

## 檢查前準備 Preparations

- 檢查前禁食6小時。  
Fasting at least 6 hours prior to examination.
- 檢查前一天及當日避免進行激烈的運動。  
Avoid vigorous exercise at least 1 day prior to examination.
- 掃描前兩星期內不可以接受任何鋇餐造影檢查。  
Do not undergo a barium meal examination within 2 weeks prior to examination.
- 糖尿病患者於檢查前，請通知本中心職員。  
For diabetic patients, please also inform our staff.
- 孕婦不可接受檢查。  
Do not undergo PET CT examination if you are pregnant.

## 檢查過程 Procedures

- 請按指示更換衣服及移除飾物。  
Please change your clothing and remove all objects that may interfere with the scan.
- 醫護人員會收集個人病歷。  
Medical history will be collected by our staff.
- 經靜脈注射放射性藥物，吸收時間約45分鐘。  
The radiopharmaceuticals will be injected intravenously. Please wait about 45 mins and allow radiopharmaceuticals to concentrate in the organ or tissue.
- 等候檢查時，請按指示飲用約500毫升水。  
During uptake of radiopharmaceuticals, please drink 500ml of water as instructed.
- 掃描前請將小便排清。  
Please empty the bladder prior to the start of the scan.
- 檢查進行時，掃描器會緩慢地在身體上掃描。  
During the scan, the scanner will move slowly over the body part being studied.
- 整個檢查需時約2至2.5小時，因應個人情況或檢查需要，掃描時間可能會延長。  
In general, the examination could take around 2 to 2.5 hours. If delay scan needed, examination time might be further extended.

## 病人接受正電子掃描檢查可得知甚麼？ What medical information could be gathered from PET-CT?

- 1 提早發現癌細胞病變**  
Distinguishing cancer at early stage
- 2 判斷癌症源頭**  
Identifying location and structure of tumour
- 3 診斷癌症期數**  
Grading and staging of cancer
- 4 分辨腫瘤是否出現擴散情況**  
Determining condition of metastasis, if any
- 5 提供資料協助腫瘤治療**  
Assisting in treatment planning
- 6 評估治療成效**  
Assessing treatment effectiveness
- 7 監察癌症復發跡象**  
Monitoring cancer recurrence if any

# 正電子電腦掃描

Positron Emission Tomography & Computed Tomography (PET-CT)



# 正電子電腦掃描中心

## PET-CT Centre

本院的正電子電腦掃描中心採用GE Healthcare Discovery MI數碼正電子及電腦掃描系統，是近年PET-CT先進的影像檢查設備，亦是未來的趨勢。相較市場上傳統的非數碼化(Analogue)系統，新系統有更高的敏感度及影像解析度，有效減少檢查者在過程中使用的掃描時間及放射性藥物劑量高達一半，令檢查者所吸收的輻射量比同類型檢查為低。數碼化的探頭亦能大大增加影像質素，有效提升準確度及能偵察細小早期病灶。

PET-CT Centre of Evangel Hospital is equipped with GE Healthcare Discovery MI positron emission tomography/computer tomography (Digital PET-CT). It is currently the most advanced PET-CT imaging technology and also a future trend. Comparing to traditional analogue system in the market, digital PET-CT has a higher sensitivity and image resolution. The new digital system could significantly reduce examination time and radiopharmaceutical dose up to 50%, allowing decrease absorption of radiation dose by examinees as compared to traditional systems. The digital detectors also could improve accuracy and help to identify small and early lesions.



### Discovery MI 的優點\* Advantages of DISCOVERY MI\*



有效減低掃描時間及放射劑量  
Significant Reduction of Scanning Time & Radiation Dose

數碼接收器能把接收到的輻射直接轉換成影像訊號，令掃描器的敏感度提升，有效減少掃描時間及放射劑量。

Digital PET detector converts received radiation information directly to image signal. It increases the sensitivity of the equipment, allowing scanning time and radiation dose to be reduced.

傳統正電子掃描



Discovery MI



ASiR-V影像技術  
ASiR-V Reconstruction Technology

減少影像雜訊及提高影像質素。  
Reducing image noise and enhancing image quality.

傳統正電子掃描



Discovery MI



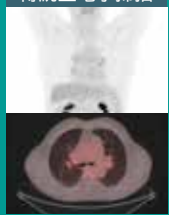
2X↑

準確度和影像質素，高達雙倍提升  
Up to 2x Improvement of Image Quality & Accuracy

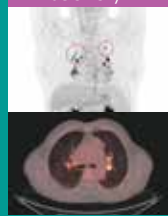
嶄新的影像重建技術 (TOF) 及Q. Clear，能提高影像質素及準確度。

Innovative reconstruction technology including the combination of Time-of-Flight (TOF) and Q.Clear, which improves image quality and accuracy.

傳統正電子掃描



Discovery MI



提升細微病灶的檢出率  
Increasing the Detectability of Small Lesions

改善微細病灶的影像清晰度，能更早發現初期癌症或異常。  
Improves the visualization of small lesions so that early cancer/abnormalities can be easily detected.

\*須視乎病人情況及檢查項目

Depends on patient condition and examination items

