



**Your Heart Has a  
Special Place in Our Hearts.**

**Caritas Heart Institute**  
Centre of Excellence in Cardiac Sciences

## An Introduction





# Dedicated to Your Heart.

**Ensuring Heart Health for All through the Right  
Diagnosis and Right Treatment at the Right  
Time for Over 37 Years.**

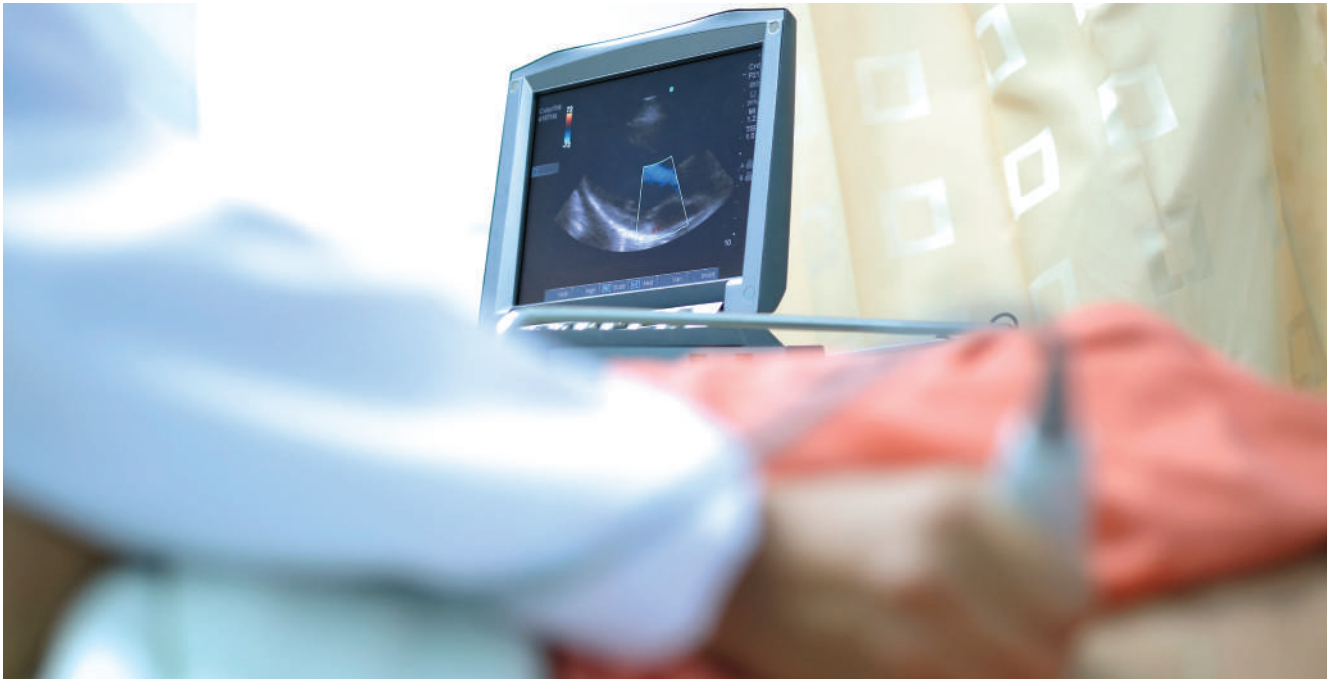
Caritas Hospital & Institute of Health Sciences has been providing dedicated services in Cardiology for over 37 Years. In the initial decades, it stood high in Central Travancore for its expertise in Cardiac Emergency Care, Non-invasive Cardiac Services - especially ECHO Cardiography, Research, and Preventive Cardiac Education. The care provided transformed with time, facilitating new treatments and technology in the field of Cardiac Sciences. It bloomed into a full-fledged, all-encompassing cardiac centre in 2011, adding the top experts and technology along with state-of-the-art facilities, particularly in Interventional Cardiology and Cardiac Surgery. Thus, the Caritas Heart Institute was born, offering excellence in heart care being one among the leading Cardiac Sciences centre in Kerala.

## Division of Cardiology (Non-invasive and Interventional)

### Non-invasive Cardiology

A significant majority of heart patients are catered to by the Non-invasive team of Caritas Heart Institute, consisting of Outpatient Clinics, ECG, Echocardiography, Holter Units, Treadmill Units and special services such as Heart Rhythm Clinic, Heart Failure Clinic, Lifestyle Clinic, etc.

**The ECHO team** at Caritas Heart Institute is a highly experienced team and has a track record of performing more than three lakhs procedures over the years. They carry out round-the-clock decision-making imaging in critical moments in addition to daytime large-volume elective work of high diagnostic quality.



## Interventional Cardiology

**The Interventional team** carries out diagnostic and curative procedures in Cath Labs, one of which is a high-end, spacious, Hybrid Cath Lab that can function like a Cardiac Surgery Suite if required and is the first of its kind in Kerala and one among the few sophisticated Cath Labs in the country.

The division witnessed a meteoric rise right from the inception and soon became one of the top notchers in the number of procedures performed besides the variety and complexity. Any latest innovation or development in the field of Cardiac Intervention is adopted at the earliest and made available to the people at an affordable cost without compromising on the quality and expertise. Slender Angioplasty, Intravascular Lithotripsy, Rota Assisted Lithotripsy, Absorbable Stents, Lead-less Pacemakers, Heart Valve Replacement without Open Heart Surgery (Transcatheter Aortic Valve Implantation (TAVI), Transcatheter Tricuspid Valve Implantation (TRIC Valve), etc. are a few examples. The Interventional Cardiology division at Caritas Heart Institute is the first to perform many of these procedures in Kerala.

The division records the highest number of ECMO procedures and the ECMO survivors in the state. The division ensures an enhanced care together



### The Number Says It All.

**The division has performed over 40,000 Interventional Cardiology Procedures, including over 25,000 Coronary Angiograms and 13,000 Coronary Angioplasties.**

with Cardiac Electrophysiology and Paediatric Interventional divisions.

The Electrophysiology (EP) division performs advanced pace making and complex procedures for various heart rhythm abnormalities. Paediatric Interventional Cardiology cures many cardiac defects in children without a heart surgery.

A spacious, highly equipped Hybrid Cath Lab with the most modern Intracoronary Imaging facilities such as Optical Coherence Tomography (OCT), Intracoronary Ultrasound (IVUS) and the expertise of the Interventional Cardiology team have elevated the division as an apex referral point in Kerala. The division performs Complex High-risk Interventional Procedures (CHIP) so that patients considered ineligible for Angioplasty by primary centres get benefitted.



## CHIP

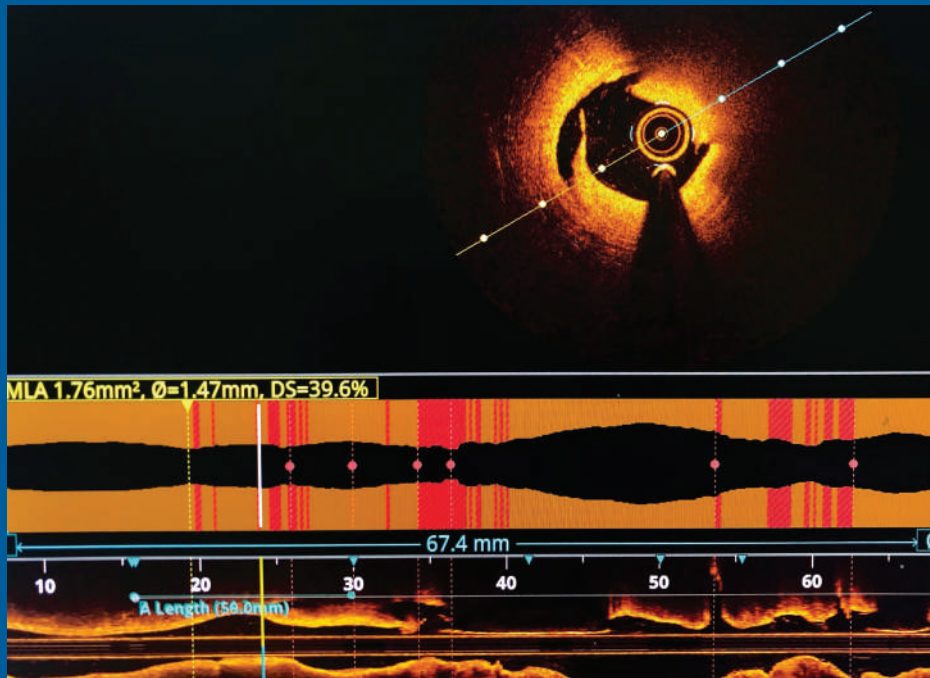
### *Complex High-risk Interventional Procedures*

CHIP refers to Angioplasty procedures performed on a symptomatic patient with 'not-easy-to-do' coronary blocks that require high expertise and advanced equipment, especially when heart surgery is not an option.

## OCT

### *Optical Coherence Tomography*

Usual Coronary Angiogram provides the degree of narrowing by the blocks offering an exterior view. However, in select cases more detailed picture of the plaques can be obtained by micro cameras inserted to heart vessels called IVUS (Intra Vascular Ultrasound) and Infrared-based OCT (Optical Coherence Tomography). OCT provides a crystal clear inside picture of the degree of a block, its stability, composition and guides perfect stenting.



In a short period, the Interventional team of Caritas Heart Institute has become one of the best at the national level. The periodic training programs in Interventional Cardiology attracts upcoming institutes and young experts nationwide for our training workshops. Our experts are among the most sought-after resource persons for academic programs conducted across the state and the national educative programs in Complex Interventions. A live case transmission, well appreciated at the 2022 Joint Interventional Conference in Milan, Italy (JIM, the second largest international teaching platform), denotes our rising global recognition.



## Division of Cardiology (Non-invasive and Interventional)

### Scope of Services

- 28-bedded 24x7 Cardiac ICU Facility and Comprehensive Non-invasive Facilities
- ECHO Doppler Laboratory with 3D, TEE, Bedside ECHO Services, Handheld ECHO, TMT, Holter Lab
- Hi-end Cardiac Catheterization Laboratory with Facilities for Routine and Complex Interventional Procedures
- OCT, FFR IVS, Rotablation and IVL
- Transcatheter Aortic Valve Implantation (TAVI)
- Extracorporeal Membrane Oxygenation (ECMO)
- Cardiac Electrophysiology Services - Pacemakers, ICD, Biventricular Pacemaker Implantation
- Paediatric Cardiology Services - Foetal Echocardiogram, Counseling and Follow-up
- Interventional Paediatric Cardiology Procedures - Device Closure of Septal Defects, Patent Ductus Arteriosus



## Division of Cardiovascular and Thoracic Surgery (CVTS)

The Cardiovascular and Thoracic Surgery division has earned a great reputation in a short period, performing the first heart transplantation in its initial years and is still soaring high complemented by an expert Cardiac Anaesthesiology team. Caritas Heart Institute performs all routine Cardiac Surgeries. Over 3000 cases performed in 10 years vouches for the expert heart care delivered at the centre.

The CVTS division was the first in the state to incorporate keyhole heart bypass surgery under its services, improvising the procedure and setting a benchmark. Over 500 keyhole heart bypass surgeries performed so far make Caritas Heart Institute Kerala's first and only centre to achieve the feat. The division also provides regular academic programs in keyhole heart bypass surgeries, attended by young professionals and cardiac surgeons from across the country.

### Keyhole Heart Surgery Improving Patient Comfort.

Usually, in open heart surgeries, the sternum is cut open and sutured back, which is avoided in keyhole heart surgeries. Instead, a small incision is made in the chest wall through which heart surgeries including cardiac bypass and valve replacements are performed. This procedure assures less chest pain, shorter hospital stay and faster recovery time. It helps the patient to return to normal life faster without compromising safety. The sterna-related and scar-related complications can be avoided through Keyhole Heart Surgeries.

So far, over 500 keyhole bypass surgeries and 200 Keyhole valve repair/replacement surgeries have been performed at Caritas Heart Institute via keyhole cardiac procedures. To add, nearly 98 percent of heart surgeries are performed through Keyhole procedures at Caritas Heart Institute.



## Heart Transplant Program

Restart Life, Beat by Beat.

A heart transplant is a surgery to remove a diseased heart from a person and replace it with a healthy one from an organ donor. Finding a donor heart is difficult. To remove the heart from the donor, two or more healthcare providers must declare the donor brain-dead. The transplant procedure is done only if the healthcare provider confirms that it is the best treatment choice for your heart failure. The healthcare team also makes sure the patient is healthy enough to go through the transplant process. After the transplant, medical care is

advised for the rest of the life to avoid complications.

Caritas Heart Institute is ably equipped to perform heart transplants. It delivers unique pre and post-transplant management facilities throughout every step of the heart transplant process. When it comes to the heart transplant program, the Institute is equipped with state-of-the-art technology and cutting-edge medical interventions. The highly trained doctors, an integrated team approach, and an excellent infrastructure help to attain superior outcomes.

### Division of Cardiothoracic Surgery | Scope of Services

- Heart - Lung Transplantation and Assist Devices
- Minimally Invasive Cardiac Surgery
- Off-Pump Coronary Artery Bypass Operation
- Complex Valvular Reconstruction
- Transcatheter Aortic Valve Implantation (TAVI) or Transcatheter Aortic Valve Replacement (TAVR)
- Extracorporeal Membrane Oxygenation (ECMO)
- Endovascular Therapy for Aortic Pathologies
- Single Valve and Double Valve Replacement
- Aneurysm/ Dissection of Ascending, Arch, Thoracic and Abdominal Aorta
- Bypass Grafting of Peripheral Vessels
- Carotid Endarterectomy
- Repair of Vascular Trauma (Injury of Vessels)
- Video Assisted Thoracic Surgery

# Kerala's First Laser Angioplasty Centre

Inspiring innovation in patient care, Caritas offers minimally invasive laser procedures for cardiac care with advanced technology

- Minimal discomfort
- Fast procedure
- Minimal hospital stays
- Low recovery time



**Excimer Laser System**

CVX-300® Philips Laser

# Venues of Synchronised 'Heart Team' Work.

Occasionally, the Non-invasive Cardiology team, Interventional team, Critical Care Anaesthesiology team and Cardiac Surgeons have to work together to save a life. Caritas Heart Institute ensures the right teamwork as well as the environment for the same, including a Hybrid Cath Lab.

## Hybrid Cath Lab

Our Hybrid Cath Lab is a high-end cath lab with a special table in a large spacious operating room suite with all features of a cardiac surgery theatre, including special lighting and Anaesthesia equipment. In case of a situation when the Cardiologist, Cardiac Anaesthesiologist and Cardiac Surgeons have to work together or in tandem to perform procedures such as ECMO, Aortic Stenting, Hybrid Coronary Intervention and Non-surgical Valve Procedures (TAVI & TRIC), the environment of Hybrid Cath Lab is invaluable.



## ECMO (Extra Corporeal Membrane Oxygenator)

### A Crucial Lifeline.

When the heart or lung fails severely and the life is at stake, ECMO – essentially a heart-lung machine at the bedside – can oxygenate the blood and pump the blood to vital organs. It can quickly be inserted at the time of collapse and maintained for days till the heart recovers or is replaced. In Kerala, Caritas Heart Institute pioneered this procedure a decade ago and has the maximum number of 'happy survivors' by ECMO, which requires a well-coordinated teamwork of Cardiologists, Cardiac Anaesthesiologists and Cardiac Surgeons during the critical hours.

# Going Forward in Heart Care.

Working Towards the Common Goal of 'A Healthy Heart for All' through Right Research as well as Patient and Community Education.

## Research, Family Cardiology, Preventive and Community Education

Caritas Heart Institute is one of the pioneers in Kerala for **Research Initiates** in Cardiology empowered by NABH accredited Ethics Committee. The centre took part in many Multicentre Registries at the state and national levels. It has been participating in several International Pivotal Multicentre Trials and is proud to be part of a decade-long international research that developed the key drugs like Dabigatran and Apixaban, and Edoxaban, which are widely prescribed now in Cardiology and Neurology.

## Right Care Starts with the Right Patient Education

Caritas Heart Institute emphasizes patient education right from the beginning so they remain informed about their heart health status, treatment plans, potential outcomes and care instructions, which guide them to make informed decisions and lifestyle changes to improve their condition. The institute facilitates dedicated clinics for patient education and motivation such as the Coronary Educative and Preventive Clinic, Heart Rhythm Clinic, Heart Failure Clinic, and Lifestyle Clinic, all of which are coordinated by a family medicine specialist with ample experience in Cardiology.







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