



HEALTHY HEART

VOLUME-14 | ISSUE-164 | JULY 05, 2023

Price : ₹ 5/-

TRANSPLANT TIMES

DR RAJEEV SINGHAL

Managing Director & CEO
Marengo Asia Hospitals



Dear Friends,

Organ Transplantation stands as one of the most remarkable, revolutionizing achievements in medical science offering hope to countless individuals whose lives are threatened by failing organs to offer a quality life with renewed vigor for several years.

Marengo Asia Hospitals strongly believes that every minute counts, every life matters. At Marengo CIMS Hospital we have established Centers of Excellence for organ transplants as a vital step towards giving an outcome to this belief offering optimized solutions for patients requiring transplants. The hospital is proud to be the first hospital to conduct its first heart transplant in the year 2016 in Gujarat. Currently, the hospital stands only second to the largest number of heart transplants performed in the country. To give further credence to our vision of 'Patient First', Marengo CIMS Hospital is a pioneer in ushering in one of the most advanced and modern techniques in heart transplants in India and in South Asia, the 'Blood Transfusion free' heart transplants to enhance patient safety and patient experience.

Marengo CIMS Hospitals is a three-times JCI accredited hospital that offers heart, lung, kidney, liver, and bone marrow transplants under a single roof. The hospital also conducted the very first bilateral lung transplant in the entire state of Gujarat on a Syrian patient with interstitial lung disease. We follow the concept of the 'Clinical Corridor' to expand our clinical excellence beyond borders to offer accessible and affordable healthcare to patients.

In the direction of organ transplants, the government has taken equally significant steps such as registration anywhere in India and changes in organ donation and organ transplant policies to make processes seamless to meet the growing demand for organ transplants giving further hope to domestic patients and to patients requiring medical treatments from other countries to India.

Organ donation is humanity's highest and noblest act and is coming of age despite challenges accelerated by a lack of information and awareness, misconceptions, and logistical hurdles. Marengo Asia Hospitals is dedicated to educating and sensitizing the masses through sustained information to create increased awareness and has emerged as a 'Trusted' healthcare provider and a preferred regional destination in West and North India for organ transplants.

We continue promoting the importance of organ donations and invest in encouraging more and more people to come forward in this noble act to ensure that more lives are saved through this incredible gift of organ transplantation.

DR KEYUR PARIKH

Interventional cardiologist
Chairman of Marengo CIMS Hospital



Dear Friends,

"When a person donates one's body after death, it creates a possibility for eight to nine people to get a new life," said PM Modi in the 99th episode of Mann Ki Baat on 26th March 2023.

The organ donation and transplant procedures strive to honor the gift of donated organs by fully using those organs to save or improve the quality of the lives of transplant recipients. As a result of advances achieved through basic and clinical research over the past several decades, organ transplantation has become the optimal treatment for many end-stage organ-specific diseases. However, there are not enough donated organs to meet the demand. Furthermore, some organs may not be recovered, some recovered organs may not be transplanted, and some transplanted organs may not function adequately, all of which exacerbates the imbalance between the supply and the demand of organs.

According to the Health Ministry, the number of organ transplants in India has increased by over three times from 4,990 in 2013 to 15,561 in 2022. The most common organ transplant is for the kidney, followed by liver, heart, lung, pancreas, and small bowel transplants. India conducts the third-highest number of transplants in the world, but the number of organs needed is still much higher than the number of transplants. Lifestyle diseases are increasing the demand for organs as heart and lungs can only be retrieved from deceased donors.

We, at Marengo CIMS Hospital strongly believe and try to spread maximum awareness on organ donation to save as many lives as possible. We proudly quote that we are the first health care institute in Gujarat to perform 1st heart transplant in 2016. After that there was no point of looking back.

So far we have successfully performed 41 Heart Transplant, 62 Kidney Transplant, 44 Liver Transplant, 2 Lungs Transplant, 200+ Bone Marrow Transplant. Marengo CIMS Hospital. We follow the organ transplant guidelines very strongly and post-transplant patient is continually monitored. We feel that our duty is not just limited to the transplant procedure but for us the quality of life of our patients we also look forward to post-surgery.

Organ transplantation also helps to reduce the burden on the healthcare system by reducing the need for hospitalization, repeat surgeries, and long-term treatment. Organ donation can help save the lives of multiple people, as one donor can donate several organs and tissues.

DR DHIREN SHAH

Director - Heart-Lung Transplant
Programme and Mechanical
Circulatory Support (MCS) Programme



Dear Friends,

It gives me immense pleasure to present this Transplant Times, a quarterly newsletter publishing and sharing the literature and information regarding Transplantation at Marengo CIMS hospital. I do remember 5-10 years back when discussing and talking about various Transplantation was a rarity and fancy topic. But Today In India and in Gujarat and in Particular Marengo CIMS hospital we are proud to inform that this is the only hospital in Gujarat where 5 transplants (Heart, Lung, Liver, Kidney, Bone marrow) are performed under one roof. We have a vision and goal to be the transplant destination of India where patients with Organ failure can see some hope for their life and live a normal life. There are still lot of Myths and lacune in knowledge about transplantation prevalent in the medical fraternity and hence through this endeavour of Transplant Times we intend to percolate the knowledge regarding Various organ transplantation and share our journey and interesting cases with you all. Hope to be successful in our intentions and hope to fulfil your expectations. Enjoy the Transplanting views and news.



HEART TRANSPLANTATION

“A change of Heart, Changes everything , and let me tell you it’s not just philosophically true, but medically also. I am talking about Heart Transplantation.”

Heart transplantation is no longer an experimental procedure (or a non imp topic for exam). It is now the therapy of choice for select patients with end-stage heart disease. It does change the quality of life dramatically for the bed bound and terminally ill heart failure patients. And in the 40 heart Transplants that I have performed, I have seen this and had first-hand experience. My favourite patient is a 17 year old very chulbuli girl from Amreli who suffered from COVID viral myocarditis and then went into heart failure with heart function only 15%. She was in the hospital for almost 5 months and not recovering with any modalities of medical treatment. She was practically on death Bed. Then Ultimately we decided to go for Heart Transplantation and after the procedure she got discharged from the hospital on 14th day and now, after one and half year, she is dancing, playing and has started going to school and enjoying life like any other teenager. Most satisfying ‘Change of Heart’ for any Doctor.

The first heart transplant was done on 3rd December 1967 by Dr Christian Bernard in South Africa and the world’s 3rd Heart Transplant was performed in Mumbai by Dr P K Sen in February 1968 (unfortunately it was Unsuccessful). It was not until antirejection medicines were used in the 1980s that it became more accepted. Now in 2000s, Heart Transplant is class 1 indication for the End stage heart failure patients . At present more than 7000 heart transplantations have been performed across the globe of which more than 50% are from North America.

In India official first heart transplantation was performed on 13th August 1994 in AIIMS New Delhi . But it was not until 2010-12 that heart Transplantation really started being performed in India widely, and the sole reason for such slow pick up , was lack of organ donation in India .

After being in Cardiac surgery practice for almost 15 years, I realised and felt the need to start Heart Transplantation program in Gujarat for thousands of Chronic and end stage Heart Failure patients of Gujarat. Preparations all started from 2014 and ultimately culminated with us performing

the first Heart Transplantation of Gujarat on 19th December, 2016 at CIMS hospital.

Heart Transplantation is not just a Surgery but a whole process starting with the ideation of embracing the new into your thought process, taking Risks, researching and gathering experience, creating protocols, systems and processes, getting licences (tough regulatory laws), forming a team of committed and interested doctors, and creating an infrastructure for the same. Apart from liasoning with government, Airport authority and Traffic police for transportation of organs and green corridors, getting government grants etc. was a tough job for everyone because this was all together a new arena for all. But now when I look back, I can see how the systems have matured so much and everything was worth it.



Why Are Heart Transplants Performed?

A heart transplant is considered when heart failure is so severe that it does not respond to any other therapy, but the person's health is otherwise good. The leading reasons why people receive heart transplants are because they have:

1. Dilated Cardiomyopathy
2. Ischaemic Dilated Cardiomyopathy
3. Valvular Heart Diseases
4. Viral Myocarditis
5. Congenital Heart defects .
6. Restrictive Cardiomyopathies .



Not all patients of heart failure are a candidate for Heart Transplantation. Patients with Heart Failure less than 65 years of age with all other preserved organ systems and no infection or malignancy are a candidate for HTx.

Uniqueness of Heart Transplantation

1. It's a transplantation which is dependent purely on cadaver organ donation.
2. It has the shortest ischaemia time (Duration between explantation to implantation in recipient).
3. Selection of Donor and recipient is of paramount importance as there is no second chance.
4. There is no time for HLA cross match and hence, heart transplant is done just based on blood group matching and weight matching.
5. Organ allocations priority is based on geographic distance
6. Males can give heart to female, but cannot receive female hearts. (Universal truth)
7. Size does matters (20% of weight +/-) (Maruti engine cannot perform in BMW car)

Statistics of Heart Transplantation ("Kitna Deti Hai" priority of all Indian consumers)

1. 1 year survival is 85-90%
2. 5 year survival is 75-80%
3. Median survival 14 years
4. Survival is as good as liver and Kidney transplant
5. Giving decades of productive life.

Complications after Heart Transplantation

1. Rejection
2. Infection
3. Graft failure
4. Renal Dysfunction
5. Malignancy

What Heart Transplantation has taught me

Medical field is one of the most exciting field and the future belongs to it.

Always embrace the new, that is on the horizon, which will help you reach the stars. Always take calculated risks. "Risk hai toh ishq hai"

Like the age old saying goes "team work is the key to success" and in future all medicos will have to work towards building a strong team to sustain, progress and prosper in the medical domain.



Cultivate and imbibe the virtues of commitment and perseverance. People with great passion can make the impossible happen. Always be a student and have a learning attitude throughout your life. There is no age limit for learning. Last but not the least, patient comes first. This mindset will make you a great doctor.

Even as heart transplantation becomes more effective, the amount of people waiting for organs, outnumbers the number of donor organs available.

The future of organ transplantation greatly depends on increasing public awareness of the organ shortage, and encouraging people to become organ donors.

It is infinitely better to transplant a heart then to burn or Bury a heart to be devoured by worms.

- Dr Christian Bernard



Heart Transplant

41st



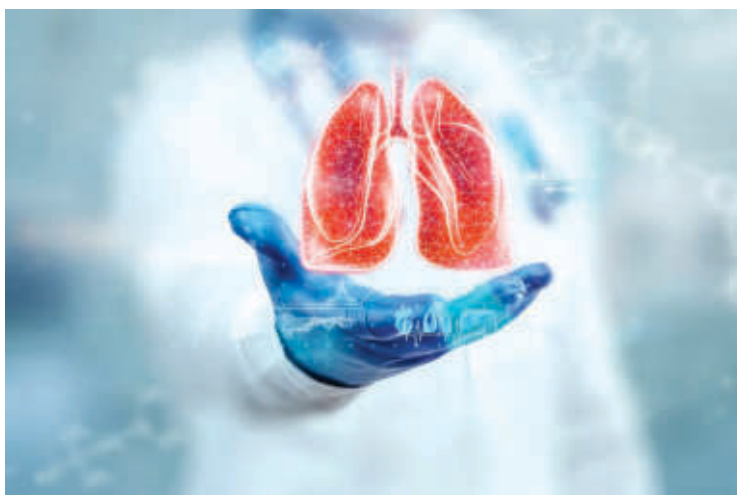
LUNG TRANSPLANTATION

“The Story of Gujarats First Lung Transplantation”

A 41 year old Syrian gentleman, suffering from progressive fibrosing interstitial lung disease, was airlifted from Syria to Marengo cims Hospital, Ahmedabad in early November 2022. He was already on 10 litres of oxygen and had limited mobility. He was accompanied by his wife and brother.

The entire family was informed about lung transplantation by their doctors in Syria. After a lot of research, discussions and enquiries about centres performing lung transplantation, they shortlisted Marengo CIMS Hospital, Ahmedabad.

The next few months were a whirlwind of emotions, anticipation and restlessness. The entire family was in a new hospital in a different country and experienced a sensory overload.



We, at Marengo CIMS Hospital, completely understood this transition. Our goal from day one was medical therapy with a holistic approach. We had a huge task on our hands as we had to ensure his prehabilitation before the surgery, cater to his sensibilities and keep the entire family motivated.

His pretransplant work up was done and he was registered for double lung transplantation with Sotto as well as Notto.

His condition unfortunately deteriorated in the form of increased oxygen requirement. He went from nasal prongs

to non rebreather mask to high flow nasal cannulae requiring 90% fio2 and flows of 60 litres per minute. A Lung transplantation was the only way out for him. His prayers were answered on 4th January 2023, when we received an alert from a 48 year old brain dead donor from Rajkot. Once the lungs were allocated to our patient, the retrieval team left immediately for organ inspection and harvesting. Even the heart was allocated to a different patient in our centre.

The entire history and investigations of the donor was rigorously cross verified. Bedside bronchoscopy revealed mucous plugs which had to be cleared from both lower lobes. Our local retrieval protocols were followed (including intravenous antibiotics, hormone supplementation in brain dead patients, necessary blood investigations including CMV and EBV PCRs etc).

The retrieved heart and lungs had to be flown into Ahmedabad via a chartered flight and with a special green corridor coordinated with the help of Surat and Ahmedabad police. Every step of the procedure, surgery, journey was relayed in great details by our transplant coordinator back to our team in Marengo CIMS Ahmedabad. The entire process needed great coordination as the retrieval team as well as the operation theatres (heart and lungs) had to be in sync. A very important part of this process is to minimize the ischemia time of the retrieved organs.

He subsequently underwent a bilateral sequential double lung transplantation on 5th January 2023 on VA ECMO. It was a surreal feeling to be a part of history being created. He was immediately shifted to the transplant ICU post operatively after weaning off the ECMO. He was being managed by a dedicated team of intensivists, pulmonologists, physiotherapists and highly skilled nursing staff.

His post operative management was as per our protocols and included various aspects of his care including weaning off from nitric oxide, immunosuppression, graded physiotherapy, prophylactic intravenous antimicrobial agents etc.

He was initiated on a triple drug immunosuppressive regimen consisting of tacrolimus, mycophenolate and corticosteroids with regular checking of tacrolimus levels. He was also initiated on voriconazole and valganciclovir for fungal and cmv prophylaxis respectively.

He was extubated on day 4 and was then initiated on a vigorous graded physiotherapy regimen under the supervision of our physiotherapy team. His family members were counselled frequently and also taught and involved in every aspect of his management.

One of the most difficult aspects of his post operative care was his rehabilitation. We had to work gradually on his dystrophic muscles as he was completely bed bound before the surgery. He also received electrical stimulation of his quadriceps and gluteal muscles.

Marengo CIMS Hospital celebrates the recovery of Gujarat's first-ever bilateral Lung transplant



Ahmedabad, The recipient of the first-ever bilateral lung transplant in the State of Gujarat is all set to leave for his country after all his tests have rendered him fit to do so. The 41-year-old Syrian, Ahmad, who had been bedbound for over 3 months from a deteriorating Interstitial Lung Disease (ILD or lung fibrosis), underwent the transplant procedure in January this year. The lung transplant team formed from combined expertise from Marengo Asia Hospitals CIMS and Faridabad was led by Dr Kumud Dhital, Program Director, Lung Transplantation. Dr Dhital was supported by his team from Marengo Hospital, Faridabad, Haryana comprising Dr Pradeep

Kumar, Director – Anaesthesia & Critical Care, CTVS and Heart & Lung Transplant, Mr Praveen Das, Chief Perfusionist, combined with support from local experts at CIMS hospital: - Dr Dhiren Shah, Director of CTVS and Heart & Lung Transplantation, Dr Pranav Modi, Consultant Thoracic & Lung Transplant Surgeon, and Dr Daval Naik, Senior Consultant CTVS and Heart & Lung Transplantation. Addressing the media and responding to the queries were Dr. Kumud Dhital, Dr. Dhiren Shah, Dr. Keyur Parikh, Dr. Pradeep Kumar, Dr. Kapil Iyer, Dr. Amit Patel and Mr. Gaurav Rekhi, Regional Director- Gujarat and Rajasthan. Given his immobility and generalized weakness, he required a prolonged hospital stay and was discharged 7 weeks following the procedure.



His first transbronchial biopsy showed no evidence of rejection.

It was really heartening to see him push his own limits. He gradually progressed from bedside mobilisation to sitting on a chair to standing up to marching on the spot and to finally walking independently.

He was subsequently discharged on 23rd February 2023. His family was also counselled in detail about all the aspects of his care at home. After all a lung transplantation is a life changing event and it is important to take adequate precautions and to have a good quality of life as well.

He had a very stringent post discharge outpatient follow ups with regular blood investigations and regular bronchoscopies. He is also doing daily digital spirometry blows and sending us his fev1. He is getting used to his new pair of lungs and is also having regular physiotherapy sessions at home. He is currently independently climbing stairs and the entire team is over the moon watching his progress.

As I am writing this article, the entire team is busy in coordinating his repatriation back to his country. This includes speaking to his treating doctors and coordinating for various blood investigations and bronchoscopies with their scheduling.

This was a surreal experience for the entire team as we were a part of history being created. The first double lung transplantation in the state of Gujarat and with such great results has further motivated the entire team to dedicate themselves to alleviate patients suffering from end stage lung diseases.

This is an index case, a landmark case which will surely herald many more lung transplantations in the state of Gujarat.



Lung Transplant

2nd



LIVER TRANSPLANTATION

The surgery for Liver Transplantation is performed to remove a liver because either it does not function properly or is affected badly due to a disease. It is replaced with a healthy liver from a healthy person.

It could be a deceased donor or a living donor. The only way to save an individual's life, in case of liver failure, is by way of Liver Transplantation.

The liver is a very important organ of the human body and it is so vital that if it stops working, almost 500 essential body tasks will cease that is necessary for us to survive.

Current Scenario of Liver Transplant in India

India is the third most preferred medical destination in the world because of the affordable treatment packages provided by the hospitals. A liver transplant surgery is possible in India at a very low price without having to compromise on the quality of treatment and medical services. Treatment in India is very cheap as compared to countries like the UK and the USA. To state, the liver transplant price in India is approximately Rs.20 lakhs to Rs.25 lakhs. Yet it is cheaper than most western countries.

As there are many hospitals doing liver transplant surgery, choosing the best hospital in India is not an easy task. One needs to make sure that the hospital provides world-class healthcare facilities and has adopted the latest medical technology. You must consider a hospital with JCI /NABH accreditation.

There is a very high success rate for liver transplantation in India, you can get the best treatment for the transplant procedure. The life expectancy and quality after liver transplant is similar to general population.

Approximately 27 thousand Liver transplants are required every year in India but only 2000-2500 transplants actually take place successfully. Around two lakh patients die every year in India due to Liver Failure or Liver Cancer. And around 12% of those patients can be saved if they receive a timely Liver Transplant.



Who needs a liver transplant?

Liver failures are mainly of two types- acute liver failure and chronic liver failure, which is also known as cirrhosis. In any of these situations, a transplant is necessary.

Here are some of the Medical Complications that will affirm every patient who needs a liver transplant.

- Chronic & Active infection of Hepatitis B/C
- Liver damage from Alcohol Consumption (Alcoholic cirrhosis).
- Primary Biliary cirrhosis.
- Biliary Atresia (Liver or Bile Duct defects by Birth)
- Hepatocellular carcinoma, Hepatoblastoma, Hilarcholangiocarcinoma, and other liver cancers
- Metabolic disorders associated with liver failure (e.g., Wilson's disease)
- Non alcoholic steatohepatitis related cirrhosis.
- autoimmune hepatitis related cirrhosis

Different Types of Liver Transplants:

1. Living Donor Liver Transplantation (LDLT) -The affected/damaged liver of the patient is replaced with a part of the healthy liver taken from a family member, relative, or a friend who is willing to donate and is in a healthy state. This type of liver donor is called a living donor. During a living donor transplantation surgery, a part of the living donor's healthy liver is then

transplanted into the patient's liver. Living donor transplant are more common than deceased donor transplants.

2. Deceased Donor Liver Transplantation (DDLT)-The healthy liver is taken from a brain-dead person and is then transplanted into the liver patient who needs it under this type of liver transplantation. By doing so the entire liver of the person can be transplanted instead of just a part. Most livers for the transplant procedure are from the recently dead people, called deceased donors. There is a possibility that we can transplant the Liver of a deceased donor into two different patients. An adult might need a larger part of it whereas the smaller part is donated to another adult or a paediatric patient. This way they can replace the organ to save two lives.
3. Auxiliary Liver Transplantation-Here a part of the healthy liver is transplanted into the patient so that it does not need complete removal of the liver of the patient. This is done for immediate recovery of the patient therapy. This type of transplant is very rare these days.

17/06/2020 Two 2-year-olds give and receive life via two organ transplant surgeries

Gujarat registers its youngest organ recipient

Two 2-year-olds give and receive life via two organ transplant surgeries

17-year-old gets new lease of life from kidneys of two-year-old braindead child in Rajkot; a two-year-old in Ahmedabad gets a portion of healthy liver from her mother



- The donor should be willing for the procedure. He/she has to be a healthy individual with a weight between 50 and 85 kilograms.
- The donor could be a relative of the patient or someone who does it out of affection and attachment for any other special reason.
- The liver donor can not be an obese or overweight individual.
- The Blood Group of the patient and donor should match, otherwise, the blood group should be "O".

Before the surgery takes place, the donor will be investigated thoroughly for donor eligibility. The risk of Life from donating a liver is so rare that it is considered even safer than tooth removal. All the above information presented to you should be taken into consideration, as it might help you in making informed decisions in difficult situations of liver transplantation.

Who can be the Liver Donor?

From the above discussion, we can conclude that a donor can be a living or dead person.

- The living donor for the Liver can be between 18 and 55 years of age.



Liver Transplant

45th



KIDNEY TRANSPLANTATION

Kidney provides two main functions, cleaning the blood and removing salt and water from the body. There are two main kinds of kidney disease - Acute Kidney Injury and Chronic Kidney Disease. Acute Kidney Injury (AKI) is when the kidney has been normal but a sudden event causes reduction or decrease of the function of the kidney within a few days or weeks. In these conditions, if the cause is identified and treated the kidney function may improve and may even return to normal.

For patients with chronic kidney disease (CKD), once the kidney function is less than 10-15%, then they may get symptoms such as nausea, vomiting, change in taste, decrease in appetite, loss in weight, itching, difficulty in thinking or concentrating, increase in potassium, increase in fluid or difficulty breathing. Once symptoms start, then the two options available are dialysis or kidney transplant.

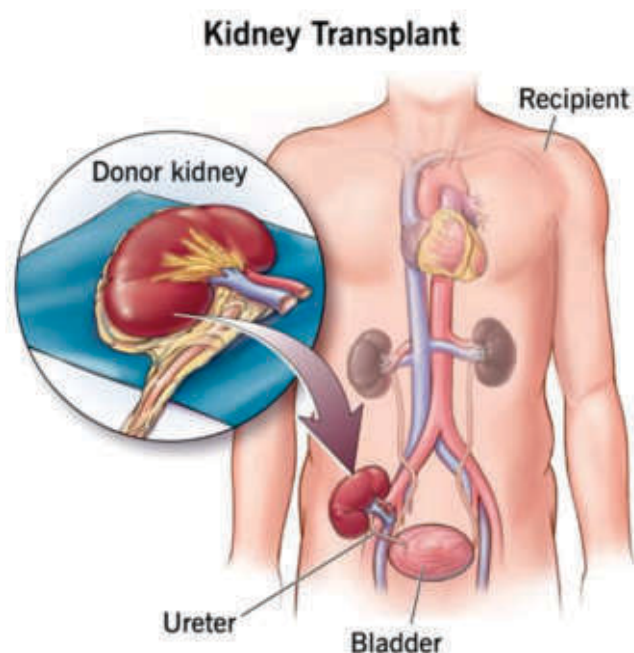
Dialysis and kidney transplantation are treatments for severe kidney failure, also called kidney (or renal) failure, stage 5 chronic kidney disease, and end-stage kidney (or renal) disease. When the kidneys are no longer working effectively, waste products, electrolytes (such as potassium, phosphorus, and acids), and fluid build up in the blood. Dialysis takes over a portion of the function of the failing kidneys to remove the fluid and waste products. Kidney transplantation can even more completely take over the function of the failing kidneys.

Reasons why you should consider kidney transplant over dialysis, if you are looking for better health for the long term:



Between dialysis and transplant, transplant is the better option for most patients as it will

1. **Increase your life expectancy:** Patients with kidney disease can live many years with dialysis; however they are likely to live longer with a transplant. If we look at a 100 patients who start dialysis or transplant then at 10 years only 20 of them are still alive on dialysis while 80 of them are still alive with a transplant.



2. **Improve quality of life:** On dialysis there are many restrictions with regards to food and water intake. In addition, there are restrictions with regard to travel as it has to be planned around dialysis schedule or have to plan dialysis at the travel destination. With transplant most of these issues disappear. Also the overall well being that a person feels is better with a transplant than on dialysis.
3. **Lower cost of treatment:** With dialysis the monthly cost is around Rs 30-50,000 and will continue for the lifetime. With transplant there is a onetime large cost of the transplant but after a few months the cost is only of the medicines which average around Rs 5-10,000 per month.

Hence, over the next few years, transplant is also cheaper than dialysis.



Get the facts on kidney transplantation before you start dialysis

Patients dealing with chronic kidney disease often begin dialysis before going through an evaluation to determine if they qualify for a kidney transplant. And sometimes, patients stay on dialysis not ever knowing that a new kidney may be a better option. Getting the right information about your options is key to not only your quality of life but also to your survival.

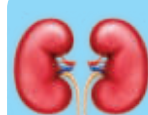
Dialysis, though a life-saving therapy, is a less-than perfect option to treat kidney failure. The longer a patient stays on dialysis, the longer they are exposed to the chronic effects of kidney failure and dialysis, including issues such as heart problems, hardening arteries, chronic inflammation, and infections.

Once a patient is diagnosed with chronic kidney disease, they should follow up regularly with a nephrologist who should be proactive, pointing them toward a transplant evaluation once their kidney function declines to about 20 to 25 percent.



It is important to know that you do not have to do dialysis before you get a kidney transplant. Patients who receive a new kidney before starting or after a short period of dialysis have better outcomes than patients who have been on dialysis for a long time. Patients who have spent no or minimal time on dialysis tend to be healthier and stronger, in part because their disease hasn't progressed, but also because dialysis is hard on the body.

Kidney Transplants are associated with several considerable benefits compared to dialysis. These include greater life expectancy, better overall health, and improved quality of life – including freedom from the severe restrictions of dialysis treatments.



Kidney Transplant

65th



BONE MARROW TRANSPLANTATION

Bone Marrow Transplant or Stem Cell Transplant or Blood and Marrow Transplant is an advanced medical treatment procedure used as a curative treatment option in blood cancers, pediatric solid cancers and multiple non-malignant disease including some genetic diseases.

It does not involve any surgery. The donor does not lose any organ. The stem cells are mostly collected from peripheral blood of the donor through a process called apheresis, similar to donating platelet.

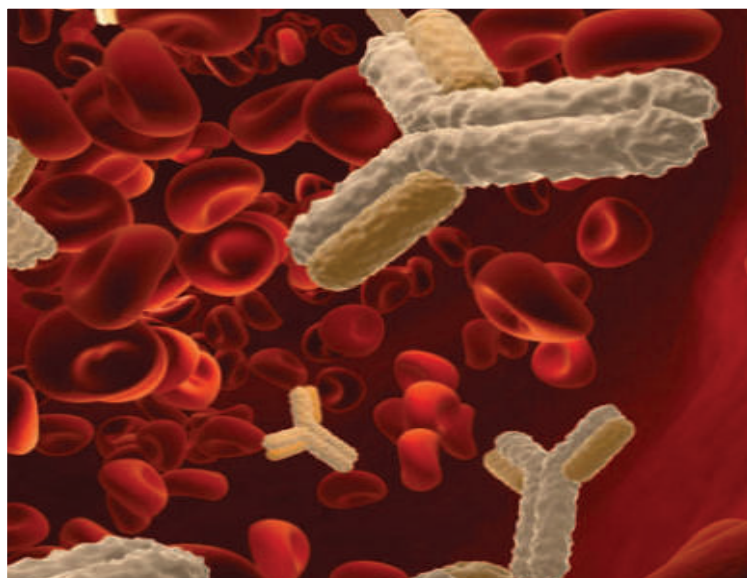
BMTs are of broadly two types:

1. Autologous BMT where the stem cells are collected from the peripheral blood of the patient
2. Allogenic BMT where the stem cells are collected from another individual, either from the family member or a donor registry

Following are the indications of BMT:

Indications of Autologous stem cell transplant in pediatric and adults:

Blood Cancers	Solid Cancers
Hodgkin's Lymphoma	Neuroblastoma
Non-Hodgkin's Lymphoma	Ewing's sarcoma and other relapsed pediatric solid tumors
Multiple Myeloma	Germ cell tumor
Amyloidosis	



Indications of Allogenic stem cell transplant in pediatric and adults:

Blood Cancers	Non-Malignant Diseases
Acute Lymphoblastic Leukemia	Thalassemia
Acute Myeloid Leukemia	Sickle Cell Disease
Hodgkin's Lymphoma	Aplastic Anemia
Non-Hodgkin's Lymphoma	Immunodeficiency Diseases
Myelodysplastic Syndrome	Congenital Bone Marrow Failure Syndromes
Chronic Myeloid Leukemia & Myelofibrosis	Osteopetrosis
Juvenile Myelomonocytic Leukemia	

• Outcome of transplant

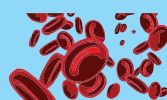
Autologous stem cell transplant has excellent outcome with minimal risk of mortality and morbidity. The progression free survival depends upon the indication and status of disease control prior to the transplant.

Allogeneic stem cell Compared to Haploidentical transplant are more complicated. Matched sibling transplant has lesser complications. Half matched or Haploidentical transplant, mostly done for cancers are now also giving good results, however complications are higher. The overall outcome of allogeneic transplant depend on the disease and the timing of performing the procedure.

• Post Transplant Care

After transplant, the patients immune system takes at least an year to recover. During this period, patient is at risk of bacterial and fungal infection. This risk is compounded by presence of central venous catheter with is maintained for few months in allogeneic transplant. There is risk of viral infections like CMV, BK-virus, EBV, Adenovirus in allogeneic transplant which needs close monitoring. Patients of allogeneic transplant also has risk of graft versus host disease. The patient is usually under close follow up for 2 months for autologous transplant and for 4 to 6 months in case of allogeneic transplant.

Patient receives a vaccination schedule from 6 months of transplant following which life starts getting back to normal. However regular follow-up with the transplant team has to be continued for years to monitor for late complications.



Bone Marrow Transplant

204th

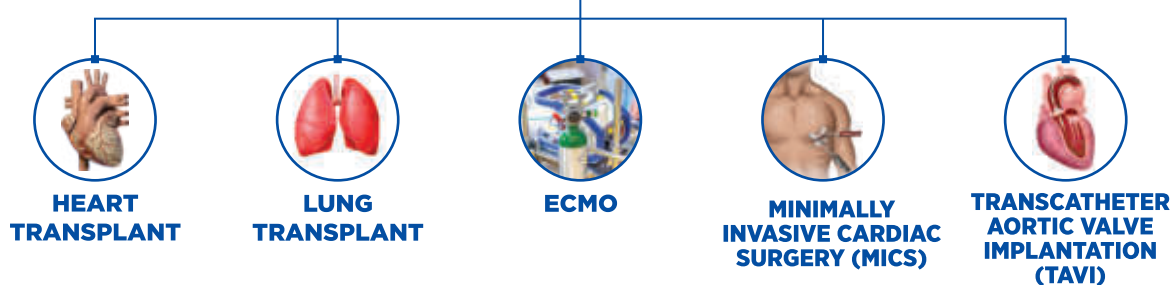


Marengo CIMS Hospital, Ahmedabad

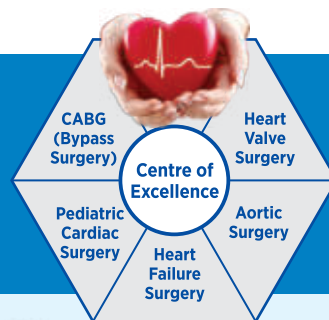
INSTITUTE OF CARDIAC SCIENCES

One-stop solution for any cardiac surgery.

Pioneer in Gujarat, India



- **First in Gujarat** in Heart, Lungs & ECMO, and **First in India** in TAVI
- Only & first centre for paediatric cardiac surgery in private setup
- Performing more than 1000 cases annually
- Experience of 25000 cardiac surgeries
- Multi disciplinary approach



One of India's largest team of Heart Care Experts

TOP ROW LEFT TO RIGHT: Dr. Vipul Ahir | Dhanyata Dholakia | Dr. Chintan Sheth | Dr. Niren Bhavsar | Dr. Nikunj Vyas
Dr. Shaunak Shah | Dr. Dhiren Shah | Dr. Dhaval Naik | Dr. Amit Chandan | Dr. Pranav Modi | Dr. Kishore Gupta
Dr. Hiren Dholakia | Ulhas Padiyar | Akash Rajawat | Dr. Guntant Patel

BOTTOM ROW LEFT TO RIGHT: Dr. Tejas V. Patel | Dr. Satya Gupta | Dr. Urmil Shah | Dr. Anish Chandarana
Dr. Keyur Parikh | Dr. Milan Chag | Dr. Ajay Naik | Dr. Hemang Baxi | Dr. Hiren Kevadiya
| Dr. Vipul Kapoor | Dr. Kashyap Sheth

1827

One of the highest coronary angioplasties and stenting
(January to December 2022)

98% Successful Hospital Outcome

Highest Number in Gujarat

4th and Most Versatile Cath Lab
"Azurion 7C20 with Flexvision XI &
3 Dimensional Navix Precision
Ep Mapping System



American College of Cardiology (ACC)
Centre of Excellence
ONE OF THE FIRST IN INDIA

1000+

Open Heart Surgeries
(January to December 2022)



Marengo CIMS Hospital, Ahmedabad

INSTITUTE OF CARDIAC SCIENCES

THE MOST TRUSTED CARDIAC TEAM



RECORD BREAKING

**Heart Surgeries, Heart Transplant, Angioplasty, TAVI, Pacemaker Devices
in Recent Times with Full Safety**

A CENTRE OF EXCELLENCE FOR TOTAL HEART CARE

- **TAVR** (Transcatheter Aortic Valve Implantation). **29 Successful TAVR** with 100% in hospital success
- Aortic Aneurysm and Dissection Endovascular Interventions TEVAR & EVAR
- Heart Transplant : **Only Centre in Gujarat with Successful Heart Transplant Program**
- **PAMI** (Primary Angioplasty in Myocardial Infarction) since year 2000
- **Complex and High Risk Procedures** with FFR, OCT, IVUS, IVL, ROTABLATION as well as Cardiac MR & Cardiac CT for Complex Angioplasty
- **Structural Heart Intervention Program**
- **Congenital Heart Disease / Structural Heart disease** All Surgeries and Devices
- **Arrhythmia and Heart Failure** with **Full Cardiac Device Program**
- **Leading center of EP Studies, RF ablation therapy and 3D mapping for Complex arrhythmia management.**
- **MICS (Minimally Invasive Cardiac Surgery) and Routine Surgeries** : Total Arterial (BIMA) Bypass, Valve Replacement, Aortic Aneurysm and Dissection
- **Peripheral & Carotid Intervention Program**
- **Intravascular Lithotripsy , Bioabsorbable Stents/ Scaffolds**

Marengo CIMS Hospital, Ahmedabad



**Ahmedabad City's only JCI Certified
Multi Specialty Hospital**



**World-class Infrastructure | State-of-the-art Technologies | Better Facilities
Specialized and Experienced Team of Experts**

- ✓ First Successful Heart and Lung Transplant of Gujarat
- ✓ Paediatric Bone Marrow Transplant Unit for Thalassemia - First in Gujarat
- ✓ TAVR/TAVI - First in Gujarat
- ✓ Digitized OTs and ICUs for better patient care - First in Gujarat
- ✓ First in Asia Pacific to set up Elekta Versa HD for cancer radiation treatment
- ✓ MRI - Signa Explorer - First in Gujarat
- ✓ Carl Zeiss Pentero 900 Microscope - First in Gujarat
- ✓ One of the first ECMO (Extracorporeal Membrane Oxygenation) machine in Gujarat for patients with cardio respiratory failure
- ✓ The First exclusive Trauma Centre in Western India to have ATLS and BLS protocol based management of trauma
- ✓ State-of-the-art - Pentax First in Gujarat HD EUS / EBUS (J 10 Series) with HD Optivista plus processor for better diagnosis
- ✓ First installation of EPIQ Cvx in Ahmedabad-premium interventional cardiology ultrasound system
- ✓ ERBE CPYO™2 for therapeutic and diagnostic applications in pulmonology
- ✓ First Specialised Transplant Unit in Private Sector in Gujarat
- ✓ Marengo CIMS Hospital, Ahmedabad launches the Fourth & Most Versatile Cathlab of Western India

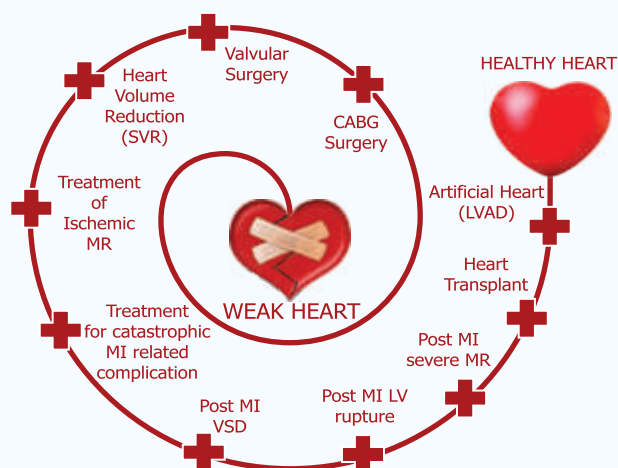


Marengo CIMS Hospital, Ahmedabad

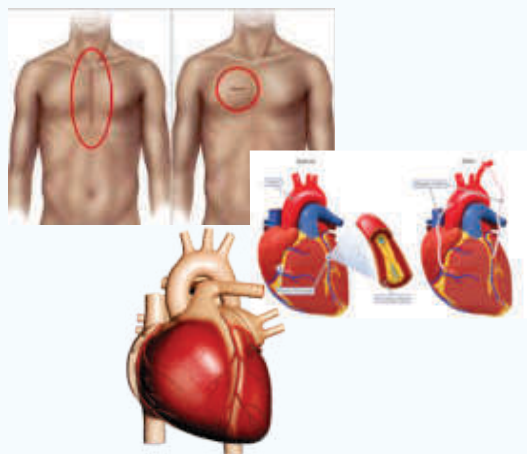
INSTITUTE OF CARDIAC SCIENCES

ARE YOU SUFFERING FROM HEART FAILURE ?

Heart Failure, also called Congestive Heart Failure (CHF), means your heart does not pump blood as well as it should. This does not mean your heart has stopped working, but it is not as strong as it used to be and fluid builds up in the lungs and other parts of your body. This can cause shortness of breath, swelling in the legs, feet, and stomach. Heart failure starts slowly and can get worse over time.



DO YOU WANT TO GET BYPASS SURGERY (CABG) ?



- Coronary Artery Bypass Grafting (CABG)
- Off Pump (Beating Heart) Surgery & On Pump Surgery
- Bilateral Internal Mammary Artery (BIMA)
- Minimally Invasive Surgery (MICS) - CABG
- Hybrid - CABG
- LV Aneurysm Surgery
- CABG & MV Repair
- Redo CABG
- CABG in Heart Failure

LARGEST AND MOST EXPERIENCED CARDIAC SURGICAL TEAM OF GUJARAT

CARDIOTHORACIC & VASCULAR SURGEONS

Dr. Dhiren Shah
+91-98255 75933

Dr. Dhaval Naik
+91-90991 11133

Dr. Amit Chandan
+91-96990 84097

Dr. Kishore Gupta
+91-99142 81008

Dr. Nikunj Vyas
+91-73531 65955

Dr. Shaunak Shah
+91-98250 44502

CARDIAC ANAESTHESIOLOGISTS

Dr. Niren Bhavsar
+91-98795 71917

Dr. Hiren Dholakia
+91-95863 75818

Dr. Chintan Sheth
+91-91732 04454



04th | TMVR

Transcatheter Mitral Valve Replacement



Balloon Expandable Valve

33rd | TAVI

Transcatheter Aortic Valve Implantation



Balloon Expandable Valve



Self Expanding Supra-Annular Valve

WEDNESDAY, 7th JUNE, 2023

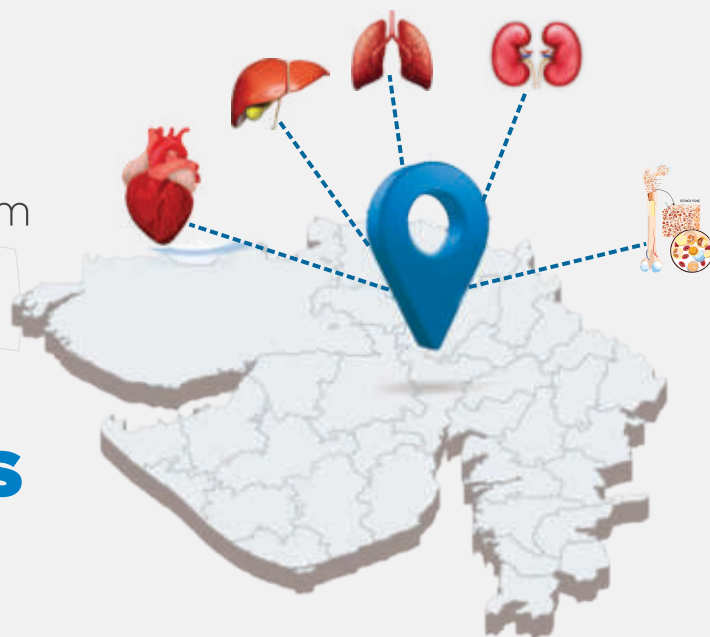
HIGHEST NUMBER IN GUJARAT

100% SUCCESSFUL HOSPITAL OUTCOMES

INDIA'S BEST HEART CARE EXPERTS

The only Hospital in Gujarat with
Multiple Teams of Experts to Perform
5 KINDS OF TRANSPLANTS
under One Roof

**LEADERS ACROSS
INDIA IN TRANSPLANTS**



Cardiologists

Dr. Vipul Kapoor (M) +91-98240 99848	Dr. Urmil Shah (M) +91-98250 66939
Dr. Tejas V. Patel (M) +91-89403 05130	Dr. Hemang Baxi (M) +91-98250 30111
Dr. Hiren Kevadiya (M) +91-98254 65205	Dr. Anish Chandarana (M) +91-98250 96922
Dr. Gunvant Patel (M) +91-98240 61266	Dr. Ajay Naik (M) +91-98250 82666
Dr. Keyur Parikh (M) +91-98250 26999	Dr. Satya Gupta (M) +91-99250 45780
Dr. Milan Chag (M) +91-98240 22107	

Congenital & Structural Heart Disease Specialist

Dr. Kashyap Sheth (M) +91-99246 12288	Dr. Milan Chag (M) +91-98240 22107
---------------------------------------	------------------------------------

Cardiothoracic & Vascular Surgeons

Dr. Dhiren Shah (M) +91-98255 75933
Dr. Dhaval Naik (M) +91-90991 11133
Dr. Amit Chandan (M) +91-96990 84097
Dr. Kishore Gupta (M) +91-99142 81008
Dr. Nikunj Vyas (M) +91-73531 65955

Paediatric & Structural Heart Surgeons

Dr. Shaunak Shah (M) +91-98250 44502

Cardiovascular, Thoracic & Thoracoscopic Surgeon

Dr. Pranav Modi (M) +91-99240 84700

Cardiac Anaesthetists

Dr. Niren Bhavsar (M) +91-98795 71917
Dr. Hiren Dholakia (M) +91-95863 75818
Dr. Chintan Sheth (M) +91-91732 04454

Cardiac Electrophysiologist

Dr. Ajay Naik (M) +91-98250 82666
Dr. Hiren Kevadiya (M) +91-98254 65205

Neonatologist and Paediatric Intensivist

Dr. Amit Chitaliya (M) +91-90999 87400
--



HEALTHY HEART

VOLUME-14 | ISSUE-164 | JULY 05, 2023

Healthy Heart Registered under **RNI No. GUJENG/2008/28043**

Published on 5th of every month

Permitted to post at PSO, Ahmedabad-380002 on the 12th to 17th of every month under

Postal Registration No. **GAMC-1725/2021-23** issued by SSP Ahmedabad valid upto 31st December, 2023

Licence to Post Without Prepayment No. **PMG/NG/055/2021-23** valid upto 31st December, 2023

If undelivered please return to :

Marengo CIMS Hospital,
Nr. Shukan Mall, Off Science City Road,
Sola, Ahmedabad-380060.
Call : 1800 309 9999

Subscribe "Healthy Heart" : Get your "Healthy Heart", the information of the latest medical updates only ₹ 60/- for one year.

To subscribe pay ₹ 60/- in cash or cheque/DD at CIMS Hospital Pvt. Ltd. Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060. Phone : +91-79-4805 2823. Cheque/DD should be in the name of : **"CIMS Hospital Pvt. Ltd."**

Please provide your **complete postal address with pincode, phone, mobile and email id** along with your subscription

JIC 2024
Joint International Conference
JANUARY 05 - 07

DO NOT MISS

20th Annual Scientific Symposium | 29th Year of Academics

SUPER EARLY BIRD PRIZE*

Register for JIC 2024

UPTO JULY, 2023

**And Get an Attractive Prize
(*For the First 500 Registrants Only)**

For MD Physicians
₹ 2,000/-* Only

For MD Students
₹ 1,000/-* Only

Marengo CIMS Hospital : Regd Office: Plot No.67/1, Opp. Panchamrut Bungalows, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad - 380060.

Ph. : +91-79-2771 2771-72 | 4805 1111

CIMS Hospital Pvt. Ltd. | CIN : U85110GJ2001PTC039962 | marengocims.info@marengoasia.com | www.cims.org

Printed, Published and Edited by Dr. Keyur Parikh on behalf of the Marengo CIMS Hospital
Printed at Hari Om Printery, 15/1, Nagori Estate, Opp. E.S.I. Dispensary, Dudheshwar Road, Ahmedabad-380004.
Published from Marengo CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060.