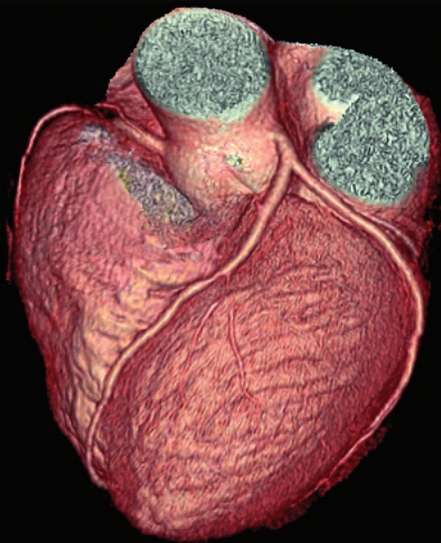




養和醫院

# 電腦掃描

## 心臟血管造影簡介



## 診斷及介入放射部

### 電腦掃描心臟血管造影簡介

冠狀動脈疾病是香港的第二號殺手，最常見的是心絞痛、其他是心肌梗塞及猝死。心電圖、運動心電圖及thallium掃描均常用作鑒別無症狀出現的冠狀動脈疾病或是用以確定診斷，不過這些檢查可能出現假陽性或假陰性的情況。冠狀血管造影術是對冠狀動脈疾病最佳的診斷及量估，但是均屬成本昂貴及創傷性的檢查。

本院引進GE 750HD、TOSHIBA 320 及SIEMENS Somatom Sensation電腦掃描機，是檢查心臟及冠狀血管造影的先進科技電腦掃描器，為非創傷性的檢查帶來新突破！

有心律不整或冠狀動脈內鈣評分高的人士，對此項檢查的質素不會受影響。

此項檢查只需5至8秒的屏息呼吸，便可計算出心臟及冠狀血管容量的影像。另外由此機器的心電圖可以捕捉到心臟處於舒張期的影像，就如心臟處於“靜止”的狀態一樣，其解象度細微到立方毫米的空間亦可觀察得到。

電腦掃描冠狀血管造影術是最佳的非創傷性方法，得以全面評估冠狀動脈的管壁與管腔以及心房與心室的狀況。冠狀動脈管壁內的鈣化與非鈣化點均顯而易見，藉著靜脈顯影劑可以描繪出冠狀動脈的管腔，從而可評估其狹窄的情況。所以，這是一個直

接而非創傷性觀察冠狀動脈的檢查。此技術是對早期偵察冠狀血管疾病的一個重要及權威性的檢查。（只有同是創傷性的冠狀動脈超聲波檢查及傳統性冠狀血管造影術可與之媲美）。

### 臨床應用：

1. 用以評估易患上冠狀血管疾病的高危人士，例如有高血壓、糖尿病、高血脂、家族病歷及吸煙的危險因素。
2. 用以評估在運動心電圖檢查出現有不正常的人士。
3. 用以評估有異乎尋常胸痛的人士。
4. 已作定期跟進冠狀動脈疾病，但不願意或不適宜施行傳統性冠狀血管造影術的人士。
5. 用以評估懷疑患有冠狀血管異常的人士。
6. 用以評估施行動或靜脈移植分流術的病人血管的暢通程度。
7. 用作診斷及跟進患先天性心臟病的人士。

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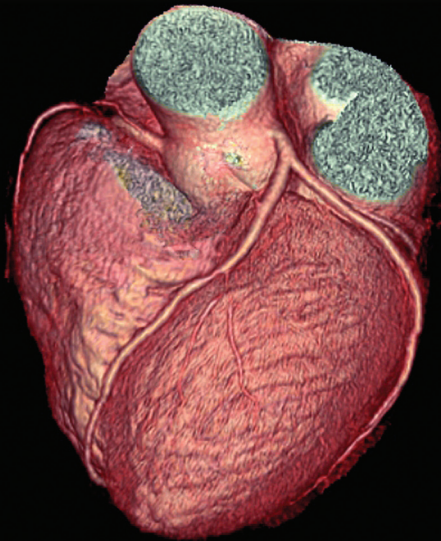
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Hong Kong Sanatorium & Hospital

# CT CORONARY ARTERIOGRAM

## For Patient's Information



**Department of Diagnostic &  
Interventional Radiology**

### For Patient's Information -

#### CT Coronary Arteriogram

Coronary Artery Disease (CAD) is the No. 2 killer in Hong Kong. The commonest presenting symptom is angina, others are myocardial infarction and sudden death. ECG, exercise ECG and thallium scan are usually used to screen asymptomatic CAD or to confirm the diagnosis. However, some false positive or false negative occur. Coronary angiography is the gold standard for the diagnosis and quantification of coronary artery disease but it is both expensive and invasive.

With the installation of GE 750HD, TOSHIBA 320 and Siemens Somatom Sensation CT scanners, there is a good alternative.

The quality of the examination will not be compromised in patients with arrhythmias, or high calcium in the coronary arteries.

With a single breathhold of 5 to 8 seconds, volumetric imaging of the heart and coronary arteries is acquired. EKG gating allows the heart to be imaged in diastole, almost as if the heart is "frozen" in time. Submillimeter spatial resolution is currently achieved. CT coronary angiography is the best non-invasive method to obtain a complete comprehensive evaluation of the walls and lumen of the coronary arteries as well as the cardiac chambers. Calcified and non-calcified plaques in the walls of the coronary arteries are clearly seen. IV contrast outlines the coronary artery lumen so that stenoses can be evaluated. This is, therefore, a direct non-invasive examination of the

coronary arteries. This technique has high potential for being an important and robust examination to detect early coronary artery disease. (The comparable gold standards are invasive intravascular ultrasound of the coronary arteries and conventional coronary angiography).

#### Clinical Applications :

1. Evaluation of coronary arteries in people with high risk factors for CAD. e.g. hypertension, diabetes, hyperlipidemia, positive family history of CAD and smoking.
2. Evaluation of patients with abnormal EKG stress test.
3. Evaluation of patients with atypical chest pain.
4. Periodic follow-up of patients with known CAD who do not want or cannot undergo conventional coronary angiography.
5. Evaluation of patients with suspected anomalous coronary artery.
6. Evaluation of patients for venous or arterial bypass graft patency.
7. Diagnosis and follow-up of patients with Congenital Heart Disease.

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