
شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم


# شبكة المعلومـــات الجامعية

# التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

# جامعة عين شمس

## التوثيق الالكتروني والميكروفيلم

## ﴿ قـسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

**To be kept away from dust in dry cool place of**
**15 – 25c and relative humidity 20-40 %**


# بعض الوثائق الأصلية تالفة


# بالرسالة صفحات

# لم ترد بالأصـــل

Benha Faculty of Medicine
Zagazig University



# ROLE OF MAGNETIC RESONANCE IMAGING IN EVALUATION OF RENAL NEOPLASMS

***THESIS***

Submitted in partial fulfillment of
M.D. Degree in radiodiagnosis

***BY***

**Hesham Abd Elhady Tawfeek**
M.B.B.ch,M.Sc. (Radiodiagnosis)

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**To**

**My Parent,**
**My Wife,**
**And my Kids**

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## ACKNOWLEDGMENT

Thanks to ***ALLAH*** for gifting me the ability to complete this thesis.

I am very greatful and deeply indebted to ***Professor. Dr. Fathy Ahmed Tantawy,*** professor and head of Radiodiagnosis departement, Zagazig Faculty of Medicine for his generous advice, constant guidance, encouragement, and great help throughout this work.

I would like to express my sincere gratitude to ***Dr. TAMER AHMED KAMAL.,*** Professor and head radiodiagnosis departement of Radiology, Benha faculty of Medicine, Zagazig university, for his energetic help, expert guidance, valuable advices and continuos support during the conduction of this thesis. Without his effort, this work would not be completed in this form.

I am specially greateful to ***Dr. Ahmed Farid,*** Assisstant professor of Radiagnosis, Binha Faculty of Medicine for his continous and geberous efforts, valuable support.

I would like to express my sincere gratitude to ***Dr. Tarek A. Elmoneim El-Diasty,*** head of Radiology departement and assisstant conultant of radiodiagnosis in Mansoura Urology and Nephrology Center for his continous support, great help and appreciable guidance throughout this work.

My deepest and sincere thanks to ***Professor Dr. MOHAMED AHMED GHONEIM,*** professor of Urology and Director of Urology & Nephrology Center, Mansoura University who kindly offered all facilities for the requirement of this work.

Valuable secretarial support has been provided by ***Miss OLA ALI*** who has been skillful and patient in typing this work.

## ABBREVIATION

| | |
|---|---|
| **3D** | : Three dimension |
| **CT** | : Computed tomography |
| **FFE** | : Fast field echo |
| **FLASH** | : Fast Low angle shot |
| **FS** | : Fat suppression |
| **Gd-DTPA** | : Gadolinium diethy lene triamine penta-acetic acid. |
| **Grass** | : Gradient recalled acquisition in steady state |
| **GRE** | : Gradient |
| **IVC** | : Inferior vena cava |
| **IVU** | : Intravenous urography |
| **LNs** | : Lymph nodes |
| **MRA** | : Magnetic resonance angiography |
| **MRI** | : Magnetic resonance imaging |
| **MRU** | : Magnetic resonance urography |
| **RCC** | : Renal cell carcinoma |
| **SE** | : Spin echo |
| **SPGR** | : Spoiled gradient recalled acquisition in steady state |
| **T** | : Tesla (magnetic MRI unit) |
| **TE** | : Echo time |
| **TR** | : Repition time |
| **PCT** | : Pelvicalyceal tumour |
| **SI** | : Signal intensity |

# INTRODUCTION

# INTRODUCTION

Magnetic resonance imaging plays an important role in detection and characterization of renal tumours and being safer undoubtedly than CT scan as it does not use ionizing radiation appears to be more suitable during child bearing period and its gadolinium contrast agent is essentially non nephrotoxxic. The various M.R features of a given lesion, such as location (including extension to adjacent structures), morphology (both external and internal), enhancement, and overall signal intensity. Although other imaging techniques, most notably computed tomography (CT), are effective tools to demonstrate many of these features, the multiplaner capability and tissue discrimination offored by MR may provide additional information when imaging certain lesions. Today with technologically improved system and therfrequent use of gadolinium contrast agents, MR is extermely effective in detecting renal masses. ***(Eilenberg et al., 1990; Hauser et al, 1995, Reminges et al., 1992, Semelka et al., 1991).***

Multiplaner capability of MR imaging with favourable resolution compared to reconstruction of axial or coronal CT images. Thus sagittal and coronal images of MR are superior to axial reformated images on CT. Also, imaging in three planes minimize partial volume artifact that facilitate the detection and characterization of lesion, this has been of great value to the authors on several ocasions. The intrinsic soft contrast affored by MR imaging is generally recognised as being superior to that obtainable with CT or sonography. The use intravascular gadolinum chelates further accentuates these