Liver Imaging Reporting and Data System (LI-RADS) Classification for Diagnosis of Hepatocellular Carcinoma

Essay

Submitted for partial fulfillment of Master degree in Radiodiagnosis

Presented by

Shaymaa Salah Abd El-Hamid Saadallah

M.B.B.Ch.

Faculty of Medicine - Ain Shams University

Under Supervision of

Prof. Dr. Ahmed Mohamed Monib

Professor of Radiodiagnosis
Faculty of medicine, Ain Shams University

Dr. Yosra Abdelzaher Abdullah

Assistant Professor of Radiodiagnosis Faculty of medicine, Ain Shams University

> Faculty of Medicine Ain Shams University 2016

تقارير التصوير للكبد ونظام البيانات (LI-RADS) في تشخيص أورام الكبد السرطانية

رسالة توطئة للحصول علي درجة الماجستير في الأشعة التشخيصية

مقدمة من

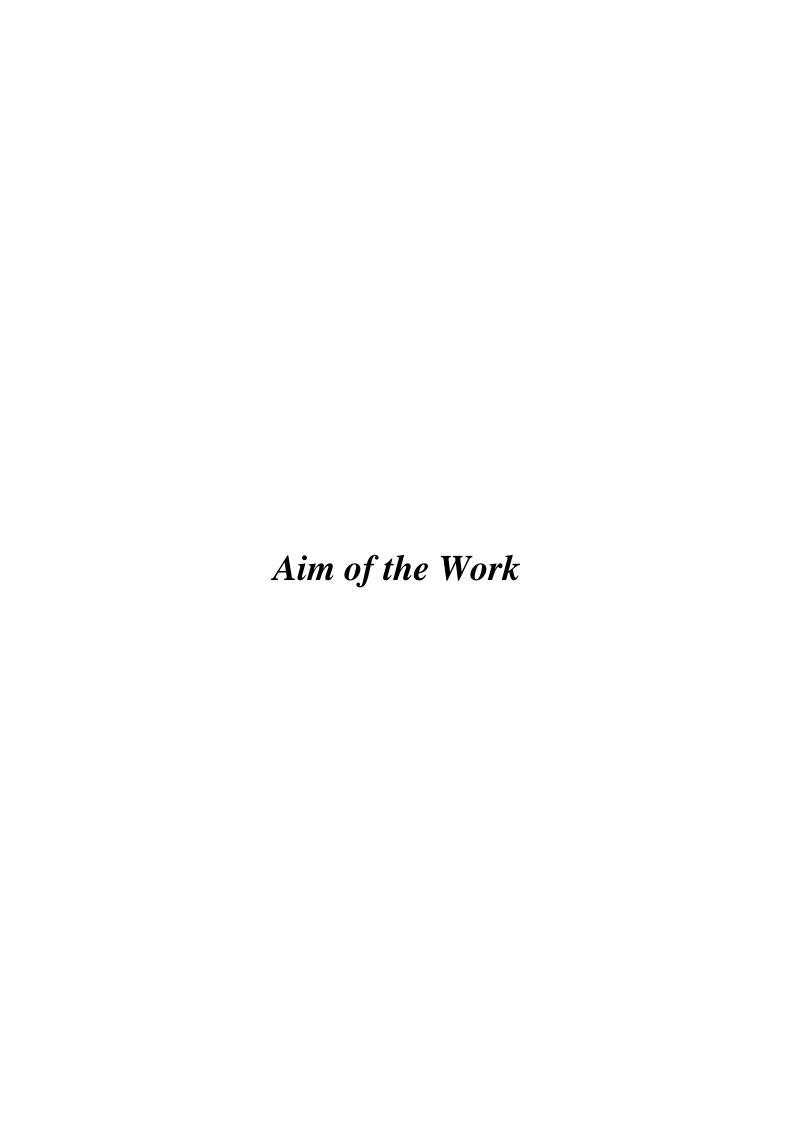
الطبيبة/ شيماء صلاح عبد الحميد سعد الله بكالوريوس الطب والجراحة كلية الطب - جامعة عين شمس

تحت إشراف الأستاذ الدكتور/ أحمد محمد منيب أستاذ الأشعة التشخيصية كلية الطب جامعة عين شمس

الدكتورة/ يسرا عبد الظاهر عبد الله أستاذ مساعد الأشعة التشخيصية كلية الطب جامعة عين شمس

كلية الطب جامعة عين شمس ٢٠١٦





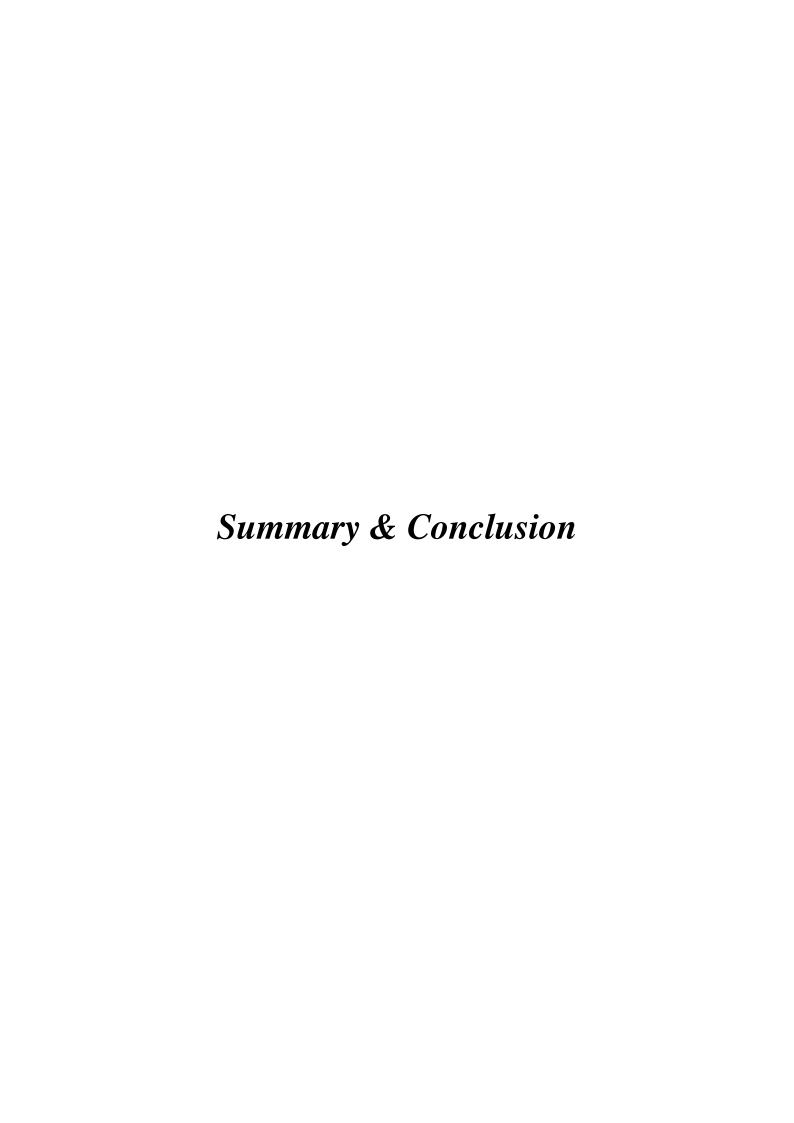
Anatomy of the Liver

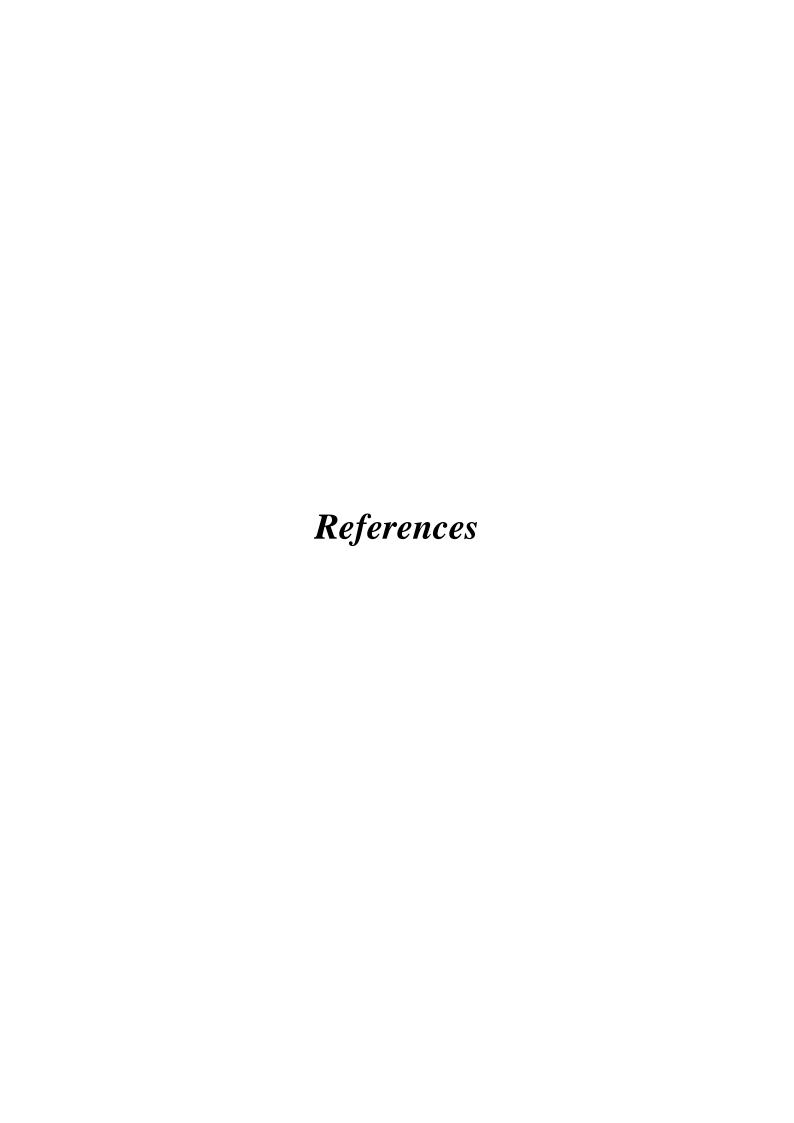
MRI Anatomy of the Liver

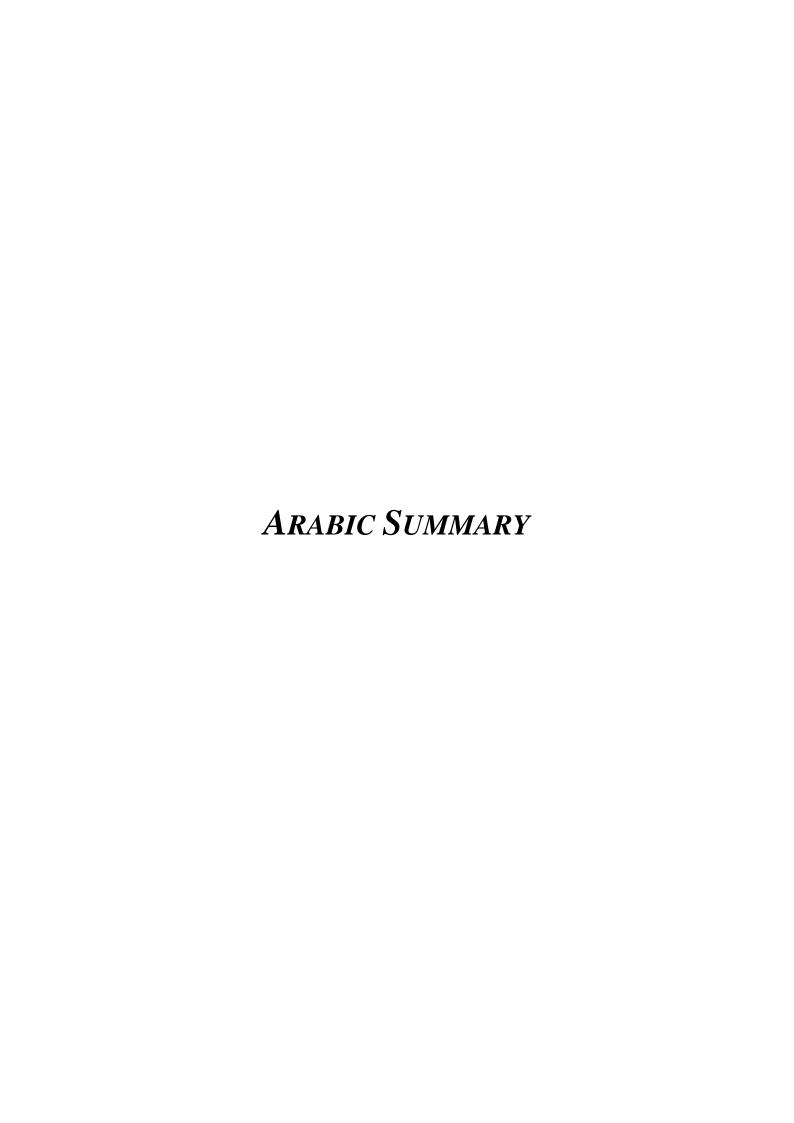
Pathology of Hepatocellular Carcinoma

Imaging Modalities Used for Detection & Diagnosis of Hepatocellular Carcinoma

LI-RADS Classification of Hepatic Focal Lesion







Acknowledgement

Praise is to ALLAH who exalted in knowledge whom he wills but above those who have knowledge there is one more knowing; the cherisher and sustainer of all what is in heaven and what is on earth. To HIM is the goal and to him is the return of all.

I would like to express my deepest gratitude and greatest respect to Prof. Dr. Ahmed Mohamed Monib, Professor of Radiodiagnosis, Faculty of medicine, Ain Shams University, under whose supervision I had the honor to proceed with this work his find guidance and continuous support I will always be grateful for.

I am deeply indebted to Dr. Yosra Abdelzaher Abdullah, Assistant Professor of Radiodiagnosis,, Faculty of Medicine, Ain Shams University her guidance and valuable scientific supervision throughout this work.

I would like to also thank my parents for all their love, help & encouragement.

Finally, I would like to thank my siblings and friends, especially my twin sister for their support.

Shaymaa Salah Abd El-Hamid 2016

List of Contents

Title	Page No.
List of Tables	ii
List of Figures	iii
List of Abbreviations	v
Introduction	1
Aim of the work	4
Anatomy of the Liver	5
MRI Anatomy of the Liver	13
Pathology of Hepatocellular Carcinoma	19
Imaging Modalities Used for Detection & Diagnosi	
of Hepatocellular Carcinoma	33
LI-RADS Classification of Hepatic Focal Lesion	
Summary & Conclusion	
References	79
Arabic Summary	

List of Tables

Table No.	Title Pa	age No.
Table (1):	TNM staging (sixth edition) TNM-6	32
Table (2):	Reported ADC values in different types o lesions in the liver.	
Table (3):	Imaging Features of Observations by LI-RADS Category	51
Table (4):	Features of a Tumor within the Lumen of Vein	
Table (5):	Ancillary Features That Favor HCC	58
Table (6):	Ancillary Features That Favor Benignity.	63
Table (7):	Examples of Definitely and Probably Ber Observations	•