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**Histopathology of Breast Cancer in the Central Hospital, Warri, Nigeria.**

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*Author for Correspondence\**: +234-818-0404-966/+234-813-1617-679/eseovo2000@yahoo.com**Abstract**

Breast cancer is the top major cause of demise among women. This study captured the histologic sorts of breast malignant tumors among women who underwent breast biopsy in the Department of Pathology, Central Hospital, Warri, Delta State, Nigeria. Ethical affirmation was acquired from the Research Ethics Committee of the Department of Human Anatomy and Cell Biology, Faculty of Basic Medical Sciences, Delta State University, Abraka in Nigeria. This retrospective review was actualized amid 248 women who underwent breast biopsy in the Department of Pathology, Central Hospital, Warri from January 1<sup>st</sup> 2010 to December 31<sup>st</sup> 2017. Their ages and biopsy upshots were jotted down. The data gathered were anthologized and scrutinized utilizing the Statistical Package for the Social Sciences (SPSS) version 20. Chi-square test was exploited for inferential statistics in checking for significant age variability in occurrence of breast cancer. A p value less than ( $<$ ) 0.05 was considered significant. Of the 483 breast biopsy reports reviewed, 248 were with breast tumors and 67 (27.0%) had breast cancer. The invasive ductal carcinoma 26 (38.8%) was the most pervasive sort of breast cancer, followed by invasive lobular carcinoma 21(31.3%), adenocarcinoma 8 (11.9%), mucinous carcinoma 7(10.4%), and medullary carcinoma 5(7.5%). Adenocarcinoma was less widespread in age group  $<20$  years, invasive ductal carcinoma was more rampant in age group 41-50 years; invasive lobular carcinoma and medullary carcinoma were more ubiquitous in age range 31-40 years and mucinous carcinoma was more

frequent in age range greater than ( $>$ ) 50 years. A significant association was noted between manifestation of breast cancer and age. The most prevailing form of breast cancer identified was Invasive Ductal Carcinoma. Breast cancer was seen to be most rampant in the age class 31-40 years.

**Keywords:** *Histopathology, Benign, Cancer, Central Hospital Warri, Delta State, Nigeria.*

**Introduction**

Breast cancer is an uttermost widespread human neoplasm, accounting for about one-fourth of all malignancies in females worldwide as well as 27% of malignancies in industrialized nations (Lakhani *et al.*, 2012). Cancer of the breast may be seen in men; howbeit it is over and beyond hundred times more prevailing in women compared to men. It typically has poor prognosis as a result of late diagnosis (Peter and Bernard, 2012). Breast cancer is the number one cancer killer amid women in Nigerian. The constantly increasing breast cancer sufferers in Nigeria is an indication of too few or ineffectual preventive measures to curb the malady or perhaps due to digression of attentiveness to HIV/AIDS and tuberculosis (Erhabor *et al.*, 2016). In developing nations, breast cancer is the leading cause of demise amid women with 324,000 deaths which is 14.3% of all deaths (Ly *et al.*, 2011).

Histopathological categorization of breast cancer involves various sorts of breast cancer, which fall into two major categories: invasive and non-invasive. Invasive cancer spreads from

the breast ducts or glands, while non-invasive cancer does not spread from the breast. These two categories depict the most rampant kinds of breast cancer, which include; ductal carcinoma in situ a non-invasive condition where the cells that line the ducts in the breast change and look cancerous without pervading the surrounding breast tissue; and lobular carcinoma in situ a cancer that grows in the milk-producing glands of the breast also with the cancer cells not invading the surrounding tissue. Invasive ductal carcinoma is the commonest sort of breast cancer and it begins in the breast's milk ducts and then invades nearby tissue in the breast. Invasive lobular carcinoma first develops in the breasts' lobules and spreads to nearby tissue and organs. Other less prevailing categories of breast cancer include; Paget disease of the nipple one that begins in the breasts' ducts, but grows and spreads to the skin and areola of the nipple. Phyllodes tumor is a sporadic one which grows in the connective tissue of the breast. Angiosarcoma grows in the vasculature or lymphatics in the breast (Jaime and Kimberly, 2017).

Several studies have been conducted on histological types of breast cancer tumors (Amin *et al.*, 2017; Augustine *et al.*, 2016; Kotepiu *et al.*, 2014; Yasemi *et al.*, 2013; Zhi-Gang Yu *et al.*, 2012; Grethe *et al.*, 2010). Dearth of literatures exists on the histologic patterns of breast cancer tumors at the Central Hospital, Warri. Hence the focus of this study was to investigate the histologic forms of breast cancer tumors at Central Hospital, Warri.

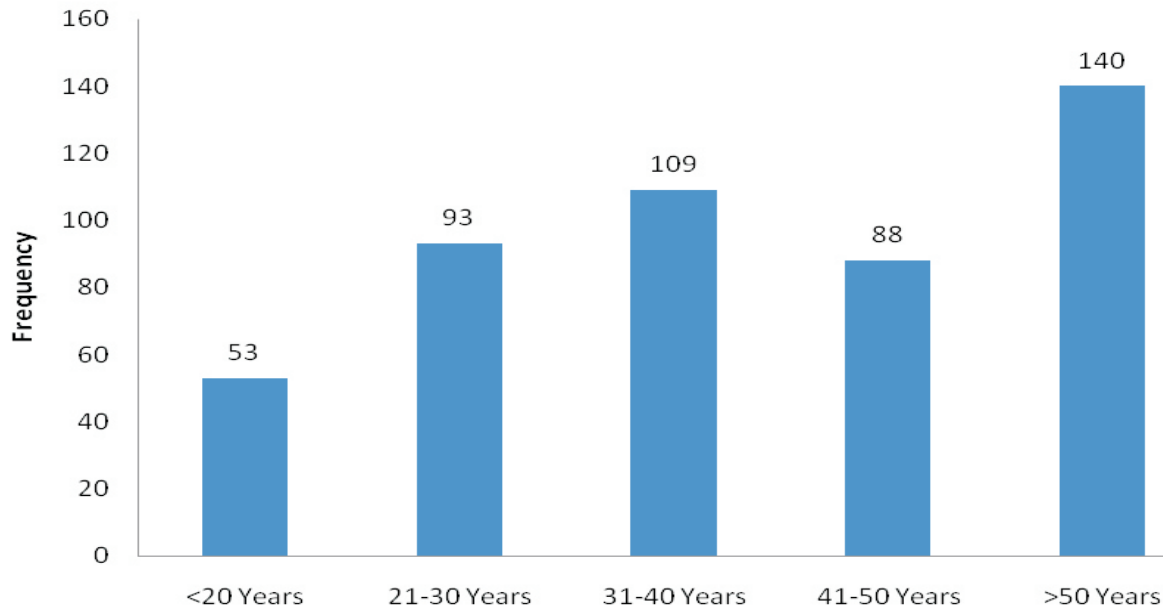
This study captured histologic types of breast cancer tumors among women who underwent breast biopsy in the Department of Pathology, Central Hospital, Warri, Delta State, Nigeria. This study would be of interest to Histopathologists and others involved in the care of patients with breast cancer.

### **Materials and Methods**

Ethical affirmation was acquired from the Research Ethics Committee of the Department of Human Anatomy and Cell Biology, Faculty of Basic Medical Sciences, Delta State University, Abraka in Nigeria. This retrospective review was actualized amid 248 women who underwent breast biopsy in the Department of Pathology, Central Hospital, Warri, Delta State, Nigeria from January 1<sup>st</sup> 2010 to December 31<sup>st</sup> 2017. Their ages and biopsy upshots were jotted down. The data gathered were anthologized and scrutinized utilizing the Statistical Package for the Social Sciences (SPSS) version 20. Chi-square test was exploited for inferential statistics in checking for significant age variability in occurrence of breast cancer. A p value less than ( $<$ ) 0.05 was deemed to be significant.

### **Results**

Of the 483 breast biopsy reports reviewed, there were 67 (13.9%) cases of breast cancer, 181 (37.5%) cases of benign breast tumors and 235 (48.6%) cases of normal breast tissues. Actually 248 were with breast tumors and 67 (27.0%) had breast cancer.



**Figure 1: Age distribution of the study subjects**

Figure 1 above revealed that the age group with the highest frequency (140) is that of the subjects above 50 years while those less than 20 years had the least frequency (53).

**Table 1: Distribution of Breast Cancer among the Subjects**

Breast Cancer Type	Frequency	Percentage (%)
Adenocarcinoma	8	11.9
Invasive Ductal Carcinoma	26	38.8
Invasive Lobular Carcinoma	21	31.3
Medullary Carcinoma	5	7.5
Mucinous Carcinoma	7	10.4
<b>Total</b>	<b>67</b>	<b>100.0</b>

Table 1 divulged that the invasive ductal carcinoma was the most pervasive type of breast cancer and medullary carcinoma was the least common kind of breast cancer.

**Table 2: Distribution of Types of Breast Cancer based on Age**

Breast Cancer Type	Age Groups (Years)				
	<20 Years	21-30 Years	31-40 Years	41-50 Years	>50 Years
Adenocarcinoma	2	3	3	0	0
Invasive Ductal Carcinoma	5	2	3	8	8
Invasive Lobular Carcinoma	1	5	9	0	6
Medullary Carcinoma	0	0	3	1	1
Mucinous Carcinoma	1	0	1	2	3

$p = 0.030, X^2 = 28.248$

Table 2 disclosed that adenocarcinoma was less widespread in age range <20 years, invasive ductal carcinoma was more rampant in age range 41-50 years; invasive lobular carcinoma and medullary carcinoma were more ubiquitous in age class 31-40 years and mucinous carcinoma was more frequent in age group greater than (>) 50 years. A significant association was notable between manifestation of breast cancer and age ( $p < 0.05$ ).

### Discussion

The findings from this study indicated that 27.0% of the patients with breast tumours were diagnosed to be with breast cancer. In Asia 35.3% of the breast lesions seen were malignant (Amin *et al.*, 2017). This study is at variance with a Chinese study which indicated that 69.0% of the patients with breast tumours had breast cancer.

In this study, breast cancer was found to be most frequent in the age class 31-40 years. This finding is consistent with a previous report (Amin *et al.*, 2017) which indicated that the most affected females fall within the 31-40 and the 41-50 years age groups. Similarly, a previous study by Yasemi *et al.* (2013) reported similar finding. However, Augustine *et al.* (2016) reported that breast cancer was more frequent in age interval 45-54 years.

This study indicated that the invasive ductal carcinoma was the most pervasive type of breast cancer. This finding is consistent with a previous report (Yasemi *et al.*, 2013) which indicated that invasive ductal carcinoma was the most rampant type. Similarly, our finding is in agreement with previous reports (Amin *et al.*, 2017; Grethe *et al.*, 2010) which indicated that the invasive ductal carcinoma was the most frequent followed by the invasive lobular carcinoma.

The various incidence rate of breast cancer in the different studies discussed above may be due to factors such as medical care delivery system, race, way of life, fecundity, nutritional status radiation exposure, parity, systemic endocrine remedy, physique, length of life and socio-environmental features.

### Conclusion

The most prevailing form of breast cancer is Invasive Ductal Carcinoma. Breast cancer is more rampant in the age class 31-40 years.

### Conflict of Interest Declaration

No conflict of interest.

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