شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

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جامعة عين شمس

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قسم

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

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تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HANAA ALY

The role of MDCT in assessment of pleuro-pneumonic changes after breast cancer radiotherapy.

Thesis

Submitted for partial fulfillment of M.D. Degree in Radiodiagnosis

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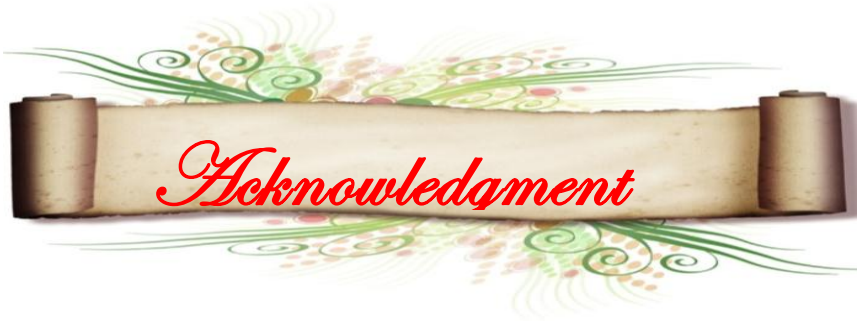

Praise to "Allah", the Most Gracious and the Most Merciful Who Guides Us to the Right Way.

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Nashwa Gad Basiouny.

LIST OF CONTENTS

ARP		Acute radiation pneumonitis
a-SMA		Alpha smooth muscle actin
ADL		Activities of daily living
BOOP		Bronchiolitis Obliterans Organizing Pneumonia
BMI		Body mass index
CTGF		Connective tissue growth factor
CTCAE		Common Terminology Criteria for Adverse Events
COPD		Chronic obstructive lung disease
DCIS		Ductal carcinoma in situ
DVH		dose–volume histograms
Endo MT		Endothelial-to-mesenchymal transition
EMT		Epithelial-to-mesenchymal transition
ECM		Extracellular matrix
2FRT		2 field radiotherapy
FGF		Fibroblast growth factor
FOV		Field of view
GGO		Ground glass opacity
Gy		Gray
ILD		interstitial lung disease
ILs		Interleukins
IMRT		Intensity modulated radiation therapy
IMN		Internal mammary node
LRRT		Locoregional radiotherapy
MDCT		Multi Detector Computed tomography
MLD		Mean lung dose

NTCP		Normal tissue complication possibility
NSCLC		Non-small cell lung cancer
OP		Organizing Pneumonia
PMRT		Post mastectomy radiotherapy
RUL		Right Upper Lobe
RML		Right Middle Lobe
RF		Radiation Fibrosis
RNS		Reactive nitrogen species
RIOP		Radiation-Induced Organizing Pneumonia
RILD		Radiation-induced lung disease
RP		Radiation Pneumonitis
RT		Radiation Therapy
RTOG		Radiation Therapy Oncology Group.
RIOP		Radiation induced organizing pneumonia
SBRT		stereotactic body radiotherapy
TNF-a		Tumor necrosis factor alpha
TGF-b		Transforming growth factor beta
VEGF		Vascular endothelial growth factor
WBB		Wedged Breast Board

Introduction & Aim of work

Introduction

Breast cancer is the most common cancer diagnosed among women, accounting for nearly 1 in 3 cancers. It is also the second cancer death among women after lung cancer **(DeSantis., et al 2013).**

In fact, 89% of women with a history of breast cancer are breast cancer survivors. These patients have most often been treated with combination of surgical resection, radiation therapy, and possibly chemotherapy **(Neal., et al 2014).**

Post operative radiotherapy plays an important role in the management of breast cancer and can reduce local and regional recurrence, thereby improving outcomes **(Oie et al., 2013).**

Chest wall radiotherapy may damage the underlying normal lung tissue in 5–15 % of patients irradiated for breast cancer **(Omarini et al., 2014).**

Radiotherapy may be complicated by radiation pneumonitis, the early stage of which occurs one to three months after treatment and is characterized radiologically by ground glass opacities and consolidation in the irradiated port (**Khashper et al., 2015).**

The late phase also known as fibrosis develops six months after the completion of radiation therapy and can progress for as long as two years **(Yilmaz et al., 2014).**

This can produce pleural changes that manifest themselves on CT images as smooth pleural based thickening contiguous with the radiation portal **(Yilmaz et al., 2014).**

Computed tomography (CT) is the technique of choice for the study of thoracic complications that are not visible on chest X-rays. Early detection of complications is of great importance for an effective treatment **(Gimenez., 2011).**

CT can be used in the diagnosis of radiation pneumonitis. It may show ground glass opacities, consolidation, fibrosis, atelectatic cicatrization, pulmonary volume loss or pleural thickening **(Giridhar et al., 2015).**

Aim of work

The aim of our work is to evaluate the pleuro-pneumonic changes after breast cancer radiotherapy by MDCT.