Give Birth to Hope: An Unique Approach to Public Cord Blood Donation

• The Public Health Nursing and Professional Development Unit, North Carolina Division of Public Health, is approved as a provider of continuing nursing education by the North Carolina Nurses Association, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.

• This presentation is being jointly provided with Carolinas Cord Blood Bank and Women’s Health Branch, Division of Public Health.

• The planners and presenters have no actual, potential or perceived conflicts of interest to disclose.
Give Birth to Hope: An Unique Approach to Public Cord Blood Donation

In order to obtain CE for this session participants must:

• Remain for the entire presentation

• Complete the participant evaluation from the Public Health Nursing and Professional Development Unit utilizing a survey monkey link which will be provided at the end of the presentation.

• A total of one contact hour will be awarded for this presentation.

• This webinar will be archived and contact hours will be available beginning August 31, 2016 until August 31, 2018.
Give Birth to Hope: An Unique Approach to Public Cord Blood Donation

Objectives

• Update health care professionals regarding Carolinas Cord Blood Banking Program.

• Provide health care professionals information about the cord blood donation and collection process to be able to share information with pregnant women.

• Discuss the potential life-saving options through the Be The Match registry.
GIVE BIRTH TO HOPE:
An Unique Approach to Public Cord Blood Donation
Carolinas Cord Blood Bank

- A not-for-profit, public cord blood bank at Duke University
- One of the largest cord blood banks in the world
- Part of the National Marrow Donor Program and Be The Match®
- Our goal is to provide safe, effective umbilical cord blood for patients in need of a live-saving transplant
Carolinas Cord Blood Bank

- Dr. Joanne Kurtzberg
- 1993 first unrelated blood transplant
- 1998 NMDP launches cord blood program
Cord Blood Transplant Beginnings

- Matthew
- 1988 First patient
- From Salisbury, NC
- 4 years old
- Fanconi’s Anemia
- Paris, France
- Sibling Donor
Matthew in 2014 with Dr. Joanne Kurtzberg
Your baby’s umbilical cord blood could SAVE A LIFE.

DID YOU KNOW?

LESS THAN 30% of people are aware of the option to donate cord blood to a public cord blood bank?

If your cord blood unit meets the criteria, it can be listed on the Be The Match Registry for any patient in need of a transplant.

Learn more at BeTheMatch.org/cord

Carolinas Cord Blood Bank
Dr. Hall Video

https://youtu.be/-C_GEAQ1iZs
<table>
<thead>
<tr>
<th>Cord Blood</th>
<th>Bone Marrow</th>
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<tbody>
<tr>
<td>• Painless to donate</td>
<td>• Donation requires treatment</td>
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<tr>
<td>• Greater HLA mismatch tolerated</td>
<td>• Closer HLA match required</td>
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<tr>
<td>• Can be frozen &amp; stored</td>
<td>• Not usually frozen or stored</td>
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<tr>
<td>• Less risk of acute GvHD</td>
<td>• Greater risk of acute GvHD</td>
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<td>• Can collect more TNCs for adults</td>
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Cord Blood is:

- The baby's blood left over in the umbilical cord and placenta after a baby is delivered and the cord is cut.
- A rich source of hematopoietic stem cells which are unspecialized cells that produce all blood cells.
- Typically thrown away as medical waste.
Why Cord Blood?

- Can be an alternative to bone marrow transplant
- Cord blood does not need to be as close a match as bone marrow
- Is more readily available than bone marrow
Cord Blood Treats:

- Sickle cell disease
- Blood cancers & diseases
- Immune deficiencies
- Inherited metabolic diseases
- Thalassemia disorders
- Bone marrow failure syndromes
Diseases Treated

More than 70 diseases can be treated by cord blood transplant

<table>
<thead>
<tr>
<th>Blood Disorders</th>
<th>Malignancies</th>
<th>Metabolic Disorders</th>
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<tbody>
<tr>
<td>• Sickle-cell anemia</td>
<td>• Leukemias</td>
<td>• Hurler’s syndrome</td>
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<td>• Aplastic anemia</td>
<td>• Lymphomas</td>
<td>• Niemann-Pick disease</td>
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<tr>
<td>• Fanconi’s anemia</td>
<td>• Multiple myeloma</td>
<td>• Krabbe disease</td>
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<td>• Thalassemia</td>
<td>• Hodgkin’s Disease</td>
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<td>• Thrombocytopenia</td>
<td>• Retinoblastoma</td>
<td>• Gaucher Disease</td>
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<td>• Diamond-Blackfan</td>
<td>• Histiocytosis</td>
<td>• Hunter Syndrome</td>
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<td>• Amegakaryocytosis</td>
<td>• Solid tumors</td>
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<thead>
<tr>
<th>Immunodeficiencies</th>
<th>Autoimmune Diseases</th>
<th>Other Inherited Disorders</th>
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<tr>
<td>• SCID</td>
<td>• Multiple sclerosis</td>
<td>• Osteoporosis</td>
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<td>• Ataxia Telangiectasia</td>
<td>• Systemic Lupus</td>
<td>• Osteogenesis Imperfecta</td>
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<td>• Wiskott Aldrich</td>
<td>• Rheumatoid arthritis</td>
<td>• Lesh-Nyhan Syndrome</td>
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<td>• DiGeorge</td>
<td>• Evan Syndrome</td>
<td>• Tay-Sachs</td>
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<td>• Kostmann</td>
<td>• Crohn’s Disease</td>
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<td>• Omenn</td>
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The NATIONAL MARROW DONOR PROGRAM® operates the Be The Match Registry®.
Your baby’s umbilical cord blood could SAVE A LIFE.

Every 3 minutes someone is diagnosed with a blood cancer. A cord blood transplant is a potentially life-saving treatment for more than 70 different diseases, including leukemia, lymphoma and other blood disorders.

If your cord blood unit meets the criteria, it can be listed on the Be The Match Registry® for any patient in need of a transplant.

Learn more at BeTheMatch.org/cord
Why is it Less Likely Non-Caucasians will Find a Match?

- Stem cells are more easily collected from Caucasian cord blood
- There are proportionally fewer Black, Hispanic and Asian donors compared to Caucasian donors
Role of Cord Blood in Transplants by Patient Ethnic Background

- Black/African American: 38% Cord Blood, 62% Bone Marrow or PBSC
- American Indian/Alaska Native: 31% Cord Blood, 69% Bone Marrow or PBSC
- Asian: 26% Cord Blood, 74% Bone Marrow or PBSC
- Native Hawaiian/Other Pacific Islander: 44% Cord Blood, 56% Bone Marrow or PBSC
- White: 12% Cord Blood, 88% Bone Marrow or PBSC

Source: National Marrow Donor Program/Be The Match FY 2015
Role of Cord Blood in Transplants for Patients of Hispanic or Latino Ethnic Background

73% Bone Marrow or PBSC
27% Cord Blood

Source: National Marrow Donor Program/Be The Match FY 2015
Donor Eligibility:

Donors must be:

✓ 18 years of age or older
✓ 34 weeks or more gestation
✓ having a single baby
✓ negative for Hepatitis B & C, HIV/AIDS, TB, HTLV
✓ free from cancers in the baby’s mom, dad or siblings
Delayed Cord Clamping

• Moms can delay clamping and donate
• Lower volumes of cord blood
• Sometimes meet minimum volume
What is the difference?

Family/Private
- Mom organizes
- For profit business
- Cost involved for mom (initial and annual)
- Advertise
- Eligibility for all bankers
- Pay initial and annual fees
- Reserved for family only
- Volumes requirements differ
- Different banking criteria

Donor/Public
- CCBB organize at staffed site/Mom organize at non-staffed site
- Not for profit organization
- No cost involved for mom
- Publicize
- Specific donor eligibility
- No donor fees involved
- For unrelated recipient
- Ship 60/80 mL
- Bank ≥ billion TNC if all criteria met
CCBB Staffed Sites

- Dedicated collection room
- Consented on admission
- Donation transported by local courier
- *Ex utero* collection by staff
- *In utero* by MDs/CNMs
- No advance coordination needed by mom
CCBB Staffed Sites in NC:

- Duke University Hospital - Durham, NC
- Duke Regional Hospital - Durham, NC
- UNC Women’s Hospital - Chapel Hill, NC
- Rex Hospital - Raleigh, NC
- Cone Health Women’s Hospital - Greensboro, NC
- Womack Army Medical Center - Fayetteville, NC
- Carolinas HealthCare System University - Charlotte, NC
- Carolinas HealthCare System NorthEast - Concord, NC
Ex Utero Collection Room
Cord Blood Collector and RN
Kit Program

• Donor driven
• NC only
• Consent before 36 weeks
• Kit sent 36 weeks
• NMDP trained MDs/CNMs
• *In utero* collection
• Shipped by commercial courier to mom and back to CCBB
At CCBB the Cord Blood is:

- Checked for viability and cell count
- Tested to make sure it is free of infectious diseases
- Tissue typed and listed on the Be the Match registry
- Frozen in liquid nitrogen and stored
Babies Are Amazing
https://www.youtube.com/watch?v=doxFKXKcPw
How can you help?

KNOWLEDGE = POWER
• Tell a friend!
• Share with your other healthcare providers, MDs, CNMs, DOs...
• Connect with us on social media
• Utilize our free educational resources for your patients
• Let us know when you’re having educational events in your area where we may be a good fit to exhibit or present
Available Resources:

Brochures

Patient Stories

Waiting Room Signs

Webpage Icon

Social Media

Educational Videos

Carolinas Cord Blood Bank
What should I remember?

• There is no cost to donate cord blood to a public bank
• Donation is not harmful to mom or baby
• Donation does not change delivery in any way
• If not donated or privately stored, cord blood is thrown out as medical waste
Thank You...

• For contributing to the National Marrow Donor Program public cord blood bank

• Your participation will help many patients in need of a cord blood transplantation
Questions?

www.ccbb.duke.edu

www.bethematch.org/cord