

## **MEDIA RELEASE**

### **For immediate release**

#### **NATIONAL HEART CENTRE SINGAPORE INTRODUCES NEW SAFER AND FASTER TREATMENT FOR PATIENTS WITH ABNORMAL HEART RHYTHMS**

- Reduces radiation exposure by 40 per cent
- Decreases risk of damaging the heart wall to less than 1 per cent
- Shortens procedure time by 50 per cent

**Singapore, 27 August 2009** - The National Heart Centre Singapore (新加坡国家心脏中心) introduces a new magnetic navigation system for electrophysiological procedures to treat patients with complex abnormal heart rhythms such as rapid or irregular heartbeats. Using computer-aided magnetic guidance, cardiologists can more precisely and accurately navigate the catheters and guidewires within the complex heart anatomy, reducing the procedure time by 50 per cent from 4 – 6 hours to 2 – 3 hours. This in turn reduces radiation exposure, enhancing patient safety. In addition, the magnetically-enabled catheters are softer and more flexible, hence reducing the chance of distorting or damaging the heart wall to less than 1 per cent from 2 - 3 per cent.

NHCS is the first in South East Asia and among the first few in Asia to introduce this new magnetic navigation system for catheter ablation. Dr Ching Chi Keong, Consultant, Department of Cardiology and Dr Teo Wee Siong, Senior Consultant Cardiologist and Director, Electrophysiology and Pacing at the National Heart Centre Singapore successfully performed the first case on a 35-year-old male patient with recurrent palpitations on 22 July 2009. The patient has since recovered and resumed his normal lifestyle.

“The robotic magnetic navigation system can allow us to safely map the heart to 1 -2 mm accuracy and precision without the use of fluoroscopy. This precision cannot be achieved by conventional ablation with our hands manually, no matter how skilled we are. This will definitely improve patient outcome and safety, especially in complex arrhythmia cases such as atrial fibrillation and ventricular tachycardia.” Said Dr Teo.

Using the magnetic navigation system for catheter ablation (a procedure to treat rapid heart rate), the cardiologist sits in front of the computer and uses sophisticated software to map a

pathway through a patient's blood vessels and heart to the diseased heart tissue. By remotely navigating the powerful magnets positioned near the patient, the doctor leads a soft catheter gently along this pathway by guiding its magnetic tip. When the catheter safely and precisely positioned in the heart's diseased area, he then activates the catheter and effectively delivers the required treatment.

With this greater precision control, cardiologists are able to enhance patient safety and improve efficiency. An additional benefit is that it reduces the neck or back pain experienced by cardiologists due to the long procedure time associated with the manual approach.

Conventionally, cardiologists treat patients with complex arrhythmia using the manual approach of catheter ablation or implantable cardioverter defibrillator (ICD) implantation. These are extremely challenging as they require very precise manual manipulation of a relatively stiff catheter within the tricky heart chamber anatomy and are usually performed by experienced cardiac electrophysiologists.

Dr Ching added, "With this navigational system, we are able to derive a better understanding of the mechanism of complex abnormal heart rhythms and adopt an effective ablation strategy to achieve a cure in these patients."

Each year, NHCS handles a high workload of about 300 cases of catheter ablation and ICD implantations, of which up to 60% of the cases can be treated using this new system.

Besides complex arrhythmias, the magnetic navigation system can also be used to treat heart failure and coronary artery disease such as chronic total occlusions.

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## **About the National Heart Centre Singapore**

The National Heart Centre Singapore (新加坡国家心脏中心) is a 185-bed national and regional referral centre for cardiovascular diseases. A one-stop facility with the largest heart specialists group in Singapore, NHCS treats complex cases and sees the highest volume of heart patients locally.

Each year, the centre handles around 100,000 outpatient consultations, 6,000 interventional and surgical procedures and 9,800 inpatients. Its outcomes for heart attack treatment, balloon angioplasty with stenting and coronary bypass surgery have been shown to be equivalent to international standards.

NHCS is the first heart centre outside USA and in Asia to receive the prestigious Joint Commission International (JCI) since 2005, which is an assurance for safe and quality patient care for the patients.