



HEALTHY HEART

VOLUME-13 | ISSUE-147 | FEBRUARY 05, 2022

Price : ₹ 5/-

Honorary Editor :

Dr. Dhiren Shah

Cardio Vascular & Thoracic Surgeon
Heart Transplant Surgeon



Dear Friends,

Greetings from CIMS Hospital CVTS department.

You all are very well aware that till date we have done 5 Successful Heart Transplants at CIMS Hospital.

I got lot of inquiries as to what are the indication, contraindication for heart transplant. Even what is the process if someone has to refer the patient for Heart Transplant. In this brief article I have tried to give you quick summary of which patients are candidates for heart transplant & once they are considered for transplant then what is further process of enrolling them in waiting list for heart transplant.

Hope this helps you in finding out right patient for transplant & you can guide them for the same.

Advanced Chronic Heart Failure and Heart Transplantation

A Guide to Clinical Decision-Making and the process for reference for Heart Transplant

Diagnosis of Advanced Chronic Heart Failure

Advanced chronic heart failure is defined as Stage D heart failure according to the latest ACC/AHA heart failure guidelines. It designates patients with refractory heart failure who might be eligible for specialized, advanced treatment strategies or cardiac transplantation, or for end-of-life care, such as hospice.

The clinical definition of advanced chronic heart failure is based on NYHA class 3 or 4 symptoms, severely impaired exercise capacity, and a history of at least 1 hospitalization due to heart failure in the past 6 months despite optimal medical therapy. Even advanced heart failure is punctuated by periods of more severe signs and symptoms followed by periods of compensation. Often, patients

with a history of functional class 4 will respond to augmented therapy with significant lessening of symptoms. Therefore, a 3-month persistence of at least NYHA III symptoms seems to be a justifiable requirement for the diagnosis of advanced chronic heart failure.

A cardiopulmonary exercise testing in the form of VO2 max--peak oxygen consumption of <14 ml/kg/min would

Diagnosis of Advanced Chronic Heart Failure

Advanced chronic heart failure is defined as Stage D heart failure according to the latest ACC/AHA heart failure guidelines. It designates patients with refractory heart failure who might be eligible for specialized, advanced treatment strategies or cardiac transplantation, or for end-of-life care, such as hospice.

The clinical definition of advanced chronic heart failure is based on NYHA class 3 or 4 symptoms, severely impaired exercise capacity, and a history of at least

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
Dr. Divyesh Sadadiwala (M) +91-8238339980	

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
--



Figure 1. Diagnosis of advanced chronic heart failure

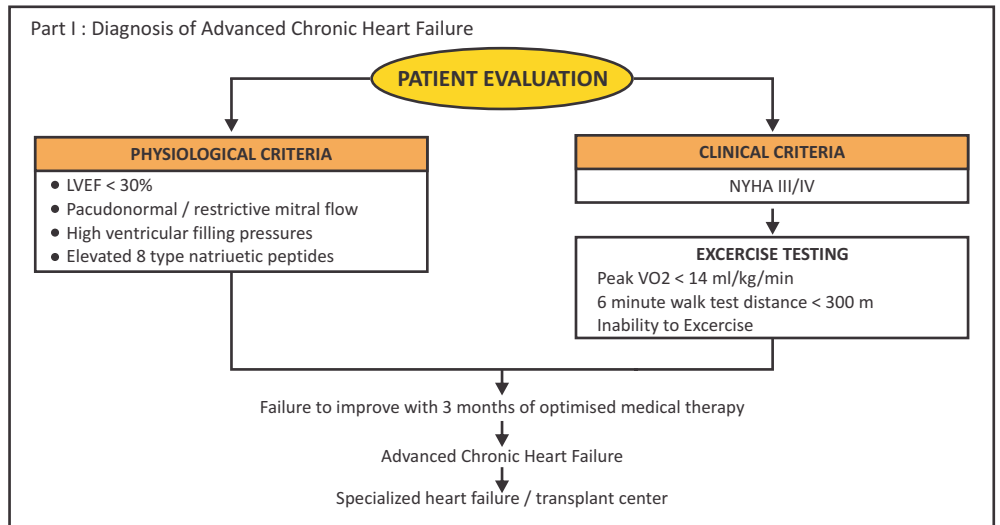


Table 5. Traditional Contraindications for Heart Transplantation

Age

- Obesity
- Insulin-dependent diabetes with end-organ damage
- Irreversible renal dysfunction
- Irreversible hepatic dysfunction
- Coexistent systemic illness with a poor prognosis
- Irreversible pulmonary arterial hypertension
- Irreversible pulmonary parenchymal disease
- Acute pulmonary parenchymal disease
- Severe peripheral and/or cerebro-vascular disease
- Irreversible renal dysfunction
- Active peptic ulcer disease
- Active diverticulosis or diverticulitis
- Active infection
- Coexisting neoplasm

● Refractory cardiogenic shock

- Documented dependence on IV inotropic support to maintain adequate organ perfusion
- Peak VO2 less than 10 ml/kg/min with achievement of anaerobic metabolism
- Recurrent life-threatening ventricular arrhythmias refractory to all therapeutic modalities

RELATIVE

- Peak VO2 11 to 14 ml/kg/min (or 55% of predicted) and major limitation of the patient's daily activities

After screening for absolute indication for Heart Transplant, assessment and screening for contraindications is done for which a battery of investigations are done.

1 hospitalization due to heart failure in the past 6 months despite optimal medical therapy. Even advanced heart failure is punctuated by periods of more severe signs and symptoms followed by periods of compensation. Often, patients with a history of functional class 4 will respond to augmented therapy with significant lessening of symptoms. Therefore, a 3-month persistence of at least NYHA III symptoms seems to be a justifiable requirement for the diagnosis of advanced chronic heart failure.

A cardiopulmonary exercise testing in the form of VO2 max--peak oxygen consumption of <14 ml/kg/min would appear to be a reasonable diagnostic criterion for advanced heart failure, and a diagnosis of advanced heart failure would be unreasonable if peak VO2 was >18 ml/kg/min. A simple 6 minute walk distance test of less than 300 meters is again diagnostic of Advanced Heart Failure.

Evaluation of Indications for Heart Transplantation

In a specialized centre, the evaluation of patients with advanced chronic heart failure patient is based on an integrated approach that includes the assessment of candidacy for heart transplantation and alternate treatment modalities, such as Cardiac Resynchronization Therapy (CRT) or mechanical circulatory support (LVAD).

Table 1. Indications for Heart Transplantation in Advanced Chronic Heart Failure

ABSOLUTE



This battery of investigations are as follows and estimated cost for this pre transplant evaluation will be around Rs 1,75,000/-.

Table 3. Required Pre-Transplant Studies in All Patients

History and Physical, Body weight Baseline + Q3 Months

Assessment of Heart Failure Severity

- Cardiopulmonary exercise test Baseline+Q1 Year
- Echocardiogram Baseline+Q1 Year
- Right heart catheter Baseline+Q6 Months
- Coronary angiography Baseline
- ECG Baseline+Q1 Year

Evaluation of multi-organ function

- Routine lab work (BMP, CBC, LFT) Baseline+Q3 Months
- PT/INR Baseline+Q3 Months
- Urinalysis Baseline+Q3 Months
- GFR (MDRD quadratic equation) Baseline+Q3 Months
- Urine sample for protein excretion Baseline+Q3 Months
- PFT with Arterial blood gasses Baseline
- CXR (PA and lateral) Baseline+Q1 Year
- Abdominal ultrasound Baseline
- Stool for occult blood 3x Baseline+Q1 Year
- Immunocompatibility Baseline
- ABO, Repeat ABO Baseline
- HLA tissue typing Baseline
- PRA and flow cytometry Baseline+Q2 Months
(PRA>10%, VAD, transfusion

Infectious serology and vaccination

- Hepatitis B surface Ag Baseline
- Hepatitis B surface Ab Baseline
- Hepatitis B core Ab Baseline
- Hepatitis C Ab Baseline
- HIV Baseline
- Rapid Plasma Reagin Baseline
- HSV IgG Baseline
- CMV IgG Baseline

- Toxoplasmosis IgG Baseline
- EBV IgG Baseline
- Varicella IgG Baseline
- PPD Baseline

General consultation

- Social work, Psychology Baseline
- Financial Baseline

Evaluation of multi-organ function

- Carotid Doppler and lower extremity arterial ultrasounds (history or coronary artery disease, smoking, or >50 y) Baseline
- Pulmonary Function Testing (smoking, Baseline amiodarone use) Baseline
- DEXA scan (>50 y) Baseline
- Dental examination (poor oral hygiene) Baseline+Q1 Year
- Ophthalmologic examination (diabetic) Baseline+Q1 Year

Preventive and malignancy

- Colonoscopy (men > 50 y) Baseline
- Mammography (> 40 y) Baseline+Q1 Year
- Gyn/Pap (>18 y sexually active) Baseline+Q1 Year
- PSA and digital rectal exam (men>50y) Baseline+Q1 Year





24
HOURS **EMERGENCY**
NEURO SERVICES

CIMS Super Speciality Hospital, Ahmedabad

Welcomes

**Western India's most experienced Team of
Neuro and Spine Surgeons**



Dr Jayun M Shah

MS, MCh (Neuro)

77689 83539



Dr Sandip S Shah

MS, MCh (Neuro),
FINR Switzerland

98790 02557



Dr Y C Shah

MS, MCh (Neuro)

98240 37137



Dr Parimal Tripathi

MCh, FRCS (UK) Neuro

98250 73030

Surgical Expertise

- Hydrocephalus
- Brain and spine trauma
- Brain and spine tumours
- Pituitary - skull base surgery
- Aneurysm, AVM - vascular surgery
- Endoscopic brain and spine surgery
- Epilepsy and stroke surgery
- Stereotactic surgery
- MVD / RFTC Trigeminal neuralgia
- MISS - Disc replacement

CALL FOR APPOINTMENT



1800 3099 999

Time : 9:00 AM - 7:00 PM (Mon to Sat)

CIMS Super Speciality Hospital

Off. Science City Road, Sola, Ahmedabad - 380060



BEST IN CLASS ECHOCARDIOGRAPHY CENTRE

- 4D ECHO Doppler
- 4D TEE
- Intracardiac ECHO
- Contrast ECHO
- Strain ECHO
- Micro TEE (Neonatal)
- True view 3D (Live 3D)
- Live 3D TEE
- ECHO Navigator R3 (Cardiac Fusion Imaging)
- Auto Strain LV / LA / RV
- 4D Mitral Valve Assessment
- Dynamic Heart Model
- Advanced Tissue Doppler Analysis
- 3D Auto RV
- Intra-Operative Graft Scan
- Live 3D TTE

**FIRST CARDIAC CENTRE IN INDIA
WITH PHILIPS EPIQ CVXi ECHOCARDIOGRAPHY SYSTEM
ARTIFICIAL INTELLIGENCE CAPABILITIES TO SUPPORT COMPLEX CARDIAC CASE MANAGEMENT**



Dedicated Cardiac MRI and CT Scan

**ONE OF THE ONLY PRIVATE CENTRES IN GUJARAT WITH THE
HIGHEST NUMBER OF ECHOCARDIOGRAPHY SYSTEMS**



HEALTHY HEART

VOLUME-13 | ISSUE-147 | FEBRUARY 05, 2022

CIMS SUPER SPECIALITY HOSPITAL

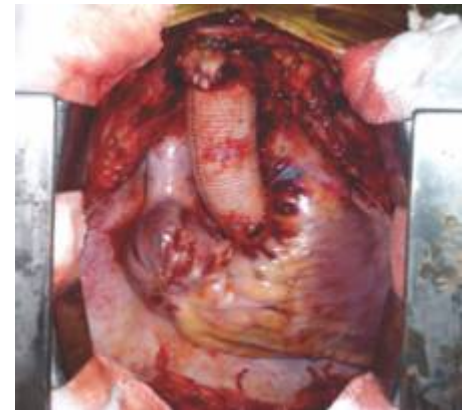
The Leading Heart Care Destination in Gujarat

When it is Heart, It is CIMS

Center of Excellence for Complex and High Risk Cardiac Surgery

BENTALL SURGERY USING VALVE WITH CONDUIT

STATE OF ART LIFE SAVING SURGERY



LARGEST AND MOST EXPERIENCED CARDIAC 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

CARDIAC ANAESTHESIOLOGISTS



Dr. Niren Bhavsar
+91-98795 71917



Dr. Hiren Dholakia
+91-95863 75818



Dr. Chintan Sheth
+91-91732 04454





CIMS ENDOCRINOLOGY



CIMS Diabetes and Endocrine Department is a state-of-the-art Department with all advanced facility for treatment of complicated endocrine problems with availability of expert super-speciality consultation for adult & paediatric endocrine disorders.

DISEASES TREATED UNDER DIABETES AND ENDOCRINE DEPARTMENT

- Diabetes Mellitus
- Obesity
- Thyroid Related Disorders
- Pituitary Disorders (Acromegaly, Cushing Syndrome, Hyperprolactinemia etc.)
- Adrenal Disorders
- PCOS, Hirsutism (Excessive Unwanted Hairs) & Menstrual Disorders in Females
- Menopause
- Sex Hormone Disorders (Low Testosterone Levels, etc.)
- Growth Disorders (Short or Tall Child)
- Puberty Disorders (Delayed / Early Puberty)
- Ambiguous Genitalia in Newborn
- Metabolic Bone Disorders and Osteoporosis
- Calcium & Vitamin D related Problems (Rickets)
- High Cholesterol & Lipid Disorders
- High Blood Pressure due to Endocrine Disorders
- Other Hormonal Disorders

CIMS RHEUMATOLOGY & CLINICAL IMMUNOLOGY

State-of-the-art Department with Advanced Facilities
For Treatment of Rheumatology
Related Problems with Expert Consultation



- All forms of Arthritis (Like Rheumatoid Arthritis, Spondyloarthritis, JIA, Gout etc),
- Osteoarthritis
- Connective tissue disease (like SLE, Scleroderma, Myositis and Overlap Syndromes) and Antiphospholipid Syndromes.
- Systemic Vasculitis
- Fibromyalgia and Soft Tissue Rheumatism
- Primary Immunodeficiency Syndromes like SCID, Hypogammaglobulinemia, etc.,
- Paediatric Rheumatology



Dr. Vivek Patel
MBBS, MD, DM(Endocrinology)
Consultant Endocrinologist
Mo. +91 99841 12928



Dr. Bhowmik Meghnathi
MD (Medicine), DNB (Rheumatology)
Consultant Rheumatologist &
Clinical Immunologist
Mo. +91-6303214341



21st KIDNEY TRANSPLANT

FEBRUARY 08, 2022



HEALTHY HEART

VOLUME-13 | ISSUE-147 | FEBRUARY 05, 2022

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 :

CIMS Hospital, Nr. Shukan Mall,
Off Science City Road, Sola, Ahmedabad-380060.
Ph. : +91-79-2771 2771-72
Fax: +91-79-2771 2770
Mobile : +91-98250 66664, 98250 66668

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

CIMS SUPER SPECIALITY HOSPITAL - AHMEDABAD

22nd

TAVI

January 2022

Transcatheter Aortic Valve Implantation



Balloon Expandable Valve



Self Expanding Supra-Annular Valve

A procedure to replace the diseased valve without surgery

HIGHEST NUMBER IN GUJARAT

100% SUCCESSFUL HOSPITAL OUTCOMES

ONE OF THE BEST HEART TEAM OF INDIA

Gujarat's First Heart Transplant Centre



26TH HEART TRANSPLANT

January 05, 2022

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 | info@cims.org | www.cims.org

Printed, Published and Edited by Dr. Keyur Parikh on behalf of the CIMS Hospital

Printed at Hari Om Printery, 15/1, Nagori Estate, Opp. E.S.I. Dispensary, Dudheshwar Road, Ahmedabad-380004.

Published from CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060.