

Bumrungrad Heart Institute

Coronary Bypass Surgery

2022 Summary

Cardiothoracic
surgery

procedure
performed



**Follow
your
heart**

1

cases

In-hospital mortality

0%

(benchmark 2.1%)

Post-operative mortality

0%

(benchmark 3%)

on
surgery

.4%

benchmark 1.1%

4%



Introduction

The heart is the hardest working organ in the body. It works non-stop as long as we live, beating **60-100** times a minute or about **100,000** times a day, pumping oxygen and nutrient-rich blood throughout the body to sustain life.

Presently, Thailand has become a full-fledged aged society, thereby heart diseases and their complications keep rising. According to the World Health Organization, cardiovascular disease is the number one cause of death worldwide, killing approximately 17.9 million people each year. The Heart Institute, Bumrungrad Hospital, in recognizing the importance of continuously improving the quality of care to meet the needs of patients and in dealing with even more complex heart diseases, is committed to delivering safe and world-class quality treatment to our patients.



Vision and Mission

The Heart Institute aims to provide a comprehensive range of treatment and the best possible treatment outcomes for patients of all types of heart diseases.

With the patient-centered approach, the Institute focuses on personalized care in treating the particular and complex diseases and symptoms in each individual patient.

Expert medical specialists, nurses, pharmacists, physiotherapists, dietitians, etc. in a multidisciplinary team collaborate seamlessly to deliver effective care.

A modern institute for cardiovascular treatment and care, the Heart Institute services cover all types of heart diseases, with a Coronary Care Unit (CCU), open 24 hours a day for emergency and postoperative patients so that patients can return to normal daily activities as soon as possible.



Chest
pain



Fainting, loss of
consciousness

Tiredness
when lying
down



Shortness
of breath



Swelling in
the legs



Unusually
getting tired
easily



Heart disease symptoms

Palpitations,
rapid heartbeat





coronary artery disease

This sub-specialty focuses on the diagnosis and treatment of blockages in the coronary arteries, which can lead to heart attacks and other serious cardiac events.



Dr. Visuit Vivekaphirat

Cardiologist and Interventionist

♥ Treatment approaches

- Medications
- Coronary angioplasty and stenting
- Coronary artery bypass surgery

♥ Prevention

- Maintain healthy weight.
- Exercise regularly.
- Do not smoke.
- Reduce stress.
- Eat heart-healthy foods.

Coronary intervention & percutaneous coronary intervention 2022 Summary

Total procedures

812 cases


PCI performed

527 cases

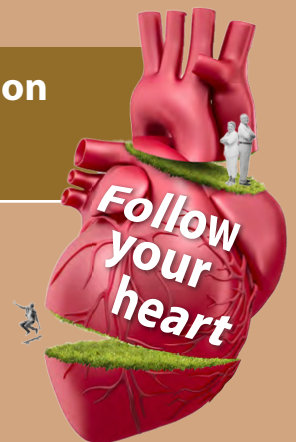



Composite complications

0.39%

USA benchmark

2.65%



Average length of stay



post-procedure

Success rate

99.2%

USA benchmark

95%



Cardiac Arrhythmia and Electrophysiology

Cardiac arrhythmia and atrial fibrillation (AFib) are important areas of cardiology because they can increase the risk of stroke and other serious cardiovascular events.



Prof. Dr. Koonlawee Nademanee

Cardiologist, Electrophysiologist and Director of the Bumrungrad Heart Institute



Sr. Gp. Capt. Dr. Kriengkrai Jirasirojanakorn

Cardiologist, Electrophysiologist



Treatment approaches



Medications



Electrical cardioversion to adjust the heart rhythm



Implantation of a pacemaker or defibrillator



Cardiac ablation



Prevention



Avoid risk factors including coffee, alcohol, stress, and smoking.



Maintain healthy weight.



Eat heart-healthy foods.



Exercise regularly.



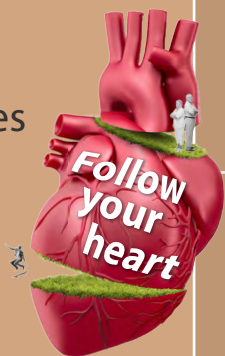
See a doctor regularly for health check-ups

Electrophysiology 2022 Summary



Total procedures

183 cases



Atrial fibrillation ablation success rate

100%

Complications

4.3%

USA benchmark

6.5%

Ventricular tachycardia ablation success rate

100%

Complications

0%

Structural Heart Disease

This sub-specialty involves minimally invasive procedures to replace the aortic valve in patients with aortic stenosis, a condition in which the valve becomes narrowed and obstructs blood flow.



Dr. Wattanaphol Phipathananunth

Cardiologist, TAVR team

Valvular Heart Disease

Treatment approaches



Medications



Mitral valve replacement surgery



Mitral valve repair



Mitral valve clip procedure



Open surgery for aortic valve replacement



Non-surgical transcatheter aortic valve implantation (TAVI)

Prevention



Maintain healthy weight the weight within the standard.



Eat healthy foods.



Reduce stress.



Exercise regularly.



Follow the doctor's advice if with a chronic disease such as high blood pressure, diabetes, and thyroid disorders.



Do not smoke or drink alcohol. Do not use addictive substances.



Transcatheter aortic valve replacement (TAVR/TAVI)

2022 Summary

Highest volume in a private hospital

26 cases

New vascular approach: (Transcatheter, Transaortic) success rate

100%



Complications

0%



Dr. Pattanasak Lertpradit

Cardiothoracic Surgeon, TAVR team



Assoc. Prof. Dr. Kriengchai Prasongsukarn

Cardiothoracic Surgeon, TAVR team

Advance Heart Failure and Heart Transplantation

This sub-specialty focuses on the care of patients with severe heart failure, including those who may require advanced treatments from multidisciplinary team or heart transplantation.



Assoc. Prof. Dr. Teerapat Yingchoncharoen

Heart Failure Specialist & Heart Transplantation



Dr. Aekarach Ariyachaipanich

Heart Failure Specialist & Heart Transplantation

Treatment approaches



Medications



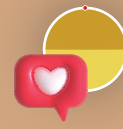
Use of an automated implantable cardioverter-defibrillator (AICD)



Use of a permanent pacemaker.



Use of a ventricular assist device (VAD)



Heart transplant surgery

Prevention



Keep observing one's own symptoms.



Exercise appropriately.



Drink the right amount of water.



Weigh yourself every day. Body weight should not increase more than **1** kg per day.



Do not smoke or drink alcohol.



Consume no more than **2,000** mg of sodium per day (or 1 teaspoon of salt)



Take medications as prescribed by your doctor.



Keep doctor's appointments as scheduled.

Advanced heart failure 2022 Summary

- Clinical care program certification by JCI
- First and only private hospital in Thailand with heart transplant capability.

1 year survival rate after heart transplantation

100%

Complications

0%



Dr. Piyachat Pipatpongsopon

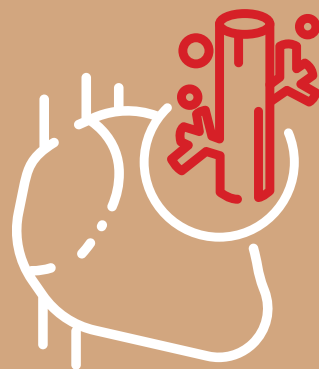
Cardiologist, Heart failure specialist



Dr. Manasawee Vassara

Cardiologist, Heart failure specialist

Coronary Bypass Surgery



This sub-specialty involves surgical procedures to bypass blocked or narrowed coronary arteries, restoring blood flow to the heart muscle.



Dr. Pat Ongcharit

Cardiothoracic Surgeon,
Heart Transplant team



Prof. Dr. Vichai Benjacholamas

Cardiothoracic Surgeon, Heart Transplant team



Coronary Bypass Surgery 2022 Summary

Cardiothoracic surgery

430

procedures performed

Coronary artery bypass grafting

71 cases



In-hospital mortality

Bumrungrad
Heart Institute

USA
benchmark

0% | **2.1%**

Post-op-stroke

Bumrungrad
Heart Institute

USA
benchmark

0% | **3%**

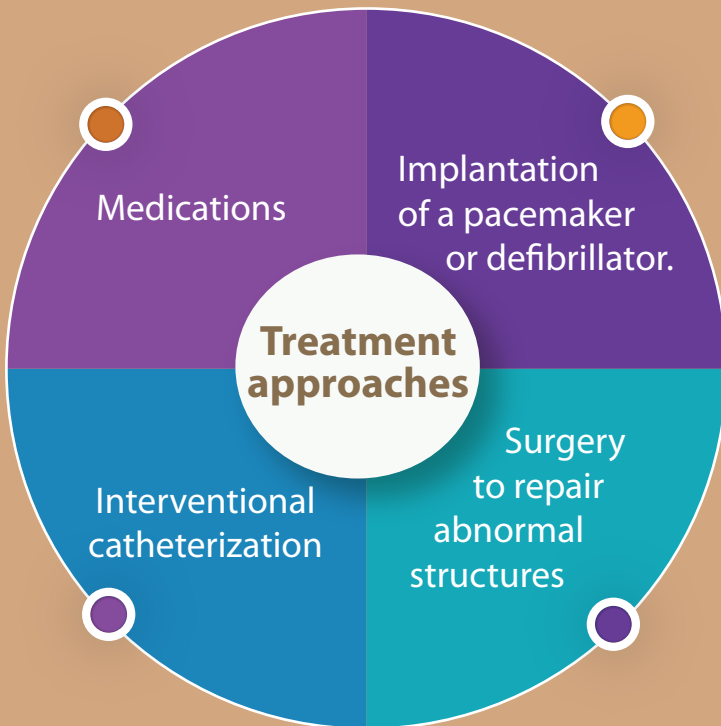
Readmission after surgery **4%**

Congenital Heart



Dr. Preecha Laohakunakorn >

Pediatric Cardiologist



This sub-specialty focuses on the diagnosis and treatment of heart defects that are present from birth.

Prevention

Practice guidelines during pregnancy:



From
2003

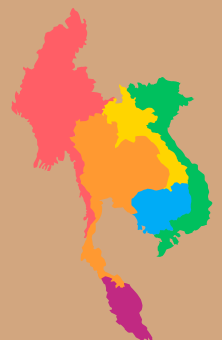
to
2023

The Rak Jai Thai program, aka the Healing Hearts program, provided heart surgeries to

825 underprivileged children

from

50 provinces across Thailand



Cardiogenetics

This sub-specialty deals with the genetic basis of cardiovascular disease, including inherited conditions such as hypertrophic cardiomyopathy and familial hypercholesterolemia.

Prevention

Get genetic testing to detect inherited heart disease risk to plan for prevention and monitoring of disease development. This is suitable for those with history or family history of the following:



With plans to have children



Acute heart attack



Aortic aneurysm, dissection and rupture



Relatives' sudden death while exercising



Relatives' death from heart disease with unknown causes



Parents with heart disease before 45 years old

Cardiogenetics 2022 Summary

Cardiogenetics

Genotype-guided antiplatelet therapy implementation Whole-genome sequencing lab : Familial DCM, FH, inherited arrhythmia

Cardiogenetics

Genotype-guided antiplatelet therapy implementation



CYP2C19 screening **360** cases
■■■■■■■■■■
■■■■■■■■■■

53% ■■■■■■■■
■■■■■■■■ ■■■■■■■■
are Clopidogrel ■■■■■■■■
non-responders ■■■■■■■■



Asst. Prof. Dr. Polakit Teekakirikul >

Cardiologist and Medical Geneticist

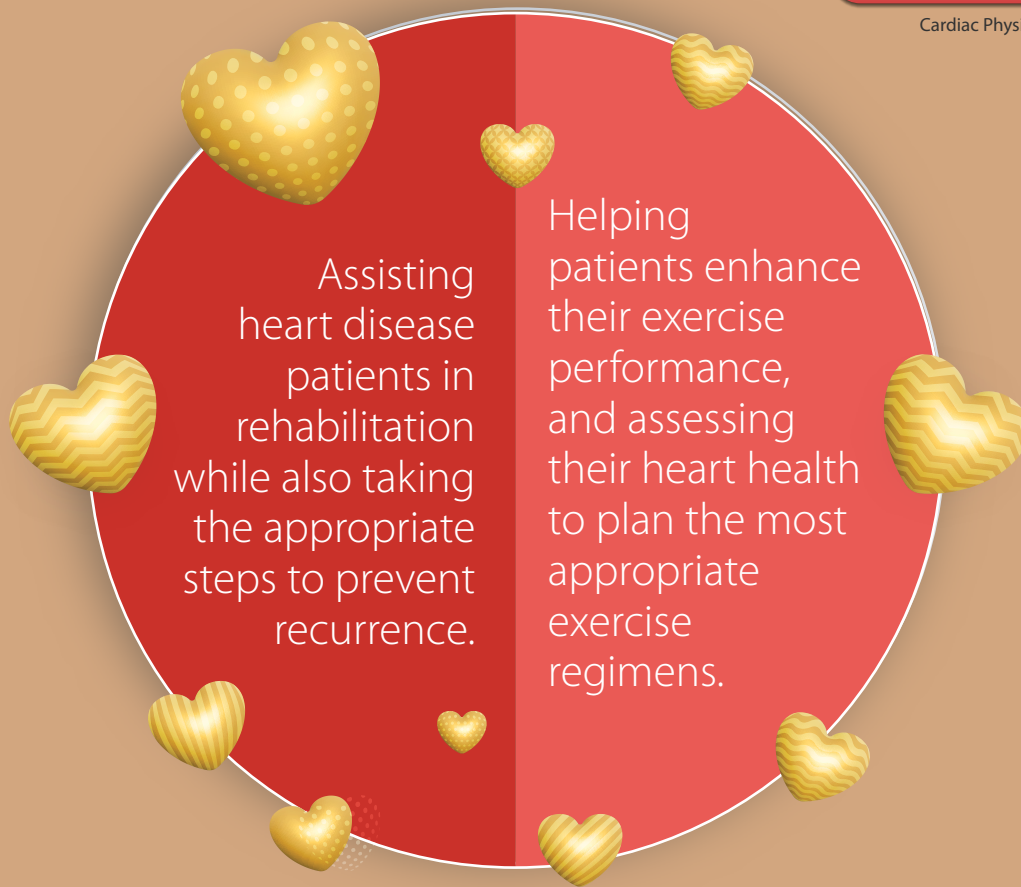
Cardiac Rehabilitation

This sub-specialty provides supervised exercise and lifestyle modification programs to help patients recover from heart disease and prevent future cardiac events.



Dr. Tanaporn Laprattanagul >

Cardiac Physiologist



Cardiac Rehabilitation 2022 Summary

Post op bypass surgery patient reach optimal functional status within



Bumrungrad Heart Institute

100%

benchmark

90%

Post PCI patient reach optimal function status within



Bumrungrad Heart Institute

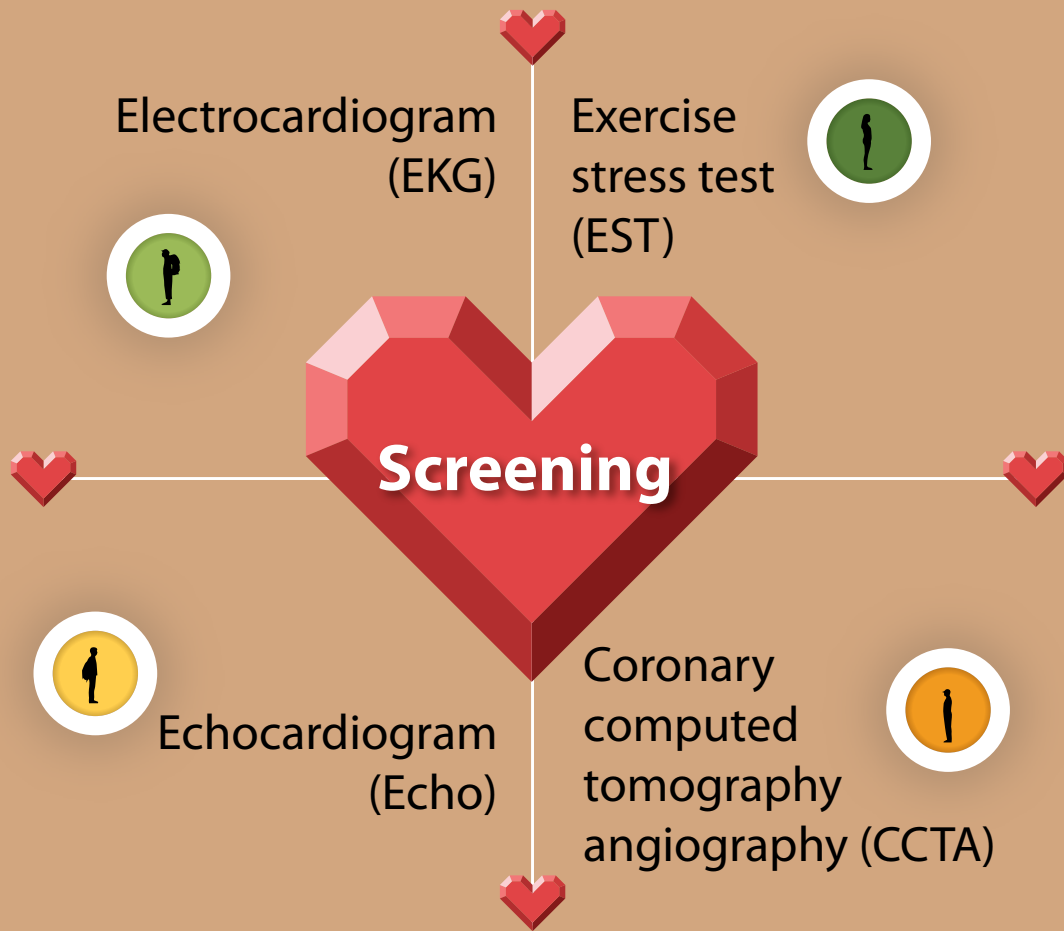
97%

benchmark

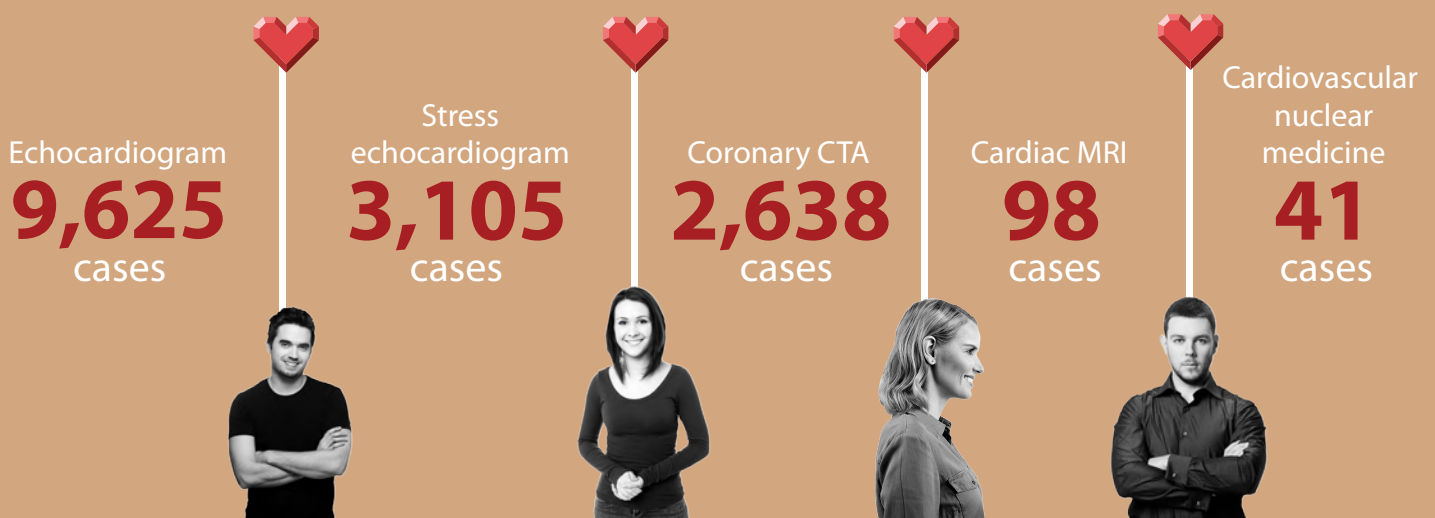
90%

cardiac preventive and cardiac imaging

The Heart Institute provides cardiovascular screening and imaging tests, with expertise in specialized imaging including echocardiogram, computerized tomography (CT) scan, and magnetic resonance imaging (MRI), for diagnosis and monitoring of heart disease conditions.



Non-invasive cardiac imaging



Bumrungrad Anywhere



Doctor's Consultations, 24 hours a day, 7 days a week



Contact
an Emergency
Physician 24/7

via Telemedicine
on Demand

**24 hrs / 7 days



Get your
medication
delivered



Request your
medical records



Service is
available in
many languages:

Amharic, Arabic, Bengali,
Chinese (simplify), French,
Japanese, Khmer,
and Myanmar

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