CBR | by CooperSurgical®

Newborn Stem Cell Quarterly Review: Q2 2023

Newborn stem cells are propelling groundbreaking advancements in the fields of transplant and regenerative medicine. Here are just a few of the exciting new developments that are shaping the future of medical science in this area.

FDA approval of the first expanded cord blood product for hematologic malignancy

The FDA's approval of Gamida Cell's Omisirge® marks a significant milestone in the field of cord blood stem cell therapy. This innovative product expands the number of blood-producing stem cells in a single unit.[1]

Cord blood stem cells offer advantages over other sources, including flexibility with genetic matching and decreased risk of graft vs host disease.[2] However, the limited cell count in cord blood poses a challenge for transplants in adolescents and adults due to cell dosing requirements. Omisirge addresses this issue by multiplying hematopoietic stem cells in cord blood units, increasing access for patients 12 years of age and older in need of an allogeneic hematopoietic stem cell transplant for hematologic malignancy.[1]

This breakthrough holds promise for further new developments in the clinical use of expanded cord blood products.

Learn more

The potential role of newborn stem cells in gene therapy

Gene therapy is a rapidly growing field that involves the modification of a patient's genetic information as a means of treating inherited conditions. Newborn stem cells may prove to be an ideal source for gene therapy due to their unique properties and easy collection at birth.[3]

The types of cells found in cord blood and cord tissue show promise for genetic manipulation outside the body. This approach has the potential to overcome immunogenic complications and provide safer genetic treatment options for certain immune disorders, solid-tumor cancers, cardiovascular disorders, and bone disease.[4,5,6,7]

Discover how the CBR Newborn Possibilities Program® is helping give qualified families the potential opportunity to participate in future research and treatments in the field of gene therapy.

Read now

"The Drew Barrymore Show" sits down with CBR® spokesperson, Dr. Christine Sterling, OB/GYN

As part of our ongoing awareness campaign, CBR spokesperson, Dr. Christine Sterling, made a special appearance on "The Drew Barrymore Show" to discuss the potential benefits of newborn stem cell preservation.

This short, must-see segment looked at the importance of healthcare providers educating patients about saving their baby's cord blood and cord tissue. It also featured an appearance by a CBR family whose son underwent a life-saving cord blood transplant.†

Watch and share this very special episode.

Watch now

Exclusive pricing for the OB/GYN and midwife community

CBR offers you and your staff significant savings on newborn stem cell preservation. Speak to your CBR rep or call Healthcare Provider Support at **1.888.588.0258**.

1. OMISIRGE [package insert]. Gamida Cell. 2023. http://www.gamida-cell.com/wp-content/uploads/Omisirge-final-PI.pdf. 2. Zhu X, Tang B, Sun Z. Umbilical cord blood transplantation: Still growing and improving. Stem Cells Transl Med. 2021;10 Suppl 2(Suppl 2):S62-S74. doi:10.1002/sctm.20-0495 3. Torre P, Flores AI. Current Status and Future Prospects of Perinatal Stem Cells. Genes (Basel). 2020 Dec 23;12(1):6. doi: 10.3390/genes12010006. PMID: 33374593; PMCID: PMC7822425. 4. U.S National Library of Medicine. ClinicalTrials.gov. Accessed October 21, 2022. https://clinicaltrials.gov/ 5. Uchibori, R., Tsukahara, T., Ohmine, K. & Ozawa, K. Cancer gene therapy using mesenchymal stem cells. Int. J. Hematol. 99, 377–382 (2014). 6. Liang, Y. et al. The caspase-8 shRNA-modified mesenchymal stem cells improve the function of infarcted heart. Mol. Cell. Biochem. 397, 7–16 (2014). 7. Lien, C. Y., Ho, K. C. Y., Lee, O. K., Blunn, G. W. & Su, Y. Restoration of bone mass and strength in glucocorticoid-treated mice by systemic transplantation of CXCR4 and Cbfa-1 Co-Expressing Mesenchymal Stem Cells. J. Bone Miner. Res. 24, 837–848 (2009).

†This family's personal experiences are not necessarily representative of other's experiences and cannot predict outcomes for others. CBR cannot and does not guarantee specific results.

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The CBR Newborn Possibilities Program® Low Apgar Protocol

CBR often partners with healthcare providers to offer free newborn stem cell processing and five years of storage for newborns at risk of developing certain neurological disorders based on a low Apgar score. How it works:

1. **Identify and begin collection at 1 minute**
   Identify newborns with an Apgar score of 3 or less at 1 minute after birth, prepare a CBR collection kit, and begin the collection.
2. **Complete the collection**
   If the Apgar score is still 3 or less at 5 minutes, OR if any medical intervention has been used (intubation, resuscitation, cooling protocol, etc.), complete the cord blood and cord tissue collection.
3. **Data Collection Sheet**
   Write the Apgar score and/or type of medical intervention on the Data Collection Sheet. Complete the remainder of the sheet and place it back in the CBR collection kit.
4. **Inform family**
   Inform the family that they may be eligible for our program and provide a copy of our Newborn Possibilities Program patient handout. If they want to participate, perform the maternal blood draw (must be done within 24 hours). Lastly, instruct the parents to call the number printed on the kit for pickup by a medical courier.
5. **Clinical specialists**
   Let the family know that one of CBR's clinical specialists will contact them to discuss the program and their option to participate.

CBR provides free training to L&D teams on Low Apgar Protocol. Contact your local CBR representative or call 1.888.588.0258 for details.

Best practices for cord blood collection

Based on 30-plus years' experience processing more than one million newborn stem cell collections,[1] we've found that following a few crucial steps can improve the usability of cord blood samples. Download "Maximize Collection Volume and Minimize Contamination Risk," for a clear, step-by-step guide on how to ensure a quality collection.

Download now

Join the CBR Healthcare Provider Network

The CBR Healthcare Provider Network is a free service that connects L&D professionals with specialized support and patient education resources. Our network aims to assist you in guiding your patients to make informed decisions regarding the preservation of their baby's newborn stem cells. Member benefits include compensation for collecting cord blood and/or cord tissue for CBR patients

Learn more

Connect with CBR®

Looking for more information to support your patients?

We've got you covered. Please visit **cordblood.com/providers** or call **1.888.588.0258** to speak with a representative today.

1. Internal data on file.

The use of cord blood is determined by the treating physician and is influenced by many factors, including the patient's medical condition, the characteristics of the sample, and whether the cord blood should come from the patient or an appropriately matched donor. Cord blood has established uses in transplant medicine; however, its use in regenerative medicine is still being researched. There is no guarantee that potential medical applications being studied in the laboratory or clinical trials will become available.

Cord tissue use is still in early research stages, and there is no guarantee that treatments using cord tissue will be available in the future. Cord tissue is stored whole. Additional processing prior to use will be required to extract and prepare any of the multiple cell types from cryopreserved cord tissue. Cbr Systems, Inc.'s activities for New York State residents are limited to collection of umbilical cord tissue and long-term storage of umbilical cord–derived stem cells. Cbr Systems, Inc.'s possession of a New York State license for such collection and long-term storage does not indicate approval or endorsement of possible future uses or future suitability of these cells.