LOCAL RECURRENCE AFTER CONSERVATIVE BREAST SURGERY FOR BREAST CARCINOMA

Essay

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Ahmed Mohamed Nageeb

List of Abbreviations

ABBI	**Advanced Breast Biopsy Instrumentation**
ADH	**Atypical Ductal Hyperplasia**
AI	**Aromatase inhibitor**
AJCC	**American Joint Committee on Cancer**
ALH	**Atypical Lobular Hyperplasia**
ALND	**Axillary lymph node dissection**
ASCO	**American Society of Clinical Oncology**
BCS	**Breast Conserving Surgery**
BCT	**Breast Conserving Therapy**
BIRADS	**Breast Imaging Reporting And Data System**
BRCA	**Breast cancer antigen**
CDK	**Cyclin Dependent Kinase**
CEA	**Carcino-emberyonic antigen**
CIS	**Carcinoma In Situ**

DCIS	**Ductal Carcinoma In Situ**
DVAB	**Directional Vacuum Assisted Breast Biopsy**
EGFR	**Epidermal Growth Factor Receptor**
EIC	**Extensive Intraductal Component**
ELUCA	**Enlarged Lobular Unit with Columnar Alteration**
ER	**Estrogen Receptor**
FDG	**Fluoro-Deoxy Glucose**
FNA	**Fine Needle Aspiration**
HELU	**Hyperplasic Enlarged Lobular Unit**
IBTR	**Ipsilateral Breast Tumor Recurrence**
IDC	**Invasive Ductal Carcinoma**
ILC	**Invasive Lobular Carcinoma**
IORT	**Intra operative radio therapy**
LCIS	**Lobular Carcinoma In Situ**

LN	**Lymph node**
LRR	**Loco Regional Recurrence**
MC	**Multi centricity**
MF	**Multi focality**
MRI	**Magnetic resonance imaging**
MRM	**Modified radical mastectomy**
NCC	**National comprehensive cancer**
NCI	**National cancer institute**
NSABP	**National Surgical Adjuvant Breast and Bowel Project**
NSM	**Nipple Sparing Mastectomy**
NST	**Non Special Type**
OS	**Overall Survival**
PBI	**Partial breast irradiation**
PCNA	**Proliferating Cell Nuclear Antigen**
PET	**Positron Emitted Tomography**
PR	**Progesterone Receptor**

SEER	**Surveillance Epidemiology And End Result**
SLN	**Sentinel Lymph Node**
SLNB	**Sentinel Lymph Node Biopsy**
SMM	**Scintimammography**
SSCP	**Single Stranded Conformational Pleomorphism**
TGF Beta	**Transforming Growth Factor Beta**
TNM	**Tumor Node Metastases**
UICC	**International Union Against Cancer**
VEGF	**Vascular Endothelial Growth Factor**
WHO	**World health organization**
XRT	**Radiotherapy**
YB-1	**Y-Box binding protein**

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Introduction

Introduction

Breast cancer is the most common cancer in women in Developed western countries and is becoming even more significant in many developing countries. In Egypt,breast cancer is the most common cancer in women, representing 18.9% of total cancer cases***(Shoma et al., 2009).***

Over the past 40 years, there has been a major change in the treatment of patients with early breast cancer, with breast conservation coming to the forefront as a viable option. Breast-conserving surgery (BCS) was initially performed to reduce the physical and psychologic morbidity of mastectomy***(Reintgen et al., 2010).***

Appropriate patient selection is critical to success of the BCS and is an attempt to balance an acceptable low rate of local recurrence in the breast with good cosmetic outcome. A complete history and physical examination help to determine which surgery is best for each individual patient **(Morrow and Khan, 2002).**

Approximately 10% to 15% of patients with invasive breast cancer treated by mastectomy or breast-conserving surgery and radiation will have a clinically isolated local recurrence. Factors predictive of a significant risk (20% or higher) of local failure after either treatment are patient age (35 to 40 years), tumor size (5 cm), lymphovascular invasion, and close or positive resection margins **(Freedman and Fowble,2010).**

Beyond established risk factors, genetic testing allows identification of high-risk patients (BRCA mutation carriers) who may benefit from bilateral mastectomy rather than BCS. Human genetic variation (SNPs/CNVs) and DNA methylation may be relevant for local failures assessment**(Ziogas and Roukos, 2009).**

Breast conservation surgery (BCS) has become the gold standard for patients with early breast cancer, mastectomy remains an option and it is necessary in at least 20% of those women with multicentric tumors, widespread DCIS, and large or recurrent tumors ***(Petit et al., 2005).***

Axillary dissection was considered as a standard technique for management of the axillary nodes. A level I and II axillary dissection will provide accurate staging information and maintain local control in the axilla ***(Luis-Sylvestre et al., 2004).***

Although the majority of patients with breast cancer have clinically negative axillary nodes at preoperative assessment, around 15-20% of these women will have metastatic disease within the lymph nodes at operative sentinel node biopsy, and additional selective treatment to the axilla might be required. Local treatment to the axilla can include axillary node clearance or axillary radiotherapy. The recent results of the American College of Surgeons Oncology suggested that some women would be safe from recurrence without further axillary treatment if they have less than three involved sentinel nodes, with no extracapsular spread. Present data suggesting that axillary irradiation for macrometastases gives equivalent control to axillary node clearance, but causes less morbidity such as lymphoedema**(Bundredet al., 2015).**

Consequently many techniques have been evolved in an attempt to detect of residual disease or local recurrence after conserving breast surgery. Such as post-excision mammography and histopathological margin assessment ***(Waddel et al., 2000).***

AIM OF THE WORK