
Why Do People Need Transplants?

• Some diseases render the bone marrow incapable of forming normal blood cells
• The bone marrow then has to be replaced to effect a cure
• Examples
  – Leukemia and Lymphoma
  – Aplastic Anemia
  – Severe forms of Sickle Cell disease
  – 70 other diseases
Annual Numbers of HCTs vs Numbers of Other Selected Malignancies

- Heme*
- Pancreas
- # of HCT
- Ovary
- Stomach
- Brain
- Liver
- Esophagus
- Cervix
- Larynx
- Sarcomas
- Testis

* Where HCT is considered good 1st or 2nd line therapy
Role of NMDP and Be The Match

- Recruit Donors to Join the Registry
- Maintain the Registry and match Donors to Patients in Need
- Make all the Arrangements to Allow a Donor to Safely Donate
- Encourages Moms to Consider Donating Their Child’s Cord Blood to one of 21 Public Cord Blood Banks
Umbilical Cord Blood

- Rich in the same cells as Bone Marrow
- As effective as Bone Marrow
- Donation is Safe and doesn’t compromise the health of Mother or child
Saving Our Communities...

• It’s easy to join
  – Fill out a form that asks for contact information and brief health history
  – Swab the inside of your cheek with a cotton-tipped applicator

• You can join at one of 12,000 drives we host every year or online at bethematch.org
Saving Our Communities...

• Basic health and contact information are collected
• Your name is added to a database that is searched daily by thousands of patients in need of a transplant
• Most patients find a match with a donor who shares their ancestry
  – This is why it is critical to grow the diversity of the registry
Saving Our Communities...

• It’s easy to donate if you are chosen as a donor
  – 70% of donors donate by taking blood from the arm in a several hour process called apheresis
  – 30% donate though a small incision made through the back hip bone while you are asleep
• Donation causes little if any discomfort to the donor
  – Particularly when the reward is a life saved
• Donors recovery completely in a matter of days
Transplants by Ethnicity

16% of overall transplants
31% of cord blood transplants
Survivals over Time: Unrelated vs. Related Donors

Adjusted Survival
Sibling Donor

Survival at 1 Year

0% 10% 20% 30% 40% 50% 60% 70% 80%
Matching Donor to Recipient

- Replacement of the Bone Marrow requires precise matching of the donor and recipient immune systems
- 30% of us have a match in our family – usually a sibling
- 70% search for a match through the NMDP and the Be The Match Registry
Public Private Partnership

• Program was formed in the mid-1980’s and has been called the CW Bill Young Cell Transplantation Program since reauthorization in 2005

• Federal funds are leveraged with program income to
  – Recruit donors - $80 per donor
  – Collect Cord Blood - $2500 per Cord Blood
  – Infrastructure and Patient Advocacy
## Expected Additional Transplants by Adding 1,000,000 Available Donors to Registry

<table>
<thead>
<tr>
<th>Race of Donor</th>
<th>Additional Transplants / year</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>44</td>
</tr>
<tr>
<td>African-Am</td>
<td>166</td>
</tr>
<tr>
<td>Asian-Am</td>
<td>72</td>
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<tr>
<td>Hispanic</td>
<td>77</td>
</tr>
<tr>
<td>Native Am</td>
<td>50</td>
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</table>
10,000 Successful Transplants

- An acceptably matched source of cells for every patient
- Optimal initial therapy and timely referral for transplant
- No non-match barriers impeding progress to transplant
- Reduce/eliminate complications
- Return to full health post transplant with minimum or no long term complications
Thank You!

Questions?