



Review Article

Breast Cancer Lesions and Its Classification

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How to Cite

Ayyub, H., Hassan, A., Ehsan, K., Asif, H., & Kabir, M. (2020). Breast Cancer Lesions and its classification. *Pakistan Journal of Health Sciences*, 1(01). Retrieved from <https://www.thejas.com.pk/index.php/pjhs/article/view/11>

ABSTRACT

Breast cancer is a type of cancer that springs up from breast tissue, most generally from the privileged line of milk ducts or the lobules that supply milk from the ducts. There are two main types of breast cancer situ and invasive. situ carcinoma includes lobular carcinoma in situ (LCIS) and ductal carcinoma in situ (DCIS). Invasive carcinoma includes invasive lobular carcinoma (ILS) and invasive ductal carcinoma (IDC). Tumors that form in breast cancer are also of two types Benign and Malignant tumors. Benign tumors are well-differentiated; structure may be typical of tissue of origin. Metastasis is absent in it. Malignant Tumors have lack differentiation; the structure is mostly atypical whereas Metastasis is present. The most frequent symptoms found in women are breast pain, nipple discharge, and a palpable mass. Women having such problems have benign breast disease. Nipple discharge is the pronominal of breast cancer. The greatest incidence, boost level disease presentation, low endures rates have been found in Pakistan. Increased prevalence has a great impact on the economic status of Pakistan. It is reported that women have aged 50 years and older were extra liable to build up breast cancer than women with age less than 50 years. Fibroadenoma is the most frequent benign breast lesion.

Keywords: Breast cancer, Carcinoma, Metastasis, Lobular Carcinoma, Ductal carcinoma

INTRODUCTION

Breast cancer is the cancer of breast tissues. Generally associated with milk ducts and lobules that supply milk [1]. There are many types of breast cancer but two mains are invasive and situ. Situ and invasion carcinomas are further divided into two, Lobular carcinoma and Ductal carcinoma. Tumors form in breast cancer are of two types Benign and Malignant Tumor [2]. Tumors are of two types i.e., Benign and Malignant [3]. The benign tumor has a well-differentiated structure and can easily be detected. The growth rate of benign tumors is slow but progressive. Mitotic shapes in a benign tumor are mostly absent and normal. Metastasis is also not present. Secernate masses do not infiltrate or invade surrounding tissues with normal structure [4].

Types of benign breast lesions:

Benign breast lesions:

A heterogeneous cluster of lesions is associated with benign breast disorders. These lesions cause inflammation, abnormality in structure neoplasm, and stromal or epithelial lesions. Lesions are further divided into proliferative

and non-proliferative lesions. These may be further characterized as lesions with atypia and lesion without atypia [5].

Proliferative lesions with atypia:

These Proliferative lesions with atypia clench atypical lobular and ductal hyperplasia.

Proliferative lesions without atypia:

It consists of florid ductal hyperplasia also considered as standard, papillomatosis, radial scar, or sclerosing adenosis.

Non-proliferative lesions:

Non-proliferative lesions are characterized by cysts, change in papillary apocrine, epithelial calcifications, and acute epithelial hyperplasia as well as nonsclerosing adenosis, periductal fibrosis, and ductal ectasia. The succeeding danger of breast cancer is directly associated with the lesion's histologic alteration [6, 7].

On the other hand, malignant Tumors have low discrimination and structure is usually atypical. Its growth rate is temperamental and changes from slower to faster; Mitotic shapes are mostly inordinate and aberrant. Metastasis is common; which generally leads toward undifferentiated growth. Malignant tumors are invasive and easily infiltrate normal tissues. Normally these look united and elastic [2].

Change in the tissue's integrity is defined as a lesion. Lesions in the breast are characterized as lumps and swelling. These lesions are normally identified by self-examination or physician's examination. Breast tissues extend to beneath the arms. During a breast self-exam, a person should examine the underarms too along with the breast tissue examination. Because it is a well-thought-out part of the breast. There are some types of lesions that are present but can't feel. These lesions are named non-palpable lesions. A screening mammogram test is used for their detection.

Lesions classification

The lesions are classified, depending upon their prognosis, nature, and cytological determinants. Change in nipple structure and discharge from nipples is most common [8]. Lesions are responsible for breast inflammation (chronic inflammatory abscess, duct ectasia, mastitis, Mondor's disease, and syphilis).

Benign neoplasm-includes Epithelial (adenoma and papilloma), Connective tissue, mixed phylloides & Fibroadenoma tumors [3]. Malignant neoplasm includes arising in ducts non-infiltrating (in situ ductal carcinoma, intraductal carcinoma, intraductal papillary carcinoma) and Infiltrating (medullary carcinoma, colloid or invasive duct carcinoma, carcinoma) and infiltrating ((lobular carcinoma) [9]

The lesions can also be classified simply as benign or malignant according to histologic analysis. Usually, benign lesions are characterized by specific fibrocystic abnormalities. Benign lesions include extensive fibrous tissues, cyst formation, and ductal or lobular deterioration. It also involves ductal and lobular hyperplasia. Whereas malignant lesions are characterized by undifferentiated ductal and lobular carcinomas. those having ductal, lobular, or undifferentiated carcinoma [10]. The incidence rate of benign tumors is most common in Asian countries as compared to malignant whereas malignant tumors are more prevalent among western women [11]. Fibroadenoma is the most prominent type of benign breast lesion with more prevalence rate [12]. The majority of breast pathologies are associated with Benign breast diseases. There are many symptoms to detect its presence such as structural abnormality, proliferation, inflammation, and many neoplasms [3]. All studies consist of the comparison between normal and carcinogenic cells [14].

Signs and symptoms

The most frequent symptoms found in women are breast pain, nipple discharge, and a palpable mass. Women having such problems have benign breast disease. Nipple discharge is the pronominal of breast cancer [15].

Common signs and symptoms
Change in size and shape of the breast
Rashes, change in skin color, dimpled skin
Swelling in the armpit, collar bone, and breast
Change in nipple position

Discharge fluid from nipples
Visible lymph or tumor

Table 1: Signs and symptoms of Breast Lesions

Morbidity and mortality rates due to breast cancer vary worldwide [16]. The ratio of proliferative disease is 68% more than non-proliferative which is about 29% [17]. A greater incidence rate of breast cancer is found in Pakistan [13].

In women, BBD encompasses a spectrum of histopathologic lesions. In the human breast, there are many types of benign entities but only a few have clinically evidential premalignant potency. Atypical ductal and lobular hyperplasia are characterized by premalignant lesions [18]. The lesion is the primary risk factor of different benign breast diseases. The further lesion is sub-divided into three categories (proliferative, non-proliferative, proliferative with atypia) [19, 20]. Benign breast disease is a heterogeneous condition consisting of various histologic entities. These entities include glandular and connective tissues structures and combinations, therefore. These lesions may develop and modify under hormonal regulation cyclically [21].