# +

# **Protect Your Heart Health**

In Hong Kong, cardiovascular diseases are a mojor cause of mortality and morbidity.

In 2023, the number of registered deaths attributed to cardiovascular diseases:



11.138 cases



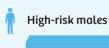
Among them, the number of deaths due to heart disease:

7,258 cases

The Population Health Survey (PHS) 2020-22 adopted the Framingham Risk Model to predict the risk of cardiovascular outcomes including coronary heart diseases, strokes, peripheral artery diseases and heart failure.



Among asymptomatic individuals aged 40 to 74 living in the community, 18.4% were classified as high risk for cardiovascular issues, with a likelihood of 20% or more over the next 10 years.



34.0%

\_\_\_\_

High-risk females



## Prevent Cardiovascular Disease



#### Aerobic Exercise

Aerobic exercise is the kind of exercise that is of moderate intensity and can be carried out over a long period of time. Examples include jogging, bicycling, and swimming. In the long term, this kind of exercise strengthens your heart and lungs.



#### A Balanced Diet

A healthy diet means a balanced diet. One should not eat too much. Overeating leads to intake of excess calories, which will make you fat and increase the burden on your heart



#### Stress Reduction

The stress we encounter daily and the changes in life will cause our blood pressure to rise and our heart to beat rapidly. All these reactions can speed up the process of hardening of the blood vessels and increase burden on the heart



### Avoid Smoking

The nicotine in tobacco products can cause an increase in blood pressure and heartbeat, thus increases the burden on the heart. Nicotine also causes blood to clot more easily which may lead to occlusion of the blood vessels.







Sir Run Run Shaw Heart & Diagnostic Centre



(852) 22003122



srrshc@sth.org.hk

# Guarding Health with Heart Healthy Together





# Safeguarding Your Heart Health!

In 2024, Sir Run. Run Shaw Heart & Diagnostic Centre of St. Teresa's Hospital has installed Siemens Healthineers Dual-Source Photon **Counting Computed Tomography:** 



# **NAEOTOM Alpha**

the world's first photon-counting CT

Lower Dose in both Radiation and Contrast Media, Improve Patient Safety

Compared to traditional CT scans, NAEOTOM Alpha uses breakthrough Quantum technology to solve the problem of information loss during signal conversion in traditional CT detectors.

Quantum technology can effectively produce images with zero electronic noise, further reducing radiation dose. Additionally, low-energy photons weakened in traditional detectors are enhanced in NAEOTOM Alpha, enhancing iodine signals in images, and reducing the amount of contrast media used, effectively reducing the burden on the patient's kidneys.



# 02 Achieving Ultra-High Resolution and more Accurate Diagnoses

Traditional CT scans are affected by technology, resulting in relatively blurry images when patients have conditions such as vascular calcification or stents.

In contrast, NAEOTOM Alpha has an ultra-high spatial resolution of 0. 11 mm, providing remarkable accuracy in assessing coronary arteries, in-stent restenosis, and plaques, helping doctors make more accurate assessments and diagnoses.

The breakthrough technology also offers a new examination method for patients who could not be diagnosed through traditional CT scans due to severe vascular calcification, reducing the need for invasive cardiac catheterization.



### **Ultra-High Temporal Resolution** Quickly Completing the Scanning

NAEOTOM Alpha has an ultra-high temporal resolution of 66 milliseconds, capable of clearly capturing heart vessels even with arrhythmias or very fast heartbeats. The 82 cm large aperture design further alleviates the examinee's claustrophobia, allowing patients to complete the examination more comfortably.



# Procedure of Cardiac CT Scan



Before the scan, a nurse will insert a small catheter into the vein in your forearm for injecting contrast media or medication.

At the beginning of the examination, you will lie on the examination bed and be connected to an electrocardiogram (ECG).



During the scan, you need to follow the staff's instructions to perform several breathing and breath-holding actions.

> When the contrast media is injected, you might briefly feel a warm sensation coursing through your body. This sensation will subside within a few seconds.



People who are less suitable for cardiac CT scan:

- Renal failure
- Allergic to contrast media



People who are not suitable for cardiac CT scan:

· Pregnant women

#### **Examination Instructions**

- 1. If you are taking diabetes medications that contain Metformin (including Glucophage and Glucovance) and have known renal function abnormalities, please stop taking these medications on the day of the examination and for the following two days.
- 2. If you have a history of allergies or asthma, please inform our staff in advance, and the doctor may prescribe steroids if nexessary.
- 3. The doctor may prescribe medication to slow your heart rate to help improve image quality and reduce radiation dose.