



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





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# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
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# بعض الوثائق الأصلية تالفة



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بالرسالة صفحات  
لم ترد بالأصل

# **CT VIRTUAL COLONOSCOPY IN COLORECTAL NEOPLASM**

## **Thesis**

*Submitted for Partial fulfillment of M.D degree in*

**"Radiodiagnosis"**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ رَبِّ اشْرَحْ لِي صَدْرِي وَيَسِّرْ لِي أَمْرِي وَالْحَمْدُ  
لِعِزَّةِ اللَّهِ الْكَبِيرِ

**First , and for most thanks to ALLAH,  
the most merciful, gracious and  
compassionate, to ALLAH  
everything in life is resumed.**



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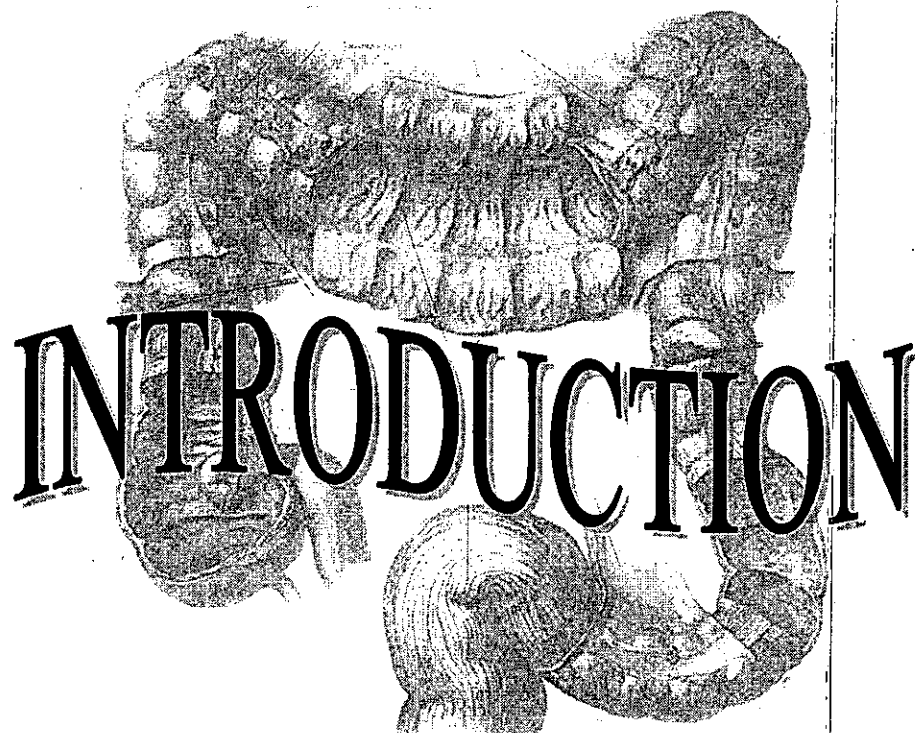
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## INTRODUCTION

Colorectal cancer is the second leading cause of cancer-related mortality in the Western world, accounting for an estimated 56700 deaths in 2003 in the United States. There is compelling evidence that screening for colorectal cancer reduces the incidence of this disease and the disease-specific mortality<sup>(1)</sup>

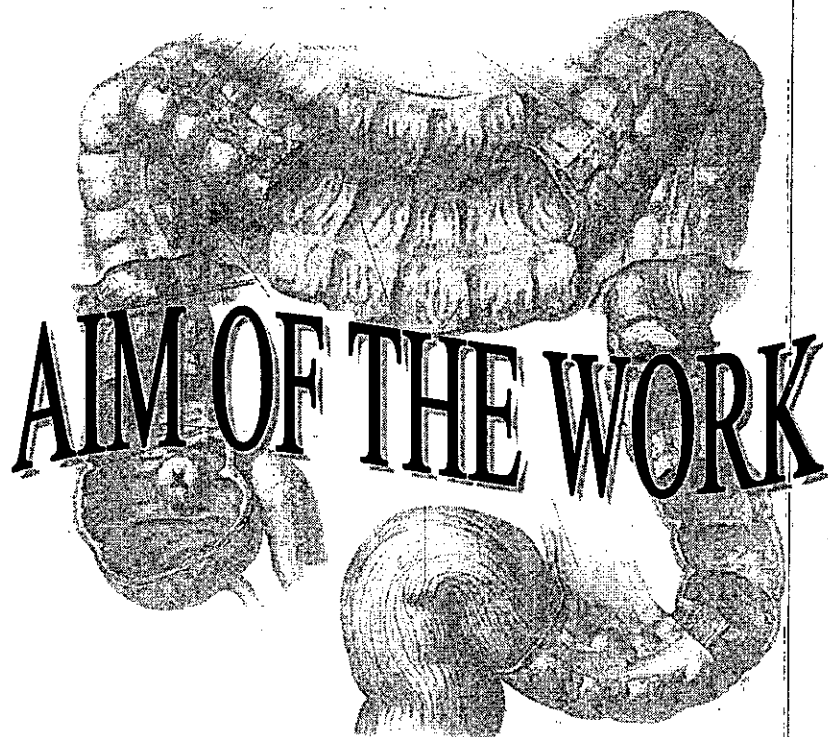
Most would agree that better screening tools for colonic neoplasia are needed in terms of performance characteristics, acceptance by patients, credibility among physicians, and affordability. Opening the door to an intriguing minimally invasive approach<sup>(2)</sup>.

Colonoscopy is regarded as the diagnostic "gold standard", but it is often incomplete. The cecum may not be visualized in up to 10% of cases, and polyps may be missed in up to 24%. Endoscopy is also expensive, has a small risk of morbidity and mortality and routinely requires sedation<sup>(3)</sup>.

The sensitivity of barium enema varies and most recent studies at 2001 suggest that detection rates may be lower than previously assumed. Barium enema detected only 44% of clinically important tumors (larger than 1 cm) compared with colonoscopy. Moreover, the examination is not well tolerated by patients<sup>(4)</sup>.

*Vining, et al., In 1994<sup>(5)</sup>* introduced "The CT virtual colonoscopy". Which is a promising new imaging technique that combines spiral CT and computer software to render two and three dimensional images of the entire colon. Several studies have show that this novel test has excellent sensitivity for the detection of cancer and adenomas greater than 1 cm in diameter <sup>(6)</sup>.

CT virtual colonoscopy has the potential for becoming an ideal diagnostic procedure, as it gives rapid visualization of the colon without anesthesia, sedation, or the risk of perforation. In addition the entire colorectum can be imaged, with accurate assessment of lesion site and visualization of the wall and its external relation slips <sup>(7)</sup>.



## AIM OF THE WORK

**T**he aim of this study is to evaluate the role of CT virtual colonoscopy in colorectal neoplasms as a diagnostic modality compared to other diagnostic procedures as barium enema and colonoscopy .