



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY



Diagnostic Accuracy of ultrasound for Post-surgical Surveillance in Patients with Breast Cancer

Thesis

*Submitted For Partial Fulfillment of Master Degree
in Diagnostic Radiology*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا
إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

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List of Abbreviations

Abb.	Full term
ALND	Axillary lymph node dissection
ATM.....	Ataxia-telangiectasia
BC.....	Breast cancer
BCT.....	Breast conservative therapy
BMI.....	Body mass index
CC.....	Cranio-caudal
CDH-1.....	E-cadherin
CT	Computed tomography
CTH	Chemotherapy
DCE MRI.....	Dynamic contrast-enhanced MRI
DCIS.....	Ductal Carcinoma in Situ
DDFI.....	Distant disease-free interval
EORTC	European Organisation for Research and Treatment of Cancer
FNAC.....	fine-needle aspiration cytology
HIV	Human immune deficiency virus
HRT	Hormone replacement therapy
LR	Local recurrence
LRR.....	Locoregional recurrence
M.....	Metastasis
MLO.....	Medio-lateral – oblique
MRI.....	Magnetic resonance imaging
MRM.....	Modified radical mastectomy
N	Nodes status
NAC	Nipple areola complex
NF1.....	Neurofibromatosis

List of Abbreviations Cont...

Abb.	Full term
PEM.....	Positron emission mammography
PET.....	Positron emission technologies
RCT.....	Randomized controlled trials
RR.....	Relative risk
RT.....	Radiation therapy
SEER	Surveillance, Epidemiology, and End Results
SLND.....	Sentinel lymph node biopsy
T.....	Tumor size
TCB.....	Tru-cut biopsy
THI	Tissue harmonic imaging
US	Ultrasound

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INTRODUCTION

Breast cancer (BC) is one of the most common cancers among the women population all over the world (*Liu et al., 2017*). Breast cancers can begin in different areas of the breast, such as the ducts, the lobules, or the tissue in between (*Feng et al., 2018*).

BC is predominantly a disease of aging, with only 5 to 7% of patients diagnosed below the age of 40 years in the developed world. In less developed regions such as in Africa and the Middle East, a higher proportion of patients are diagnosed below the age of 40, reaching as high as 20% (*Azim and Partridge, 2014*).

Increasing age, reproductive factors, mammographic density and, in around 9% of cases, genetic factors and family history are all known risk factors for breast cancer (*Thomson et al., 2014*).

Based on criteria of pathological features and invasiveness, common breast cancers can be divided into three major groups: non-invasive (or in situ), invasive, and metastatic breast cancers (*Feng et al., 2018*).

Postoperative imaging demonstrates abnormalities associated with skin-incision sites, repositioning of the nipple

areola complex (NAC), and parenchymal redistribution (*Margolis et al., 2014*).

Postoperative U/S has a high sensitivity for the detection of malignant lesions in the breast and associated breast region, which can be a predictor of distant metastasis in mastectomy patient's Doppler sonography is preferred when suspicious lesions are discovered within the context of underlying postoperative changes. U/S and Doppler study can also provide a more accurate characterization of suspected lesions than physical examinations, and it allows for immediate intervention for the tissue diagnosis of such suspicious lesions (*Suh et al., 2013*). In contrast to mammography, the detection performance of U/S is not affected by dense breast tissue. The main limitation of U/S is the high number of non-specific or false-positive findings, although this is less of a problem if U/S is performed on a regular basis during follow-up (*Bick and Helbich, 2019*).

AIM OF THE WORK

The aim of this study is to evaluate the diagnostic accuracy of postoperative surveillance by ultrasound and Doppler study in breast cancer patients correlated to pathology as golden reference.