شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

BOOKO

STEREOTACTIC RADIOSURGERY PHYSICAL AND CLINICAL ASPECTS

Essay

Submitted for The Partial Fulfillment of
The Master Degree in
Radiotherapy & Nuclear Medicine

By

Tamer Hassan Ahmed
M.B., B. Ch.,

Supervised By

Prof. Dr. Salwa Massoud Ibrahim
Professor and Head of
Radiation Oncology and Nuclear Medicine Dept.
Faculty of Medicine
Ain Shams University

Dr. Mohamed Essam Saleh
Lecturer of Radiation Oncology and Nuclear Medicine
Faculty of Medicine
Ain Shams University

Dr. Nivine Mahmoud Gado
Lecturer of Radiation Oncology and Nuclear Medicine
Faculty of Medicine
Ain Shams University

Faculty of Medicine
AIN SHAMS UNIVERSITY
(2001)

Acknowledgement

First and foremost thanks to **God**, The Most Beneficent and Merciful.

I would like to express my deepest gratitude to **Prof. Dr. Salwa Massoud Ibrahim**, Professor and Head of Radiation Oncology & Nuclear Medicine Dept., Ain Shams University to whom. I owe very much, for planning and supervising this work, for her constructive criticism, and for her close valuable guidance all through this work. I will never be able to express my feeling toward her with simple word, and I wish to be able one day to return to her a part of what she had offered to me.

I would like to express my deepest gratitude and appreciation to **Dr. Mohamed Essam Saleh**, Lecturer of Radiation Oncology & Nuclear Medicine, Faculty of Medicine, Ain Shams University for giving me so much attentions and time, for gentle encouragement and for his generous character.

I am much obliged to **Nivine Mahmoud Gado**, Lecturer of Radiation Oncology & Nuclear Medicine, Faculty of Medicine, Ain Shams University, for her faithful and sincere advise, much support and for helpful suggestions.

Great appreciation and gratitude to all my professors and colleagues in Radiation Oncology & Nuclear Medicine Department, Faculty of Medicine, Ain Shams University.

CONTENTS

LIST OF ABBREVIATIONS

3D	Three dimensions
AVMs	Arteriovenous malformations
BEV	Beam eye view
BRW	Brown-Roberts-Wells-frame
cc	Cubic centimeters
Ci	Curi
CNS	Central nervous system
CT	Computed tomography
EBRT	External beam radiation therapy
FDG	^{18}F-flurodeoxy glucose
GBM	Glioblastoma multiforme
GTC III	Gill-Thomas-Cosman III
Gy	Gray
Kv	Kilo voltage
Kvp	Kilo voltage potential
LINACS	Linear accelerators
MLC	Multileaf collimator .
MPRs	Multiplanar reconstruction
MRI	magnetic resonant imaging
Mv	Mega voltage
PET	Positron emission tomography
SPECT	Single photon emission computerized tomography
SRS	Stereotactic radiosurgery
SRT	Stereotactic radiotherapy

LIST OF TABLES