

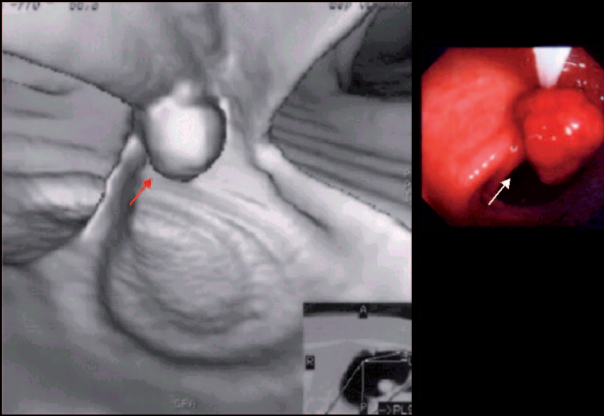


養和醫院

Hong Kong Sanatorium & Hospital

# 電腦掃描

## 大腸鏡檢查



## 診斷及介入放射部

### 介紹

腸癌是香港第三高發病率的癌症，亦是主要的癌症殺手。不過腸癌是可以預防的，腸道瘻肉或增生有機會轉化成癌症，只要早期診斷並除去，腸癌便可預防。要預防腸癌，普查是有效的方法。腸癌普查適用於以下人士：五十歲以上人士，有腸道發炎之病者，及家族中有腸道瘻肉或腸癌病歷人士。傳統的腸癌普查包括檢驗大便隱血、鋇灌腸檢查及傳統的大腸鏡檢查。現今腸癌普查的最好方法是電腦掃描檢查，但這是一項侵入性的檢查，病人需要接受麻醉及住院，有少量病人在傳統大腸鏡檢查後引致其他疾病。

電腦掃描大腸鏡是一種結合嶄新科技的檢查。電腦將斷層掃描影像合成，造成仿如傳統腸鏡檢查的影像。

### 檢查前的準備

殘留在腸道內的渣滓和液體會影響檢查的準確性，所以在檢查前病人必須遵守嚴格的飲食限制。檢查前兩天，病人只可進食低渣滓的食物，避免進食水果、蔬菜及其他高纖食物；並於指定時間服用本院發給的瀉劑以清潔腸道。

### 檢查如何進行？

電腦掃描檢查非常簡單，病人不需接受麻醉。我們會注射一種藥物令你的腸臟放鬆，並會從肛門注入空氣使結腸內空腔膨脹。閣下須作兩次掃描，一次俯臥，一次仰臥。每次掃描大約十秒，掃描時閣下需屏息呼吸。檢查完成後，放射科醫生會審閱每張影像及電腦合成的立體腔管內影像，作出最準確的診斷。而閣下將會獲得全套電腦掃描片及影像光碟作記錄之用。

### 電腦掃描大腸鏡的準確度及優點：

電腦掃描大腸檢查提供全面結構性的大腸檢查，用以偵測大腸瘻肉及腫瘤，有研究顯示此項檢查成效良好。近期本地有一項研究指出電腦掃描大腸鏡可以發現大腸癌的效率為100%；而找出大於10mm、大於5mm及小於5mm大腸瘻肉的有效率分別為100%、78%及53%。

電腦掃描大腸鏡的主要優點為傷害性較少。病人不需住院或麻醉，引致腸道穿孔的機會亦比傳統大腸鏡低。而「額外提供」於腸道外的內臟檢查亦是優點之一。

### 電腦掃描大腸鏡的輻射量：

本院提供低輻射量的大腸檢查，比傳統的掃描檢查低 85% 的輻射量

### 臨床上電腦掃描大腸鏡有以下用途：

1. 大腸癌症普查
2. 傳統大腸鏡檢查失敗
3. 病人不宜進行傳統大腸鏡檢查
4. 檢查阻塞性腸道癌附近的腫瘤

### 電腦掃描大腸鏡有以下缺點：

1. 不能找出平滑的病變
2. 不能找出小於5mm的瘻肉（不過一般來說，小於5mm的瘻肉轉化為腫瘤的機會不大）
3. 大腸內殘留的渣滓會影響檢查的準確性

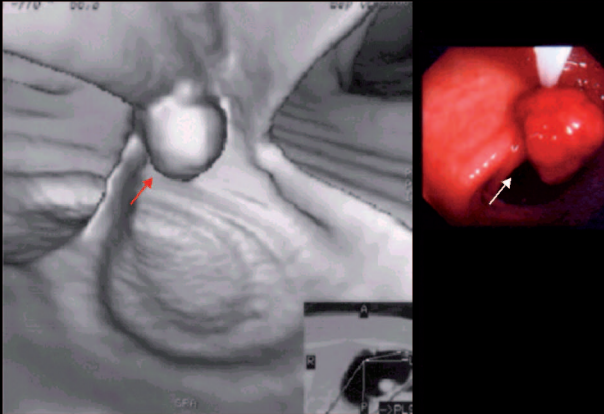
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# CT Virtual Colonoscopy



Department of Diagnostic &  
Interventional Radiology

## Introduction

Cancer of colon is a leading cause of death. It is the 3<sup>rd</sup> commonest cancer in Hong Kong. It is preventable if colonic polyps or small growths are detected early. Screening for colon cancer is advocated for individuals after 50 years, patients with inflammatory bowel disease or colonic polyps and positive family history of colon cancer or colonic polyps. Conventional screening methods includes stool for occult blood, barium enema and conventional colonoscopy. The best method to date is colonoscopy, which is an invasive procedure requiring sedation and hospitalization. Small but definite morbidity is associated with conventional colonoscopy.

CT colonography is a new-generation technique for detecting colorectal neoplasm. Axial pictures acquired on a CT scanner are reconstructed to produce pictures resembling conventional colonoscopy using special imaging software.

## Preparation for Examination

Residual feculent material and fluid will be detrimental to image interpretation. Therefore a strict bowel preparation regime similar to conventional colonoscopy is usually followed. You should keep a low residual diet for 2 days before the examination. Fruit, vegetable and high fiber food should be avoided. Drink the Klean Prep<sup>®</sup> solutions given to you at the instructed time. The solution will cleanse your bowel.

## How it is done?

The CT procedure is simple and comfortable requiring no sedation. You will lie on a scanner table and the colon is gently inflated with air. We will give you an injection to relax your bowel. Scanning is performed in both supine and prone position. Each scan takes less than 10 seconds while you hold your breath. Our radiologist will review the individual images. 3-D endoluminal images are reconstructed. You will receive films recording the pictures and a CD-ROM containing movie file of the 'fly-through' sequence.

## Accuracy and Advantage of CT Colonography

CT colonography emerged as a competitive full structural colonic examination for the detection of polyps and cancer. Studies performed reveal favorable results. A local study published recently reveals that all colon cancers were detected by CT colonography (accuracy of 100%). The sensitivity of CT colonography for the detection of polyps  $\geq 10\text{mm}$ ,  $>5\text{mm}$  and  $\leq 5\text{mm}$  were 100%, 78% and 53% respectively.

CT Colonography has the advantage of being less invasive. The examination is an outpatient procedure, no hospitalization is required. It is safe. Sedation is not required. Chance of perforation is much less common than conventional colonoscopy. An added advantage is a 'free' examination of structures outside the colon.

## What is the X-ray dose?

We can perform low dose CT colonography. There is 85% decrease in dose compared to previous study.

## Clinical role of CT colonography includes the followings:

- Screening for colorectal malignancy.
- Fail conventional colonoscopy.
- When conventional colonoscopy is contraindicated.
- Evaluation of the colon lesion proximal to an obstructing lesion.

## Pitfalls includes:

- Flat mucosal lesion in which discoloration is the only abnormality.
- Small polyps (less than 5mm). That generally do not have significant malignant potential.
- Residual faeculent material.

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