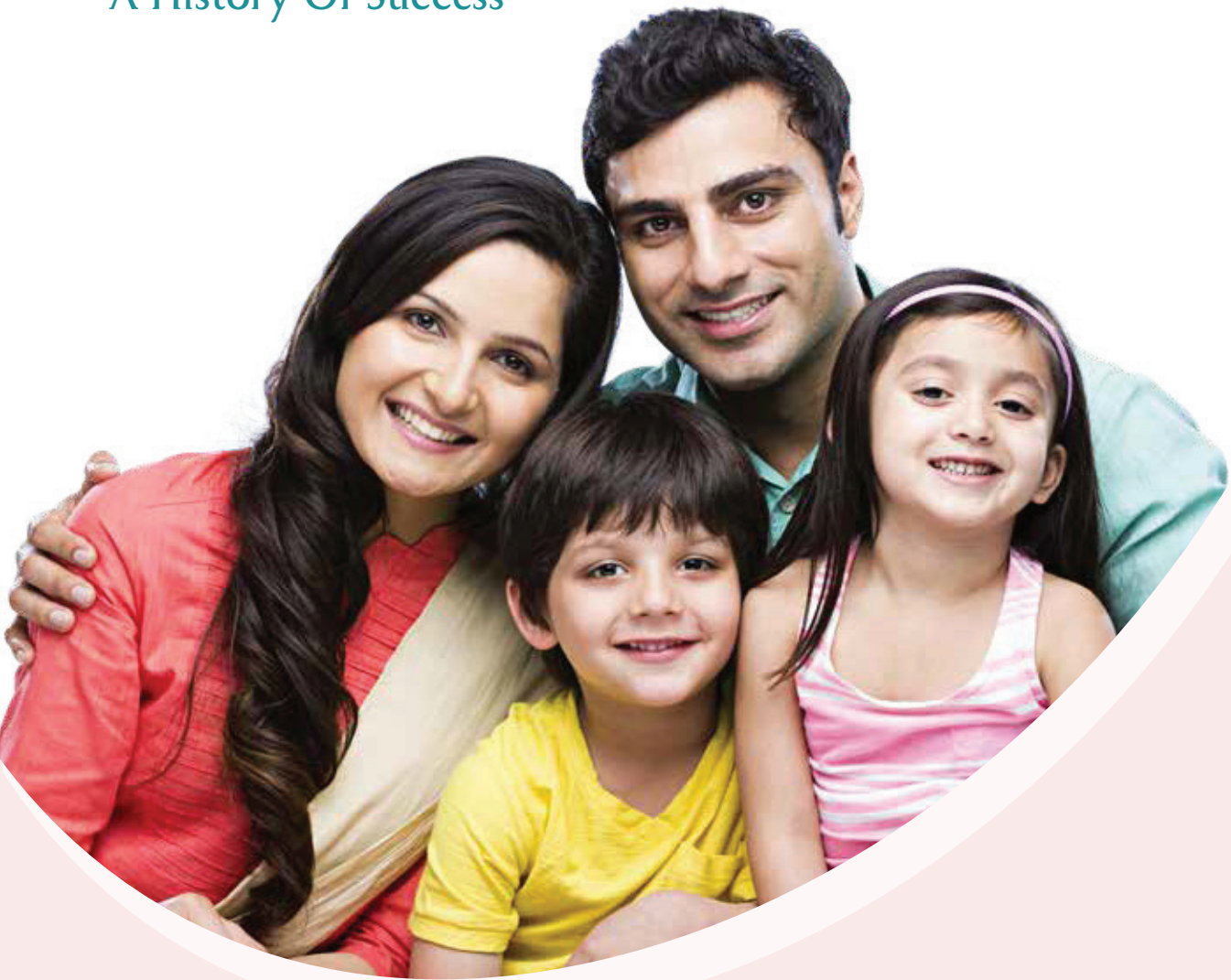


Stem Cell Transplantation & Infusion Record

A History Of Success



100% A Perfect
Record

All Cord Blood Specimens released by LifeCell
International have been viable when thawed





Private Bank / Public Bank



LifeCell - "Community Bank"

LifeCell's Community Banking - The Best Solution to Meet the Recommendations, Challenges & Need of the Hour

Abides by the Recommendations of IAP & IMA

LifeCell's Community Stem Cell Bank works similar to a Public Bank. Parents contribute their baby's cord blood stem cells to a common pool for use by themselves and other members of the community. This increases the chances of finding a suitable matching donor and thereby expands the treatment options for patients. Thus, the Community Banking model aligns with the recommendations of both the Indian Academy Of Pediatrics (IAP) and Indian Medical Association (IMA). Not only does Community Banking solve the challenges of low inventory and high costs of the public banking model, it is also a more sustainable business model compared to public banks.

What leading hemato-oncologist have to say about India's First Community Double Cord Blood Transplant?



Dr. Pritesh Junagade
(Director, Lotus Hospital)
Leading hemato-oncologist
and transplant physician

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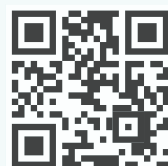
To watch this
video now

What leading hemato-oncologist have to say about Community Banking



Dr. Sandip Shah, MBBS, MD
(Medicine),
Senior Medical Oncologist,
Hematologist & Bone
Marrow Transplant
Physician, Ahmedabad,
Gujarat

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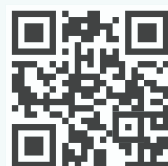


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video now



Dr. Rahul Bhargava,
MBBS, MD (Medicine), DM
(Clinical Haematology)
Hematologist, Haemato-
Oncologist & Bone Marrow
Transplant
Physician, Gurugram,
Haryana

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What leading hemato-oncologist have to say about Community Banking

Ex - Tata Memorial Hospital, Mumbai



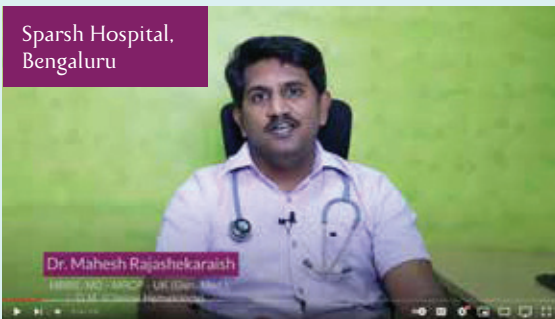
Dr. Purvish Parikh,
MBBS, MD, DNB, FICP,
PhD, ECMO, CPI,
MBA, Senior Medical
Oncologist & Hematologist,
Mumbai, Maharashtra

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Sparsh Hospital,
Bengaluru



Dr. Mahesh Rajashekaraiah,
MBBS, MD (Internal
Medicine),
DM (Clinical Hematology),
Hematologist, Haemato-
Oncologist & Bone Marrow
Transplant Physician,
Bengaluru, Karnataka

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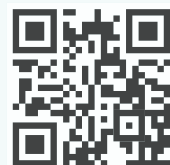
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Ujwal Hospital,
Aurangabad



Dr. Shraddha Chandak,
MBBS, DCH, DNB, FIAP
Consultant Pediatric
Haemato-Oncologist &
Immunologist,
Aurangabad, Maharashtra

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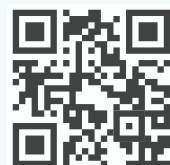
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video now

Narayana Health
City, Bangalore



Dr. Sunil Bhat,
Director & Head of
Pediatric Haematology
Oncology & bone marrow
transplantation, Narayana
Health City, Bangalore

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Doctor's Voice

Being in this field for almost 17 years people do turn up to me for suggestions regarding the option of saying “yes” or “no” to cord blood banking. I am definitely in a better position to say YES to them after I heard about your Community based cord blood banking program. It is unfortunate that our country lacks the awareness about cord blood banking and the ones who know a little about it are sceptical to go for it. Nevertheless, our country is in the “willing to learn” category and I am sure in the next few years most of the pregnant mothers will be opting for cord blood banking, hopefully all of them with LifeCell.

- Dr. Praveen Clement, Transplant Coordinator, Marrow Donor Registry India (MDRI)

Likelihood of using own cord blood is very small (less than 0.04%). Hence, the donation of cord blood to public bank is recommended because there is 100 times more likely chance of release of a unit from public bank compared to a private bank. - Recommendations by ACOG, AAP and ASBMT.

In majority of blood disorders, the child's own stored cord blood cannot be used for the same child as they will carry the same genetic defect. - Padma Shri Dr. K. K. Aggrawal, Immediate Past President of Indian Medical Association (IMA)- April, 2018.

According to the current literature, Community Banking is better than Private Banking. - Dr. Ashima Taneja, MD (Obst & Gynec), Dayanand Medical College and Hospital, Ludhiana, Punjab.

Community stem cell banking is really a need of this era and please make sure to take this idea especially to remote areas. - Dr. Yogita Chandarvanshi, Senior Consultant and Medical Director of Chandrayan Health Care, Raipur, Chhattisgarh.

Dr. Niranjan N Rathod, Associate Director & Head of Department, Haemato-Oncology & Bone Marrow Transplant, Nanavati Super Speciality Hospital, Mumbai said, “We have a huge number of patients suffering from fatal blood disorders like Blood Cancer and Thalassemia Major for whom the last resort is a Blood Stem Cell transplant. For patients who could not find a match within their family there was no hope. It is only with help of unrelated donor registries that there is a ray of hope for such patients.”

Private banks continue storing umbilical cords, with no one questioning its futility. This kind of singular banking systems is reaping little gain but with the general lack of awareness, parents are falling into deep traps. The reserves should be turned into pools of sharing resource. Patients can be treated by choosing the closest match from the available pool. - Dr A. Kannan, Head of Paediatrics, Meenakshi Mission Hospital, Madurai, Tamil Nadu.

Routine non-directed cord blood and cord banking as a form of ‘biological insurance’ against future disease should be discouraged. Restructuring the way umbilical cord blood is stored and shared will present new paradigms of treatment. Filling the large gap between what's available and what's usable is now the need of the hour. - Dr. Prathima Reddy, Senior Obstetrician and Gynaecologist, Director of Fortis La Femme Hospital, Bangalore, Karnataka.



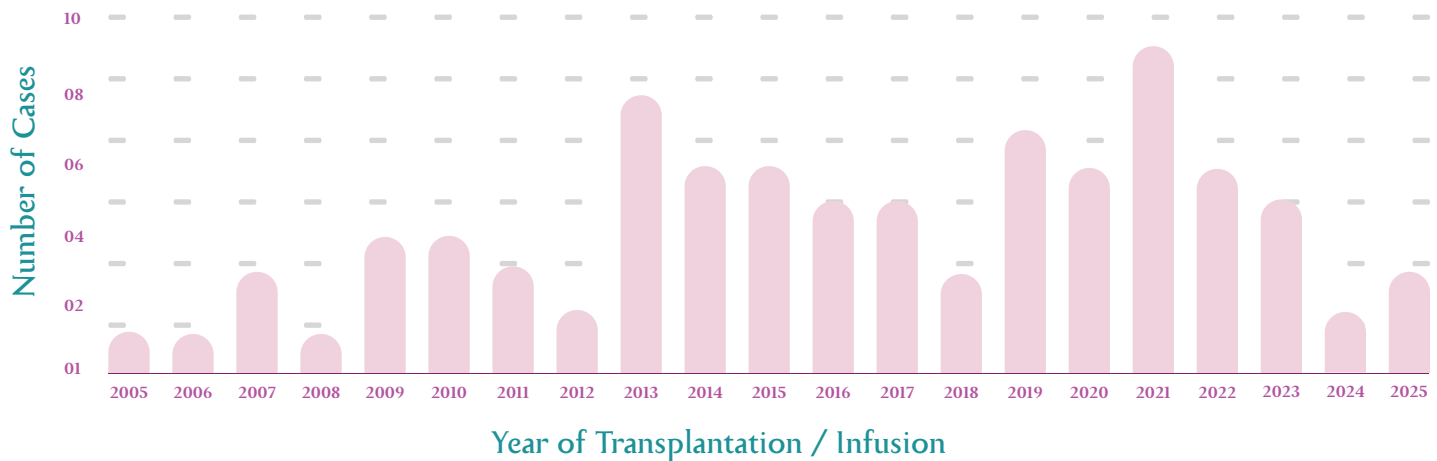
In the past **20+** years, **over 4,75,000** parents have placed their trust in LifeCell International to collect, process and safely store their newborn's cord blood stem cells – just in case it is needed. Here is a complete record of the families who called on their stored specimens to cope with life-threatening or debilitating diseases. Our perfect record of stem cell viability upon thaw is based on these families' experiences.

Total number of cord blood transplants = **90**

Total number of cord blood units retrieved = **91**

Note: In one of the transplant, the patient retrieved & utilized two unrelated cord blood units from LifeCell's Community Banking Registry (Double Umbilical Cord Blood Transplantation).

Number of Cases vs. Year of Transplantation / Infusion



Summary Of Our Retrieval Experience

Total Unique Medical Conditions Treated

18

The stored cord blood units were shipped to the below countries at no extra cost to the Clients

India

69

USA

17

Singapore

02

Thailand

01

Georgia

01

Total Unique Hospitals

23

Total Unique Doctors

27

*Data as on Sep 2025

Unlike other stem cell banks who showcase the data of their entire Group including various subsidiaries and all global facilities, our data features the cord blood releases performed by LifeCell International only from its India based facility. Our transplant record is the ultimate validation of our cord blood processing and storage capability making LifeCell the most trusted and preferred stem cell bank for Indians.

Medical Conditions Treated Using The Stored Cord Blood Units

*In many cases, to increase the stem cell dosage, patients received both cord blood and bone marrow stem cells from the same sibling donor.



Beta Thalassemia
Major

51

Autism Spectrum
Disorder

11

Spastic
Cerebral Palsy

07

Acute Lymphoblastic Leukemia (ALL)	4
Aplastic Anemia	2
Medulloblastoma	2
Acute Myeloid Leukemia (AML)	1
Chronic Myeloid Leukemia (CML)	1
Fanconi Anemia	1
Chronic Granulomatous Disease (CGD)	1
Ewing Sarcoma (Metastatic)	1
Ganglioneuroblastoma (Metastatic)	1
Hemophagocytic Lymphohistiocytosis (HLH)	1
Juvenile Myelomonocytic Leukemia (JMML)	1
MSMD (Mendelian Susceptibility To Mycobacterial Disease)	1
Supratentorial CNS Embryonal Tumor (Formerly Primitive Neuroectodermal Tumor - PNET)	1
Shwachman-Diamond Syndrome (SDS)	1
Hypoxic Ischemic Encephalopathy (HIE)	2

Medical Conditions Treated Using The Stored Cord Blood Units

Medical Conditions / Diagnosis	 India	 USA	 Singapore	 Thailand	 Georgia	TOTAL
Beta Thalassemia Major	49	0	1	1	0	51
Autism Spectrum Disorder	1	8	1	0	1	11
Spastic Cerebral Palsy	1	6	0	0	0	7
Acute Lymphoblastic Leukemia (ALL)	3	1	0	0	0	4
Aplastic Anemia	2	0	0	0	0	2
Medulloblastoma	2	0	0	0	0	2
Acute Myeloid Leukemia (AML)	1	0	0	0	0	1
Chronic Myeloid Leukemia (CML)	1	0	0	0	0	1
Juvenile Myelomonocytic Leukemia (JMML)	1	0	0	0	0	1
Hemophagocytic Lymphohistiocytosis (HLH)	1	0	0	0	0	1
Chronic Granulomatous Disease (CGD)	1	0	0	0	0	1
Mendelian Susceptibility to Mycobacterial Disease (MSMD)	1	0	0	0	0	1
Fanconi Anemia	1	0	0	0	0	1
Supratentorial CNS Embryonal Tumor (formerly PNET)	1	0	0	0	0	1
Ganglioneuroblastoma (Metastatic)	1	0	0	0	0	1
Ewing Sarcoma (Metastatic)	1	0	0	0	0	1
Shwachman-Diamond Syndrome (SDS)	1	0	0	0	0	1
Hypoxic Ischemic Encephalopathy (HIE)	0	2	0	0	0	2
Total	69	17	2	1	1	90

Where Do These Indian Families Belong To?



Hospitals Where These Stem Cell Transplantations / Infusions Were Performed

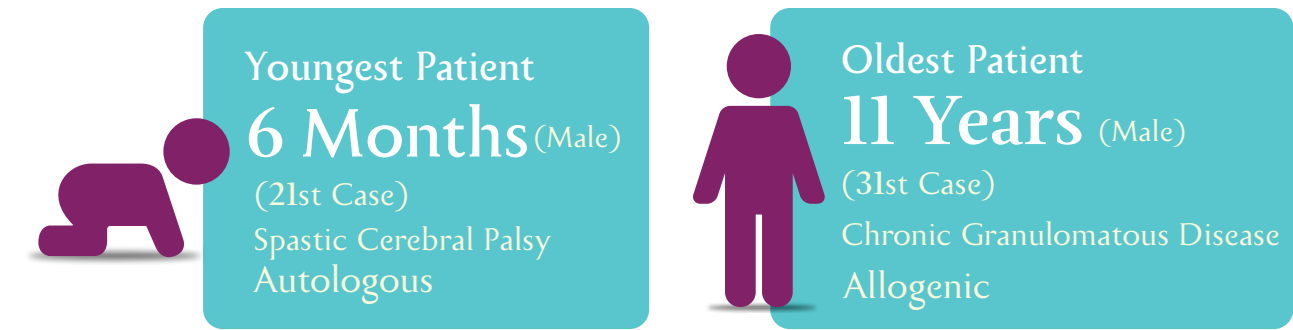
Name Of Hospital	Name Of Cases
INDIA	
• Apollo Speciality Hospital, Chennai, Tamil Nadu, India	30
• Narayana Hrudayalaya Health City, Bengaluru, Karnataka, India	7
• Dr. B. L. Kapur Memorial Hospital, New Delhi, India	7
• NH SRCC Children's Hospital, Mumbai, Maharashtra, India	4
• Medanta - The Medicity Hospital, Gurugram, Haryana, India	4
• Christian Medical College (CMC), Ludhiana, Punjab, India	2
• Rajiv Gandhi Cancer Institute and Research Center, Delhi, India	2
• Indraprastha Apollo Hospital, New Delhi, India	2
• Lotus Hospital, Nashik, Maharashtra, India	2
• Fortis Malar Hospital, Chennai, Tamil Nadu, India	1
• Sir Ganga Ram Hospital, New Delhi, India	1
• Sterling Hospital, Ahmedabad, Gujarat, India	1
• St. Johns Medical College Hospital, Bengaluru, Karnataka, India	1
• Rainbow Children's Hospital, Banjara Hills, Hyderabad, Telangana, India	1
• Kokilaben Dhirubhai Ambani Hospital Mumbai, Maharashtra, India	1
• Zydus Hospital, Cancer Center, Ahmedabad, Gujarat, India	1
• Dharamshila Narayana Superspeciality Hospital, Delhi, India	1
• Kauvery Hospital, Tiruchirappalli, Tamil Nadu, India	1
USA	
• Duke University Medical Center, Durham, North Carolina, USA	15
• Carolinas Cord Blood Bank At Duke University, Durham, North Carolina, USA	2
SINGAPORE	
• Mount Elizabeth Hospital, Singapore	1
• KK Women's and Children's Hospital, Singapore	1
THAILAND	
• Siriraj Hospital, Bangkok, Thailand	1
GEORGIA	
• Mardaleishvili Medical Center, Levana Charkviani St., Tbilisi, Georgia	1

Physicians Who Performed These Stem Cell Transplantations / Infusions

Name Of Doctor / Physician	
INDIA	
• Dr. Revathi Raj, Apollo Speciality Hospital, Chennai, Tamil Nadu, India	29
• Dr. Sunil Bhat, Narayana Hrudayalaya Health City, Bengaluru, Karnataka, India	6
• Dr. Dharma Choudhary, Dr. B. L. Kapur Memorial Hospital, New Delhi, India	5
• Dr. Satya P. Yadav, Medanta - The Medicity Hospital, Gurugram, Haryana, India	4
• Dr. Ruchira Misra, NH SRCC Children's Hospital, Mumbai, Maharashtra, India	3
• Dr. M. Joseph John, Christian Medical College (CMC), Ludhiana, Punjab, India	2
• Dr. Pritesh Junagade, Lotus Hospital, Nashik, Maharashtra, India	2
• Dr. Satya P. Yadav, Sir Ganga Ram Hospital, Rajinder Nagar, New Delhi, India	1
• Dr. Gaurav Kharya, Dr. B. L. Kapur Memorial Hospital, New Delhi, India	1
• Dr. Gaurav Kharya, Indraprastha Apollo Hospital, New Delhi, India	1
• Dr. Dinesh Bhurani, Rajiv Gandhi Cancer Institute and Research Center, Delhi, India	1
• Dr. Dinesh Bhurani, Sterling Hospital, Ahmedabad, Gujarat, India	1
• Dr. Ranjan Kumar Mohapatra, Apollo Speciality Hospital, Chennai, Tamil Nadu, India	1
• Dr. V. Murugan, Fortis Malar Hospital, Chennai, Tamil Nadu, India	1
• Dr. Narendra Agrawal, Rajiv Gandhi Cancer Institute and Research Center, Delhi, India	1
• Dr. Sarath Damodar, Narayana Hrudayalaya Health City, Bengaluru, Karnataka, India	1
• Dr. Anand Prakash, St. Johns Medical College Hospital, Bengaluru, Karnataka, India	1
• Dr. Lokesh Lingappa, Rainbow Children's Hospital, Banjara Hills, Hyderabad, Telangana, India	1
• Dr. Himani Dhingra, Indraprastha Apollo Hospital, New Delhi, India	1
• Dr. Santanu Sen, Kokilaben Dhirubhai Ambani Hospital Mumbai, Maharashtra, India	1
• Dr. Sandeep Shah, Zydus Hospital, Cancer Center, Ahmedabad, Gujarat	1
• Dr. Chintan Vyas, NH SRCC Children's Hospital, Mumbai, Maharashtra, India	1
• Dr. Suparno Chakrabarti, Dharamshila Narayana Superspeciality Hospital, Delhi, India	1
• Dr. Vinod Gunasekaran, Kauvery Hospital, Tiruchirappalli, Tamil Nadu, India	1
USA	
• Dr. Jessica M. Sun, Duke University Medical Center, Durham, North Carolina, USA	14
• Dr. Joanne Kurtzberg, Carolinas Cord Blood Bank At Duke University, Durham, North Carolina, USA	3
SINGAPORE	
• Dr. Patrick Tan, Mount Elizabeth Hospital, Singapore	1
• Dr. Joyce Lam Ching Mei, KK Women's and Children's Hospital, Singapore	1
THAILAND	
• Dr. Vinai Suwatt, Siriraj Hospital, Bangkok, Thailand	1
GEORGIA	
• Dr. Gocha Shatirishvili, Mardaleishvili Medical Center, Levana Charkviani St., Tbilisi, Georgia	1

Total number of cord blood transplants - 90
Total number of cord blood units retrieved - 91

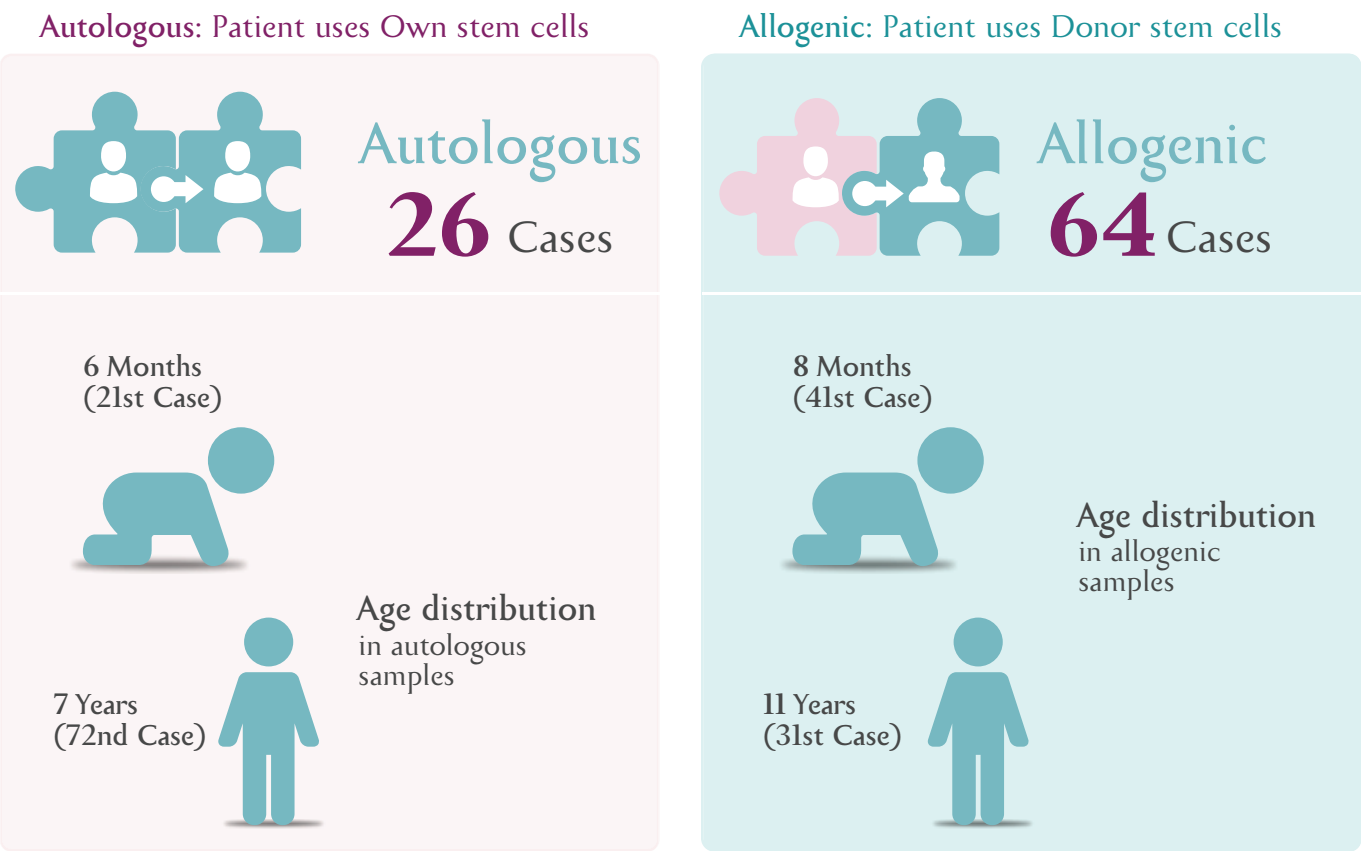
Age Range of patients who received the stem cell transplantation / infusion



Gender Distribution

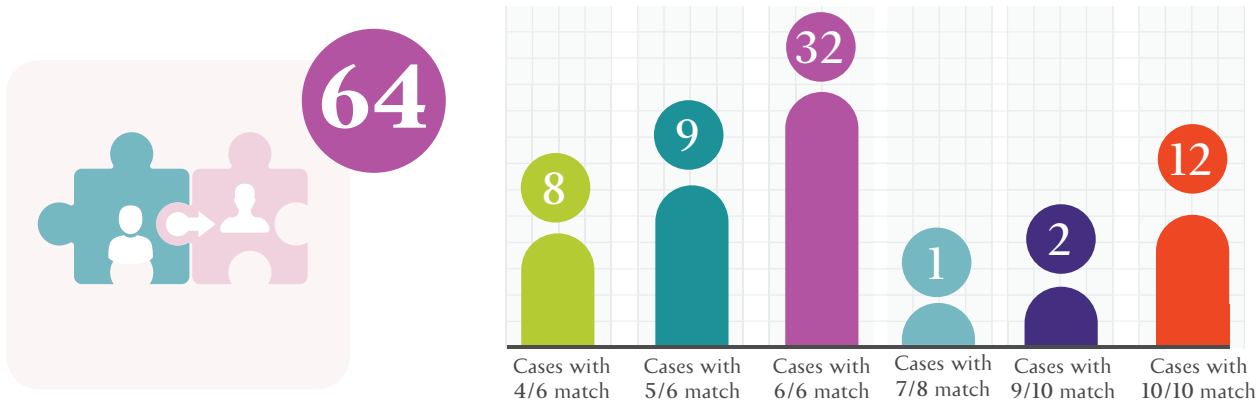


Type Of Transplantation / Infusion



Distribution of HLA Matching Between Siblings

Human Leukocyte Antigens are proteins on the surface of our cells that helps the immune system to identify the cells that belong to our body. The best transplant outcome happens when a patient’s HLA and the donor’s HLA closely match.



Allogenic Cases

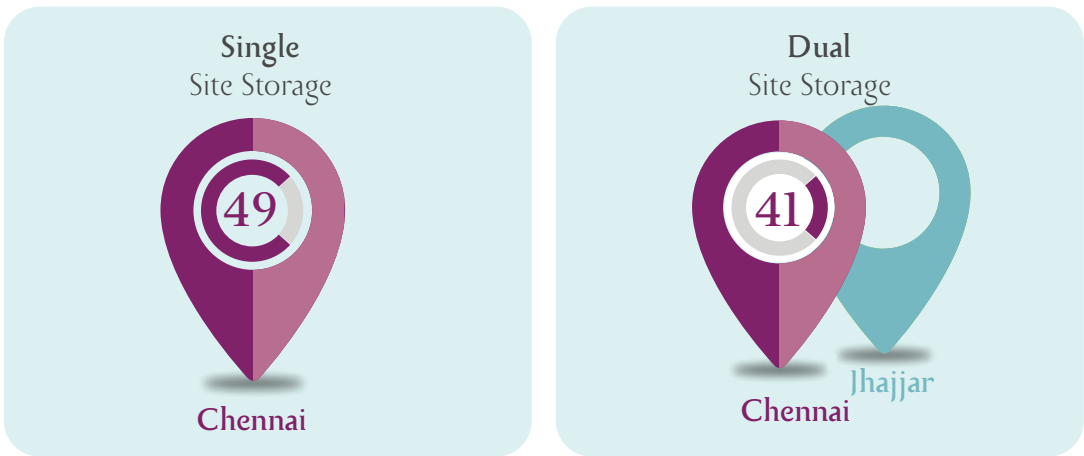
HLA typing is used to match the compatibility of the patient with a donor for a stem cell transplant. As per the new NMDP (National Marrow Donor Program) guidelines minimum 6 out of 8 match HLA match (~75% match) between the patient and the donor is required for a haematopoietic stem cell transplant to improve overall transplant outcomes and better quality of life post transplant.

Reference: http://www.nationalcordbloodprogram.org/public_hla_search.html

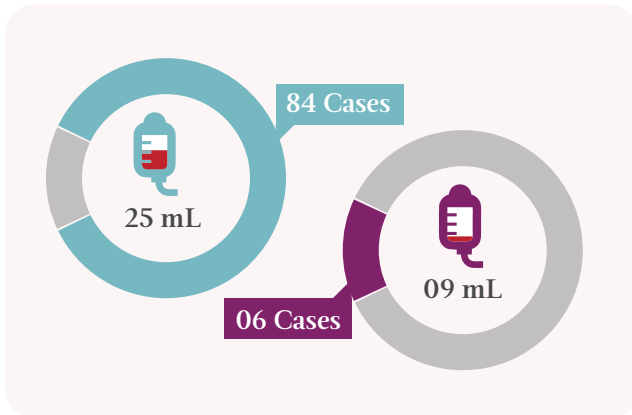
LifeCell has facilitated total Two Umbilical Cord Blood Transplantations from its Community Banking Registry.
Note: The first transplant recipient received two unrelated cord blood units (Double Umbilical Cord Blood Unit Transplantation) and the second transplant recipient received a single unrelated cord blood transplantation.

Type Of Storage

For disaster management and added retention security, LifeCell exclusively offers Dual Site Facility wherein at its own discretion LifeCell shall safely store the samples at either of its licensed facilities.

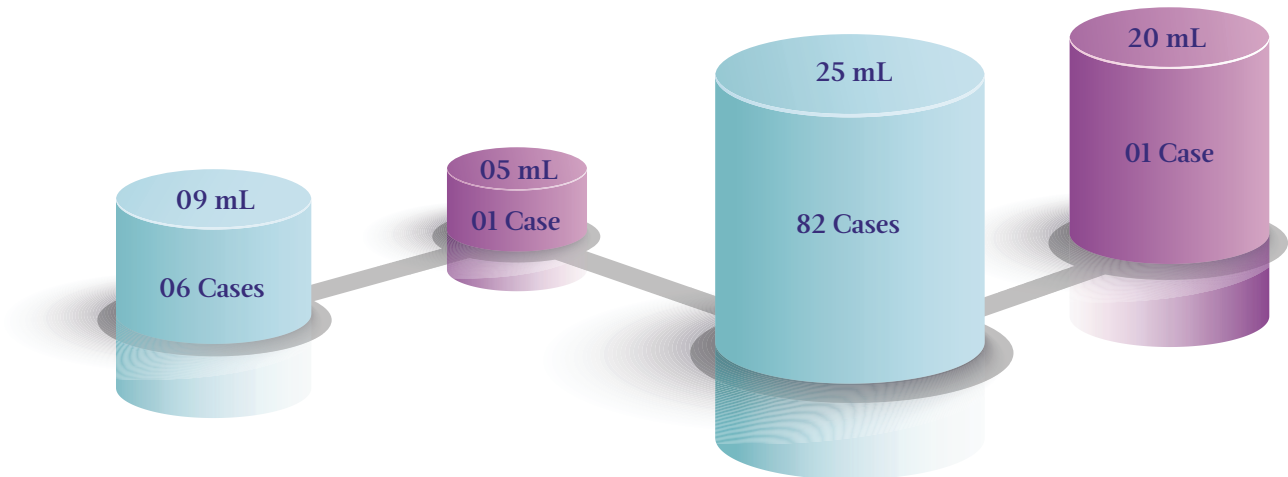


Volume Distribution Of CBU At The Time Of Storage

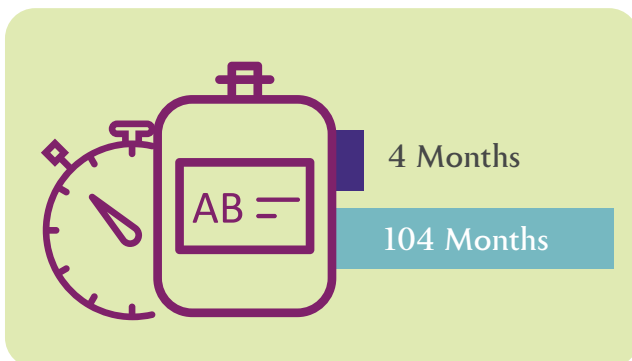


Median Values Per Cord Blood Unit	
Median Collection Volume	91 ml
Median Storage Volume	25 ml
Median Volume Retrieved	25 ml
Median TNCC	616 Million
Median CD34+ Cell Count	1.90 Million
Median CD34+ Stem Cell Viability	95.06%

Volume Distribution Of CBU At The Time Of Retrieval



How Long Were The Cord Blood Units Stored Before Retrieval



- Youngest Sample (CBU) Retrieved**
4 months (0.3 years)
6th Case
Chronic Myeloid Leukemia (CML)
- Oldest Sample (CBU) Retrieved**
104 months (8 years 8 Months)
76th Case
Autism Spectrum Disorder

Did You Know?

CryoCell International Inc., world's first private use cord blood bank On March 13 2020, announced the results of specimen testing on cord blood performed by Dr.Hal Boxmeyer and colleagues, completed on samples stored from 1996, and determined stability of 23+ years with CD34 viability of >92% . These results suggest that if properly processed and maintained at the proper temperature, cryogenically preserved cord blood stem cells can be stored for many decades.
(Ref :<https://rb.gy/2mdr05>)

LifeCell Case Studies

CASE STUDY # 1

Section I: Aplastic Anaemia

First Cord Blood Transplant from Community Bank

November 2020

LifeCell International of India operates the world's first **Community Cord Blood Bank**, a new banking model where parents pool their children's cord blood units to provide protection to the community of participants. Now, LifeCell has released the first transplant from this community bank to save a 7-year-old child suffering from aplastic anaemia – a rare and serious blood disorder in which the body stops making new red blood cells.

How the story began



It was two years ago that the child was diagnosed with aplastic anaemia. At the time of diagnosis, the doctors had suggested a stem cell transplant would be the best possible treatment in the future. Since the child's parents were expecting another baby at the time, on medical recommendation, they decided to bank the sibling's umbilical cord blood stem cells with LifeCell's Community Bank.

The child was recently admitted to the well-known LOTUS Institute of Haematology, Oncology and Bone Marrow Transplantation in Nashik, and was in a very critical state. Despite receiving repeated platelet transfusions to control bleeding, the health of the child kept deteriorating. Given the severity, the doctors advised an immediate stem cell transplant.

In such transplants, stem cells from a matched sibling or a related donor are preferred. Unfortunately, when assessed, the sibling was only a 50% (4 of 8) match – unacceptable for proceeding with a stem cell transplant. In the absence of a suitable family donor, stem cells from a closely matching unrelated donor are the fallback transplant strategy to ensure lower rates of complications such as graft versus host disease¹.

Community banking offers hope

While stem cells from the umbilical cord blood can be procured from global public banks, the probability of finding a match for a patient of Indian origin is less than 10% because of the low inventory of Indian units². Luckily, since the family was now part of the LifeCell Community Bank, they had access to the community inventory of over 50,000 cord blood units which provide over 97% probability of finding a match. Importantly, the parents could request and withdraw matched units at no additional expense, which otherwise would cost at least USD \$43,500 for each cord blood unit from an international public bank³.

As an additional hurdle, the doctors recommended procuring not one, but two, cord blood units to treat the child's aplastic anaemia. Whereas typical stem cell transplants require a dose of 25 million cells per kg of patient weight, in the case of aplastic anaemia the recommended minimum dose is 40 million cells per kg⁴.

Fortunately, when the parents placed a request at the LifeCell registry, two high-quality matches (7 of 8) were found, which fulfilled the requirement for transplantation of aplastic anaemia. Since the cord blood units were ready in the bank, and the retrieval process from the Community Bank does not require waiting for donor consent, LifeCell promptly released and shipped the two matched cord blood units to the hospital.

A new beginning for the child and family



The child was able to receive a timely transplant thanks to the talented team of doctors and the prompt response by LifeCell. The initial outcome has been very encouraging. Just 18 days after the transplant, white blood cells have completely engrafted and platelet and red blood cell production have also increased drastically. The child is now discharged from the hospital!

Relieved and content with the speedy recovery of his child and the pleasant experience with LifeCell, the father of the child was glad to have enrolled in the Community Bank. Witnessing the life-saving benefits of cord blood stem cells, he also makes it a point to raise awareness and educate others about this unique initiative.

This heart-warming story has been encouraging for the whole community. Not only did the easy access to high-quality cord blood units expedite the recovery process, but also this complex double transplant was carried out at a low-volume transplant centre in a mid-sized city. Dr. Pritesh Junagade, a prominent hemato-oncologist and director of Lotus Hospital, said that he was pleasantly surprised that the retrieval process for two cord blood units was convenient and at no additional cost to the patient as compared to other banking models. LifeCell's Community Bank not only allows unlimited retrievals for the siblings of the baby that banked cord blood, but also protects the entire family including parents and grandparents. Calling it a real social service, Dr. Junagade is now a supporter of the LifeCell Community Bank and would welcome the opportunity to further advance this banking model.

Established in 2004, LifeCell International is India's first and largest stem cell bank, enjoying the trust of over 3,50,000+ parents who have banked their children's cord blood with the company. We are the only player in the industry providing comprehensive stem cell solutions including the novel initiative of community stem cell banking, R&D, and point-of-care stem cell therapy for orthopaedic and vascular specialities. The diagnostic division offers India's most comprehensive screening program for mother & baby care, offering preconception, prenatal, and newborn testing services aimed at addressing the challenge of high infant mortality rate in the country as well as promote health and wellness for generations to come. For more information, visit LifeCell.in

CASE STUDY # 1

Section II: Thalassemia Major

Printed from:
THE TIMES OF INDIA

His sister's keeper: Brother's blood is boon of life

TNN | Sep 17, 2009, 02:52 AM IST



His sister's keeper: Brother's blood is boon of life

CHENNAI: Senthil Kumar and Sarojini were shattered when their 18-month-old daughter, Thamirabharani, was diagnosed with thalassaemia. The blood disorder left the infant, born in 2000, at the mercy of transfusions and with little energy for anything else. (Watch Video) Sarojini aborted her next two pregnancies, fearing a repeat of the disorder in her children and it began to look like Thamirabharani would have neither a good life nor a sibling. Today, she has both – and, to double the family's joy, her brother also turned out to be her saviour.

Giving a happy ending to a poignant family tale and raising fresh hope of leveraging stem cell therapy, a group of doctors and specialists in Chennai and Coimbatore have registered the first successful treatment of thalassaemia in a child using a sibling's umbilical cord blood. Stem cells

extracted from the cord blood during Pugazhendhi's birth were transplanted in Thamirabharani in March. After the mandatory five months' observation period, doctors on Wednesday announced Thamirabharani cured of thalassaemia.



Dr. Revathi Raj, Pediatric Hematologist at Apollo Speciality Hospital, Chennai, Tamil Nadu, India performed this blood stem cell transplantation in 2009 using Thamirabharani's younger brother's bone marrow and cord blood stem cells together. LifeCell assisted this family with INR 12 lakh to offset the transplant related expenses on humanitarian grounds.

Transplant Outcomes For Thalassemia Major Cases Facilitated By LifeCell

The youngest patient was 2 years and the oldest 10 years in age. There were total 21 males and 22 females. A standard chemotherapy conditioning regimen was used in all the patients to prepare them for the hematopoietic stem cell transplantation. On follow up of first 21 cases, ~95% of the patients had one year disease-free survival. In our experience so far, 11.6% of cases were with 4/6 match, 21% cases with 5/6 match and 67.4% cases with 6/6 full match. To increase the stem cell dosage, patients received both cord blood and bone marrow stem cells from the same sibling donor.



CASE STUDY # 1

Nitya's Story

Nitya Dua, is like any other teenager, but not so long ago! Her parents were quite concerned and worried when she repeatedly fell sick. They were shocked to learn that Nitya was diagnosed with Thalassemia Major and needed two units of blood transfusion every month.

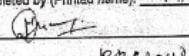
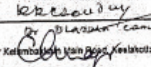
Her father, Mohit, a businessman from Ghaziabad, read about bone-marrow transplants being used to treat Thalassemia, and when his son was born in 2009, he had the infant's cord blood banked with LifeCell International.

In Sep 2012, Dr. Dharma Choudhary at Dr. B. L. Kapur Memorial Hospital, New Delhi, India, performed a bone marrow transplantation on Nitya using cord blood and bone marrow of Nitya's brother.

Nitya showed progressive recovery from day one and showed good engraftment of the new stem cells into his bloodstream. She was declared disease-free and was discharged from the hospital subsequently. She is now cured and is focusing on her studies.

Would Mr. Mohit Dua recommend expectant parents to get their baby's cord blood banked: "How can I not? It did help," he says.

Nitya is an example that such incurable diseases can be treated with the best quality stem cells.

LifeCell		ANNUAL TRANSPLANT FOLLOW-UP FORM	
Date:	16/12/14 (mm/dd/yyyy)		
Patient Name:	Nitya Dua	Age (yrs):	10.10
LifeCell CRM ID:	091700059	Transplant Physician:	Dr. DHARMA R CHOWDHARY
Transplant Center (Hospital Address):		B L KAPUR MEMORIAL HOSPITAL, NEW DELHI - 110005	
Transplant Date/Time:		01/09/2012 Transplant done for (Disease): THALASSEMIA MAJOR	
1. Quality of life of the patient: ☒ Good ☐ Better ☐ Improved ☐ Not Improved			
2. Post Transplant Hospitalization in the past: ☐ Yes ☒ No			
Comments (if yes):			
3. Concomitant medication: ☐ On ☒ Stopped			
Comments (if medication is on):			
4. Laboratory testing in the past: ☒ Done ☐ Not done			
(Abnormal values if any): None			
(NOTE: Kindly attach the copy of laboratory reports in case of abnormal values)			
5. Whether intended dysfunction is: ☒ Cured ☐ Improving ☐ Not Improving			
6. GVHD: ☐ Yes ☒ No (If yes, please provide details):			
7. Chimerism: ☐ Yes ☒ No (If yes, please provide details): complete donor chimerism			
Comments (if yes):			
Additional comment on Patient's examination (if any): None			
Form completed by (Printed name): MAYANK DHAMRA Date: 16/12/14			
Signature: 		Telephone: 1226	
Reviewed by: 		Date: 16/12/14	
Please send the filled-up form to: LifeCell International, # 28, Varadhar Kalamandir, Main Road, Vashikotayur, Chennai-600127, Phone: +91-44-47443353, Or Fax the form to +91-44-47443354			
LCGRY/GEN/SOP-002/FOM-20		Effective: 07/08/2014	
		Dr. B L Kapur Memorial Hospital Pusa Road, New Delhi-110005 t +91 11 30403040, f +91 11 2575 2885 e info@blkhospital.com www.blkhospital.com	

Section III : Autism Spectrum Disorder (ASD)

Stem Cells Transl Med. 2017 May;6(5):1332-1339. doi: 10.1002/sctm.16-0474. Epub 2017 Apr 5.

Autologous Cord Blood Infusions Are Safe and Feasible in Young Children with Autism Spectrum Disorder: Results of a Single-Center Phase I Open-Label Trial.

Dawson G¹, Sun JM², Davlantis KS¹, Murias M^{1,3}, Franz L¹, Troy J², Simmons R², Sabatos-DeVito M¹, Durham R², Kurtzberg J².

Author information

- 1 Duke Center for Autism and Brain Development, Duke University Medical Center.
- 2 Robertson Clinical and Translational Cell Therapy Program, Duke University Medical Center.
- 3 Duke Institute for Brain Sciences, Duke University Medical Center, Durham, North Carolina, USA.

Abstract

Despite advances in early diagnosis and behavioral therapies, more effective treatments for children with autism spectrum disorder (ASD) are needed. We hypothesized that umbilical cord blood-derived cell therapies may have potential in alleviating ASD symptoms by modulating inflammatory processes in the brain. Accordingly, we conducted a phase I, open-label trial to assess the safety and feasibility of a single intravenous infusion of autologous umbilical cord blood, as well as sensitivity to change in several ASD assessment tools, to determine suitable endpoints for future trials. Twenty-five children, median age 4.6 years (range 2.26-5.97), with a confirmed diagnosis of ASD and a qualified banked autologous umbilical cord blood unit, were enrolled. Children were evaluated with a battery of behavioral and functional tests immediately prior to cord blood infusion (baseline) and 6 and 12 months later. Assessment of adverse events across the 12-month period indicated that the treatment was safe and well tolerated. Significant improvements in children's behavior were observed on parent-report measures of social communication skills and autism symptoms, clinician ratings of overall autism symptom severity and degree of improvement, standardized measures of expressive vocabulary, and objective eye-tracking measures of children's attention to social stimuli, indicating that these measures may be useful endpoints in future studies. Behavioral improvements were observed during the first 6 months after infusion and were greater in children with higher baseline nonverbal intelligence quotients. These data will serve as the basis for future studies to determine the efficacy of umbilical cord blood infusions in children with ASD. *Stem Cells Translational Medicine* 2017;6:1332-1339.

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KEYWORDS: Autism spectrum disorder; Autologous umbilical cord blood; Cell therapy

PMID: 28378499 PMCID: [PMC5442708](#) DOI: [10.1002/sctm.16-0474](#)

Significance Statement

This phase I study demonstrates that it is safe and feasible to perform autologous umbilical cord blood infusions in young children with autism spectrum disorder and identifies several promising outcome measures for use in future trials.

5 out of total 25 children who participated in this US FDA-approved clinical trial had their own cord blood stem cells banked at birth with LifeCell which turned out to be beneficial. The children underwent the infusion of their own cord blood stem cells under the able supervision of world renowned physicians Dr. Joanne Kurtzberg and Dr. Jessica Sun at Duke University Medical Center, Durham, North Carolina, USA.

In July 2019, one of LifeCell Client's Child got her Own Cord Blood Infused to treat ASD in a SingHealth Centralised Institutional Review Board (CIRB) Approved Clinical Trial led by Dr. Joyce Lam Ching Mei, Paediatric Haematology / Oncology, Pathology Laboratory Medicine at KK Women's & Children's Hospital, Singapore.



Case example: Baseline assessment

- *No words; limited vocalizations*
- *Little use of gestures*
- *Little emotional engagement*



Case example: 12 month assessment

- *Increase in number of word*
- *Spontaneous use of full sentences and gestures*
- *Use of imaginary play*
- *Increased emotional response and sustained eye contact*
- *Language score increased from 62 to 97 (100 is average)*
- *IQ increased from 54 to 82*

Encouraging Preliminary Data:

The researchers found that while at Baseline Assessment, kid had limited vocalizations, little use of gestures and little emotional engagement. At **12-Month Assessment**, the kid showed improvement in increase in number of spoken words, spontaneous use of full sentences and gestures, use of imaginary play, increased emotional response and sustained eye contact. The language score increased from 62 to 97 (100 is average), while the IQ increased from 54 to 82.

This trial identified outcome measures that are feasible, sensitive to change, and developmentally-appropriate, and thus are suitable for use in future clinical trials to test the efficacy of cord blood therapy for the treatment of young children with ASD.



Watch This Video From
15.45 mins To 17.16 mins

LifeCell Community Cord Blood Bank Saves A Seven-year-old Girl From Aplastic Anaemia

India's First Double Cord Blood Transplant



Chennai, November 18, 2020: India achieves a major milestone in the field of stem cell transplants. Community Cord Blood Banking, a unique and innovative stem cell banking initiative that was introduced by LifeCell in 2017, helped save a seven-year-old girl suffering from aplastic anaemia – a rare and serious blood disorder when all other possible treatments failed.

It was two years ago that the child was diagnosed with aplastic anaemia. At the time of diagnosis, the doctors had suggested a stem cell transplant would be the best possible treatment in the future. Since the child's parents were expecting another baby at the time, on medical recommendation, they decided to bank the sibling's umbilical cord blood stem cells with LifeCell's Community Bank.

Dr. Pritesh Junagade from LOTUS Institute of Haematology, Oncology and Bone Marrow Transplantation at Nashik, Maharashtra successfully conducted a double unit cord blood transplant to save the life of the child. This transplant was, in particular, challenging because there were no appropriate bone marrow donors and the cost of retrieval of matching units from public cord blood banks would have been quite high.

As an additional hurdle, the doctors recommended procuring not one, but two, cord blood units to treat the child's aplastic anaemia. Whereas typical stem cell transplants require a dose of 25 million cells per kg of patient weight, in the case of aplastic anaemia the recommended minimum dose is 40 million cells per kg. Fortunately, when the parents placed a request at the LifeCell registry, two high-quality matches (7 of 8) were found, which fulfilled the requirement for transplantation of aplastic anaemia. Since the cord blood units were ready in the bank, and the retrieval process from the Community Bank does not require waiting for donor consent, LifeCell promptly released and shipped the two matched cord blood units to the hospital. Importantly, the parents could withdraw these matched units at no additional expense, which otherwise would cost not less than Rs.45,00,000/unit, according to the cost of UCB transplantation in India.

The child was able to receive a timely transplant thanks to the talented team of doctors and the prompt response by LifeCell. The initial outcome has been very encouraging. Just 18 days after the transplant, white blood cells have completely engrafted and platelet and red blood cell production have also increased drastically. The child is now discharged from the hospital!

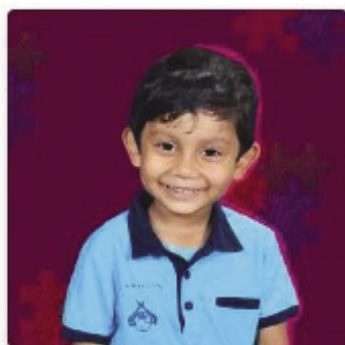
Dr. Pritesh Junagade, Director of LOTUS Hospital said, that he was pleasantly surprised that the retrieval process for two cord blood units was convenient and at no additional cost to the patient as compared to other banking models. Calling it a real social service, he is now a supporter of LifeCell's community banking and would welcome the opportunity to further advance this initiative.

LifeCell Client Testimonial:

Interview Of Mr. Apurba Dey Singha, Father of Master Apartim Who Underwent Autologous Cord Blood Infusion At Duke University, USA

Apratim gets cord blood therapy for autism

April 2018



Apratim Dey Singha of Kolkata, India, is now four years old. Although his birth was a month premature, as an infant he passed all his developmental milestones on time. It was not until he reached 18 months of age that his parents noticed his communication skills were not progressing like other children.

"We were worried but our local paediatrician was positive. He asked us to observe him for another six months. We saw no changes in his behaviour."

- Apurba Dey Singha, Apratim's father

Apratim saw a specialist in Delhi who diagnosed him as having Autism Spectrum Disorder (ASD). Autism refers to a range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication, as well as by unique strengths and differences. Each person with autism presents differently, but has enough of the traits to be recognized as being on the spectrum.



Apratim's family researched interventions to improve his language skills and tried several approaches. They learned that in 2014, the same year Apratim was born, Duke University launched the first in a series of clinical trials treating autism with cord blood stem cells.

Results from the first Duke trial of cord blood therapy for autism were published open access in April 2017. In that pilot study, participants showed significant improvements in measures of social skills, expressive vocabulary, severity of autism behavior patterns, and eye-tracking response to stimuli. The children's scores were measured by both parents and clinicians using established behavioral scales developed for autism. The observed improvements appeared within 6 months of cord blood therapy.

In a press release from Duke University, lead investigator Dr Joanne Kurtzberg expressed "cautious optimism" but urged parents not to jump to conclusions:

"Parents of children with autism should not interpret these results as conclusively showing effectiveness of this treatment. There is much work still to be done in much larger, randomized clinical studies before we can draw any firm conclusions about effectiveness." - Joanne Kurtzberg, MD

Apratim's cord blood had been stored since birth with LifeCell International, the largest family cord blood bank in India. His parents asked to participate in a clinical trial at Duke, and after a number of tests he was accepted. The therapy took place in the United States in July 2017.

In the 9 months since the cord blood therapy, his father says he has seen significant changes in Apratim. He is communicating more, his cognitive skills have improved, he's started school, and he likes playing with his friends.

"We were happy that we made a wise decision of preserving our baby's umbilical cord stem cells at birth in 2014 with LifeCell, which were used to treat my son for autism. Today, we are seeing great progress in terms of development milestones in my son." - Apurba Dey Singha

"Seeing Is Believing,
Scan This & Watch A Miracle!"



Recent Advancements in Cord blood transplants

Cord blood transplants outperforms Bone marrow transplants

STIMULUS REPORT

blood advances

Low 5-year health care burden after umbilical cord blood transplantation

Jesus Garcia Garcia,¹ Sonya Grillo,² Qing Cao,³ Claudio G. Brunstein,⁴ Mukta Arora,⁴ Margaret L. MacMillan,⁵ John E. Wagner,⁵ Daniel J. Weisdorf,⁴ and Shernan G. Holtan⁴

¹Department of Bioinformatics and Computational Biology, ²Best Practices Integrated Informatics Core of the University Clinical and Translational Science Institute, ³Department of Biostatistics and Bioinformatics, ⁴Division of Hematology, Oncology and Transplantation, Department of Medicine, and ⁵Division of Pediatric Blood and Marrow Transplantation, Department of Bioinformatics and Computational Biology, University of Minnesota, Minneapolis, MN

Key Points

- Recipients of UCB had the lowest 5-year health care burden of the graft types compared by a density composite score.

Recipients of allogeneic hematopoietic cell transplantation (HCT) experience a substantial health care burden, with potentially differing patterns of long-term health care requirements using peripheral blood stem cells, bone marrow, and umbilical cord blood (UCB) grafts. We analyzed data from 1077 consecutive adult allogeneic HCT recipients who underwent transplant at the University of Minnesota between 2000 and 2016. To estimate health care burden over time, we compared the number of visits, laboratory studies, medications, and relative value units billed. Health care elements were analyzed both individually and together (ie, total health care elements used per patient days into a density composite score). UCB had the lowest density health care burden composite score from the time of transplant through year 5 (median score 64.0 vs 70.5 for peripheral blood stem cells and 88.0 for bone marrow; $P < .01$). In multivariate analysis of health care burden between years 1 and 5, recipients of either bone marrow (odds ratio [OR] 0.49 [95% confidence interval (CI) 0.29–0.84] or peripheral blood stem cells (OR 0.49 [95% CI 0.36–0.67]) were half as likely to experience low health care burden compared with UCB. Adult recipients of UCB have a lower long-term health care burden compared with other graft sources, possibly reflecting a better quality of life.

Downloaded from <http://ashpublications.org/blood/advance-article-abstract/doi/10.1182/blood-2018-03-834990>

REGULAR ARTICLE

blood advances

Adult cord blood transplant results in comparable overall survival and improved GRFS vs matched related transplant

Prasant Sharma,¹ Enkhtsetseg Purev,² Bradley Hovvika,³ Daniel A. Polyes,⁴ Evan Cherry,⁵ Manali Kamdar,⁶ Tamer Mark,⁷ Peter Forstberg,⁸ Daniel Sherbenou,⁹ Andrew Hannon,⁹ Rachael Robinson,⁹ Clayton A. Smith,⁹ and Jonathan A. Guzman¹

¹Division of Hematology, ²Center for Innovative Design and Analysis, Department of Biostatistics and Informatics, and ³Department of Radiation Oncology, University of Colorado, Aurora, CO

Key Points

- Adult CBT results in comparable overall survival and superior GRFS compared with matched sibling peripheral blood transplant.
- In select situations, relapse rate may be lower with comparable transplant-related mortality comparing cord with peripheral blood transplant.

We compared outcomes among adult matched related donor (MRD) patients undergoing peripheral blood stem cell transplantation (PBST) at our center between 2010 and 2017. A total of 190 CBT patients were compared with 123 MRD patients. Median follow-up was 899 days (range, 109–3350) among surviving CBT patients and 1262 days (range, 249–3327) among surviving MRD patients. Comparing all CBT with all MRD patients, overall survival (OS) was comparable ($P = .61$) and graft-versus-host disease (GVHD) relapse-free survival (GRFS) was significantly improved among CBT patients ($P = .006$), primarily because of decreased moderate to severe chronic GVHD following CBT ($P < .0001$; hazard ratio [HR], 3.9; 95% confidence interval [CI], 2.26–7.06). Among patients undergoing our most commonly used MRD and umbilical cord blood (CB) myeloablative regimens, OS was comparable ($P = .136$) and GRFS was significantly improved among CBT patients ($P = .006$). Cumulative incidence of relapse trended toward decreased in the CBT group ($P = .075$; HR, 1.85; CI 0.84–3.67), whereas transplant-related mortality (TRM) was comparable ($P = .32$; HR, 0.75; CI 0.29–1.95). Among patients undergoing our most commonly used nonmyeloablative regimens, OS and GRFS were comparable ($P = .158$ and $P = .697$). Cumulative incidence of both relapse and TRM were comparable ($P = .32$; HR, 1.35; CI 0.75–2.5 for relapse and $P = .34$; HR, 0.82; CI 0.18–4.23 for TRM). Our outcomes support the efficacy of CBT and suggest that among patients able to tolerate more intensive conditioning regimens at high risk for relapse,

REGULAR ARTICLE

blood advances

Reduced-intensity single-unit unrelated cord blood transplant with optional immune boost for nonmalignant disorders

Mark T. Vanden Lugt,¹ Xiaohua Chen,² Meta L. Escobar,³ Beth A. Cowell,⁴ Jessie L. Barnum,⁵ Randy M. Wiedrich,⁶ Memphis J. Hill,⁷ Michelle Piro,⁸ Rebecca A. Marsh,⁹ Heather Standish,⁹ Elizabeth G. Stenger,⁹ and Paul Sabinov^{1,10}

¹Division of Blood and Marrow Transplantation and Cellular Therapies and ²Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ³Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ⁴Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ⁵Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ⁶Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ⁷Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ⁸Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ⁹Division of Blood Marrow Transplantation and Cellular Therapies, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA; ¹⁰Department of Immunology, University of Pittsburgh, Pittsburgh, PA

Key Points

- This RIC regimen paired with single-unit cord blood results in >90% event-free survival effective for 20 nonmalignant conditions.
- The regimen obviates the need for pharmacokinetic dose adjustments, rendering it applicable even in resource-limited centers and countries.

Children with many inherited nonmalignant disorders can be cured or their condition alleviated by hematopoietic stem cell transplantation (HSCT). Umbilical cord blood (UCB) units are a rapidly available stem cell source and offer great flexibility in HLA matching, allowing nearly uniform access to HSCT. Although reduced-intensity conditioning (RIC) regimens promise decreased treatment-related morbidity and mortality, graft failure and infections have limited their use in chemotherapy-naïve patients. We prospectively evaluated a novel RIC regimen of alemtuzumab, hydroxyurea, flutamide, melphalan, and thiotepa with a single-unit UCB graft in 44 consecutive patients with inherited forms of metabolic, immunologic, or hematopoietic disorders. In addition, 5% of the UCB graft was cryopreserved and reserved for cord donor leukocyte infusion (CDLI) posttransplant. All patients engrafted at a median of 15 days posttransplant, and chimerism was >90% donor in the majority of patients at 2-year posttransplant with only 1 secondary graft failure. The incidence of grade II to IV graft-versus-host disease (GVHD) was 27% (95% confidence interval [CI], 17–41) with no extensive chronic GVHD. Overall survival was 90% (95% CI, 83–99) and 83% (95% CI, 64–91) at 1 and 5 years posttransplant, respectively. No significant end-organ toxicities were observed. The use of CDLI did not affect GVHD and showed signals of efficacy for infection control or donor chimerism. This RIC transplant regimen using single-unit UCB graft resulted in outstanding survival and remarkably low rates of graft failure. Implementation of this protocol not requiring pharmacokinetic monitoring would be feasible and applicable worldwide for children with inherited disorders of metabolism, immunologic, or hematopoietic. This trial was registered at www.clinicaltrials.gov as

LifeCell’s Medical Assistance Benefit Program Case Study

Background: This couple from Mumbai, Maharashtra, had double the joy of welcoming their twin babies in early January of 2014. To provide lifetime security to the unborn kids, they chose LifeCell International to preserve both the babies umbilical cord stem cells. Life took a spin when months later they discovered that one of the babies was diagnosed with Thalassemia Major. It's a blood disorder that affects life giving red blood cells that give oxygen to each of our body's cells. This is due to lower-than-normal amounts of an oxygen-carrying protein called hemoglobin. There are 2 types of Thalassemia - Minor and Major. As Thalassemia Minor does not have any major symptoms, this couple was unaware of the fact that they both had a trait of this genetic disease. This meant that there is a high chance of Thalassemia Major being passed down to one of their kids and this fear turned reality! Doctors advised them that blood stem cell transplantation is the best treatment option. The decision of preserving both babies' cord blood stem cells at birth with LifeCell turned nothing less than a miracle! The siblings were a perfect 6/6 identical HLA match and the transplant could be performed. On 15th February 2016, the patient underwent hematopoietic stem cell transplantation from his HLA-identical healthy brother's cord blood as well as bone marrow stem cells. Using an HLA-identical sibling donor, survival is excellent for young children who are in a low-risk group.

Patient's Age	2years
Gender	Male
Disease	Thalassemia Major
Year of Enrollment	December 2013
Date Of Sample Storage	January 2014
Date Of Sample Release	31st January 2016
Date Of Transplantation	15th February 2016
Transplant Center	Narayana Hrudayalaya Health City, Bengaluru, Karnataka, India
Name Of Transplant Physician	Dr. Sunil Bhat, Consultant & Head of Paediatric Haematology, Oncology and Bone Marrow Transplantation Center
Type of Transplant	Related Allogenic ('Twins' Siblings)
HLA Matching	6/6 (100%)

LifeCell’s Medical Assistance Benefit Program: Since the patient’s disease was diagnosed after the enrollment date (as per the Client Agreement), the family was eligible to avail this benefit program. INR 10 lakhs was transferred to the transplant facility’s bank account almost two weeks prior to transplantation.

Remitter Account Number	Beneficiary	Bank Product	IFSC code	Beneficiary Account Number	Amount	Inst Date	UTR Sr No	Status
XXXXXXXX	XXXXXXXX	NEFT	HDFC0000549	XXXXXXXXXX	1000000	02/02/2016	KKBKH 16033XXXXXX	Presented and paid

LifeCell's Benefit Program Continues Spreading Smiles

From: Manik Kubba
Sent: 04 February 2015 15:21
To: Dr.Paramjit Singh Dhot
Subject: Re: Wiskott Aldrich report Centogene:

Dr Dhot

Thank you so much for your cooperation. I am short of words to explain how much this noble gesture from your MD and your organisation means to me.

As you have correctly mentioned, we have taken CMC vellore and i was in contact with Dr Revathi Raj also at Apollo Chennai. After consultation with many medical professionals, we decided to go with Dr Satyendra Katewas treatment through BMT.

So we have planned the BMT in first week of March and i will keep you posted on the developments.

We are depositing money this week for the TCR ALPHA BETA receptor kit which will be needed for Haplo transplant under Dr Satyendra Katewa at Fortis, Gurgaon.

Please let me know when can the financial assistance from LIFECELL would come in as we would need the money in next 2-3 weeks.

My family is so thankful to you and you have acted like an angel for us, which we will always remember through our lifetime.

Please give my best regards and thanks to your MD who has given us tremendous support we were badly in need for.

I will stay connected and keep you updated.

On humanitarian grounds, LifeCell supported this family with INR 10 lakhs to offset the stem cell transplantation related expenses.

Because We Care

Medical Assistance Beneficiaries – Client's Eligible As Per The Agreement

Sr. No.	Retrieval Number	Enrolling City & State	Type Of Medical Condition / Diagnosis	Date Of Credit	Total Amount Credited To Client / Hospital (INR)	Type Of Banking
01	Case # 37	Bengaluru, Karnataka	Spastic Cerebral Palsy (US FDA Approved Clinical Trial)	26th July, 2015	500000	Private Banking
02	Case # 40	Mumbai, Maharashtra	Thalassemia Major	2nd Feb, 2016	1000000	Private Banking
03	Case # 47	Kolkata, West Bengal	Autism Spectrum Disorder	31st July, 2017	500000	Private Banking
04	CryoSave Client	Allahabad, Uttar Pradesh	Thalassemia Major	18th Sep, 2019	1000000	Private Banking
05	Not Applicable	Surat, Gujarat	Thalassemia Major	03rd Jan, 2020	1988444	Community Banking
06	Not Applicable	Madhya Pradesh	Chronic granulomatous disease	31st Dec, 2021	20,00,000	Community Banking

INR 69,88,444

*Not Applicable - Since The Stored CBU With LifeCell Was Not Used For This Stem Cell Transplantation

Medical Assistance Beneficiaries – Client's Eligible As Per The Agreement

Type Of Transplantation /Infusion	Case Description	Name Of Treating Doctor & Hospital
Autologous	Client's Child Underwent Own Cord Blood Infusion For Treatment of Cerebral Palsy. This Was A Sponsored Clinical Trial, So Client Did Not Have To Pay Any Amount For The Treatment. The Monetary Support Was Provided For Other Related Expenses.	Dr. Jessica M. Sun, Duke University Medical Center, Durham, North Carolina, USA
Allogeneic	Cord Blood unit of one of the Twin Babies was 6/6 full match with the sibling patient and was Retrieved for conducting blood stem cell transplantaion along with bone marrow of the same donor. As per their Agreement, the patient was eligible for upto INR 10 lakh to offset transplant related expenses. They received full reimbursement.	Dr. Sunil Bhat, Narayana Hrudayalaya Health City, Bengaluru, Karnataka,India
Autologous	Client's Child Underwent Own Cord Blood Infusion For Treatment of Autism Spectrum Disorder. This Was A Sponsored Clinical Trial, So Client Did Not Have To Pay Any Amount For The Treatment. The Monetary Support Was Provided For Other Related Expenses.	Dr. Jessica M. Sun, Duke University Medical Center, Durham, North Carolina, USA
Allogeneic	Younger sibling's matching cord blood unit was used for blood stem cell transplantation along with bone marrow stem cells for treating the elder child for Thalassemia Major. This is a CryoSave Client and hence, LifeCell supported the stem cell transplantation cost.	Dr. Gaurav Kharya, Indraprastha Apollo Hospital, Delhi, India
Allogeneic	Client's baby whose cord blood stem cells were preserved with us had undergone a bone marrow transplantation for Thalassemia Major Using Her Father's 10/10 HLA Matching Stem Cells (Rarest Of Rare Case!)	Dr. Revathi Raj, Apollo Speciality Hospital, Chennai, Tamil Nadu, India
Allogeneic	Client's baby whose cord blood stem cells were preserved with us had undergone a bone marrow transplantation for (CGD)Chronic granulomatous disease. Haploidentical Transplant using the stem cells from the Father" was used.	Dr. Revathi Raj, Apollo Speciality Hospital, Chennai, Tamil Nadu, India

Medical Assistance Beneficiaries On Humanitarian Grounds Via LifeCell Foundation

Sr. No.	Retrieval Number	Enrolling City & State	Type Of Medical Condition / Diagnosis	Date Of Credit	Total Amount Credited To Client / Hospital (INR)	Type Of Banking
01	Case# 8	Coimbatore, Tamil Nadu	Thalassemia Major	01st March, 2009	1200000	Private Banking
02	Case# 32	Noida, Uttar Pradesh	Thalassemia Major	26th Sep, 2014	200000	Private Banking
03	Not Applicable	New Delhi	Severe Combined Immunodeficiency (SCID)	07th Jan, 2015	522000	Private Banking
04	Not Applicable	Gurugram, Haryana	Wiskott–Aldrich Syndrome (WAS)	04th Mar, 2015	1000000	Private Banking
05	Not Applicable	Dehradun, Uttarakhand	Thalassemia Major	07th April, 2015	300000	Private Banking
06	Case# 41	Bengaluru, Karnataka	Hemophagocytic Lymphohistiocytosis (HLH)	23rd April, 2016	500000	Private Banking
07	CryoSave Client	Ludhiana, Punjab	Thalassemia Major	14th May, 2018	952954	Private Banking
08	Not Applicable	Jamtara, Jharkhand	Thalassemia Major	05th July, 2019	200000	Private Banking
09	Case# 09	Gurugram, Haryana	Thalassemia Major	05th July, 2019	200000	Community Banking
10	Case # 61	Jawali, Satara District, Maharashtra	Thalassemia Major	22nd Jan, 2020	250000	Private Banking

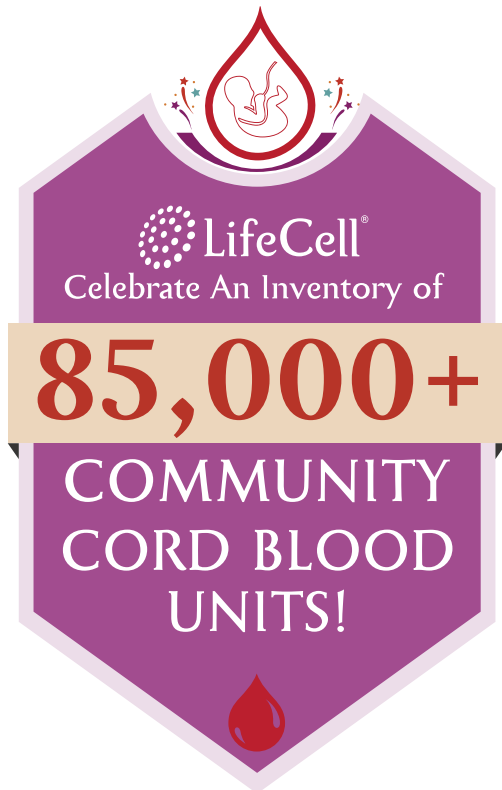
INR 53,24,954

Medical Assistance Beneficiaries On Humanitarian Grounds Via LifeCell Foundation

Type Of Transplantation /Infusion	Case Description	Name Of Treating Doctor & Hospital
Allogeneic	Younger Sibling's 6/6 HLA Matching Cord Blood Unit (CBU) + Bone Marrow Stem Cells Were Used For Blood Stem Cell Transplantation To Treat Elder Child With Thalassemia Major. This Client's Agreement did not had the provision for medical assistance for the baby's sibling. Financial assistance was provided through Rotary Club in Chennai.	Dr. Revathi Raj, Apollo Speciality Hospital, Chennai, Tamil Nadu, India
Allogeneic	Younger Sibling's 6/6 HLA Matching Cord Blood Unit + Bone Marrow Stem Cells Were Used For Blood Stem Cell Transplantation To Treat Elder Child With Thalassemia Major.	Dr. Dharma Choudhary, Dr. B. L. Kapur Memorial Hospital, New Delhi, India
Allogeneic	Child's own cord blood could not be used as per the transplant physician since the stem cells contained the same genetic defect. In face of no matched sibling or matched related donor availability, the patient underwent invitro TCR alpha/beta CD19 depleted, gamma/delta selected Haplo-Identical Bone Marrow Transplantation from his Father. This Client's Agreement Did Not Have The Provision For Medical Assistance For Bone Marrow / PBSCs Transplantation.	Dr. Gaurav Kharya, Dr. B. L. Kapur Memorial Hospital, New Delhi, India
Allogeneic	Client's Child Underwent Haploidentical Bone Marrow Stem Cell Transplantation. This Client's Agreement Did Not Have The Provision For Medical Assistance For Bone Marrow / PBSCs Transplantation.	Dr. Satyendra Katewa, Fortis Memorial Research Institute, Gurugram, Haryana, India
Allogeneic	Client's Child Underwent BMT Using Stem Cells From A Matching Bone Marrow Donor. This Client's Agreement Did Not Have The Provision For Medical Assistance For Bone Marrow / PBSCs Transplantation.	Rajiv Gandhi Cancer Institute and Research Center, Delhi, India
Allogeneic	Elder Sibling's stored CBU was Retrieved for Younger Sibling's Treatment. CBU + BM Stem Cells Of The Same Donor Were Used For The Transplantation. This Client's Agreement Did Not Have The Provision For Medical Assistance For Bone Marrow / PBSCs Transplantation.	Dr. Sunil Bhat, Narayana Hrudayalaya Health City, Bengaluru, Karnataka, India
Allogeneic	Younger Sibling's 6/6 HLA Matching Cord Blood Unit (CBU) Stored With CryoSave India + Bone Marrow Stem Cells Were Used For Blood Stem Cell Transplantation To Treat Elder Child With Thalassemia Major.	Dr. Sharat Damodar, Narayana Hrudayalaya Health City, Bengaluru, Karnataka, India
Allogeneic	Client's Child Underwent BMT Using Stem Cells From A Matching Bone Marrow Donor. This Client's Agreement Did Not Have The Provision For Medical Assistance For Bone Marrow / PBSCs Transplantation.	Dr. Revathi Raj, Apollo Speciality Hospital, Chennai, Tamil Nadu, India
Allogeneic	Younger Sibling's 6/6 HLA Matching Cord Blood Unit (CBU) + Bone Marrow Stem Cells Were Used For Blood Stem Cell Transplantation To Treat Elder Child With Fanconi Anemia.	Dr. Satya P. Yadav, Medanta - The Medicity Hospital, Gurugram, Haryana
Allogeneic	Younger Sibling's 6/6 HLA Matching Cord Blood Unit (CBU) + Bone Marrow Stem Cells Were Used For Blood Stem Cell Transplantation To Treat Elder Child With Thalassemia Major.	Dr. Ruchira Misra, NH SRCC Children's Hospital, Mumbai, Maharashtra, India

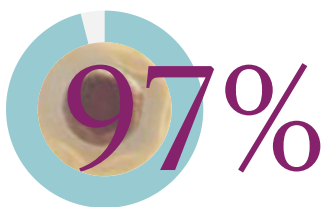
How Community Banking Overcomes The Current Challenges Of Public Banks?

Now Every Patient in India Can Find Matching Stem Cells For Treatment



Currently, LifeCell's Registry has over **85,000** qualified cord blood stem cells units

Ref: Maiers M, Halagan M, Joshi S, et al. HLA match likelihoods for Indian patients seeking unrelated donor transplantation grafts: population-based study. Lancet Haematol. 2014;1:e57-63



As per Indian Council Of Medical Research study, with an inventory size of **50,000** cord blood units in a bank, chances for an Indian to find matching unrelated donor cord blood stem cells is **>97%**



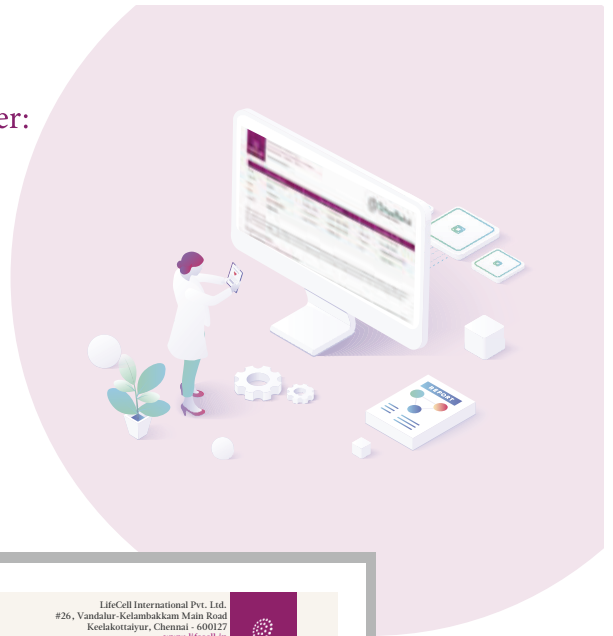
Unlimited Retrieval of Stem Cells absolutely Free of Cost for Baby, Siblings, Parents and Grandparents

Welcome to the new era of stem cell banking where not just the birth of a newborn that will be celebrated, but also of that which comes attached to it at birth - the umbilical cord!

LifeCell's StemMatch Is The Ultimate Matchmaker: ICMR's Prediction From 2014 Comes True!

Discovering The Power Of Many

LifeCell believes in winning Client's trust through data & transparency, and we wanted to share it with you.



StemMatch: Annual Status Report

LifeCell International Pvt. Ltd.
#26, Vandalur-Kelambakkam Main Road
Keelekkottaiyur, Chennai - 600127
www.lifeCell.in



ANNEXURE I

Patient Details	Specimen Details
Name : [REDACTED]	Report Date : [REDACTED]
CRM : [REDACTED]	Specimen : Cord Blood
Gender : [REDACTED]	Test : HLA Matching
DOB : [REDACTED]	Lab ID : [REDACTED]

StemMatch provides instant information on the exact number of matching cord blood units available for you in the LifeCell Registry.

What's Tested

Our immune system uses certain markers to recognize which cells belong in your body and which do not. Scientifically these markers are known as HLA or Human Leukocyte Antigens. LifeCell StemMatch or HLA typing is a way to tell how closely the tissues of one person match the tissues of another person. This is vital in blood stem cell transplants to know, as better the match between the transplant recipient and their donor, better are the transplant outcomes.

A) Current Result Summary

Your matching score is based on the search of qualified and consented cord blood units stored in LifeCell's Registry as on the date of report. As the registry size increases, so does the probability of finding a closely matched donor. Cord blood transplants luckily don't require to be perfectly matched to progress with a transplant as generally acceptable even if 6 out of the 8 genomic locations match. Thus the odds of finding a donor is significantly better using a cord blood unit rather than an adult donor where only a perfect match is required.

 70661 Searched Units On 15th Jul'25	 43 Donors Perfect!! 8/8 Match	 90 Donors Good!! 7/8 Match	 263 Donors Acceptable, 6/8 Match
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B) Historical Result Summary

Your historical matching score of previous years is based on the search of qualified and consented cord blood units stored in LifeCell's Registry in that respective year.

Historical Results				
Year	Searched Units	Perfect!! 8/8 Match	Good!! 7/8 Match	Acceptable!! 6/8 Match
2021	37721	22	48	126



A Quick & Easy Way To Know Your Perfect Stem Cell Match

 Largest Inventory With 85,000+ cord blood units, LifeCell gives access to the largest inventory of Indian origin stem cells for rapid access and availability	 Assurance Updated annual status report based on new samples added in or retrieved from the registry at no extra cost	 Coverage Can be availed by all community banking members (baby, parents, siblings and grandparents)
 High-Quality Matches The exact number of high-quality 6/8, 7/8 & 8/8 matching stem cell units	 Expedited Access Reduced testing and matching time for expedited stem cell transplantation, enabling faster treatment	

Preserve Your Baby's Cord Blood At Birth &
Get Lifetime Access To India's Largest Bank Of Stem Cells
Choose LifeCell, Choose Hope!

Stem Cell Transplantation & Infusion Record

Authors

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Lab Director
LifeCell International Pvt. Ltd



Choose LifeCell, Choose Hope!

Preserve your baby's stem cells with India's
largest & most trusted community stem cell bank



Partnership With Cryo-Cell International, Inc., USA

World's first stem cell bank with over 30 Years of
operating experience



Most Accredited

AABB | AATB | NABL | CAP | WHO-GMP |
US FDA-Registered | ISO | ISBT | ISMS



Safe Transplantation Program (1st And Only Bank)

Screens every CBU before retrieval for 4000+ Genes
related to inherited Disorders and Pediatric cancers at
NO EXTRA COST!



India's Largest

World-class facilities, over 200 service centers, collections
at over 6000 hospitals by >10000 gynecologists

Disclaimer:

Banking cord blood does not guarantee treatment outcomes. The use of umbilical cord stem cells to treat a medical condition is the decision of treating transplant physician based on the suitability of the treatment and whether the source of stem cells is autologous (self) or allogenic (suitable donor- siblings of the same biological parents have a 25% chance of a perfect match and a 50% chance of a partial match; biological parents have partial match). Currently, umbilical cord tissue stem cells are not approved for clinical use since they are evaluated under clinical trials and hence its use depends on the ongoing research. There is no guarantee that treatments studied in the laboratory, clinical trials and other experimental treatments (including regenerative medicine applications) shall be available in the future.

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