



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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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

Presented By

Nashwa Gad Basiouny Gad

Master degree of Radiodiagnosis

Faculty of Medicine

Ain Shams University

Supervised By

Prof. Dr / Hanan Mohamed Hanafy Abuzeid

Professor of Radiodiagnosis

Faculty of Medicine

Ain Shams University

Prof. Dr / Eman Ahmed Shawky Geneidi

Professor of Radiodiagnosis

Faculty of Medicine

Ain Shams University

Dr / Haytham Mohamed Nasser

Lecturer of Radiodiagnosis

Faculty of Medicine

Faculty of Medicine

Ain Shams University

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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-α	Tumor necrosis factor alpha
TGF-β	Transforming growth factor beta
VEGF	Vascular endothelial growth factor
WBB	Wedge Breast Board

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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.