

## Analysis of clinical and histological features of breast cancer in Libyan women

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**Abstract:** The objective was to assess the magnitude of carcinoma of the breast as a problem among women seen in Libya. Design: There were 168 female patients with breast cancer treated and operated upon in African Oncology Institute. The clinical and pathological picture of these 168 female patients was evaluated and different methods of operation for breast cancer performed. The time of presentation of patients with breast cancer and staging was recorded. The rationale of this study was to encourage the establishment of national cancer registry in Libya and a detailed national population screening programmer. The results show that 25.5% were of multipara while 24.4% were of high parity, married at relatively young age and most practiced breast feeding. The majority (56.5%) of these patients presented at late stage III and IV and 35.6 % of these patients presented early stage.

**Key words:** Breast cancer, pathology of breast cancer, staging of breast cancer, Libya.

### Introduction

With one million new cases in the world each year, breast cancer is the commonest malignancy in women and comprises 18% of all female cancers (1). The incidence of breast cancer increases with age, doubling about every 10 years until the menopause, when the rate of increase slows dramatically (1). As our understanding of the biology of breast cancer continues to improve, treatment of the disease continues to change (1). Although the ultimate goal of treatment remains improved survival, increasing emphasis is now put on less morbid treatments and improving quality of life. Prevention remains a major focus, particularly in women at high risk (2). The outline of breast diseases is still not well reported in Libya. The present situation of this common and serious health problem is less than ideal and indicates that a lot has to be carried out to detect the disease at earlier stage (3). Until recently, the only biologic marker that has been utilized in decision making regarding

specific treatment in breast cancer was the estrogen receptor (ER) or progesterone receptor (PR) or both. For the last 20 years, advances in the molecular biology highlighted numerous tumor associated markers, the most promising of these new markers was the Her 2/neu (1). Human growth factor receptor HER 2 gene is a proto-oncogen encoding the HER2 receptor. It is well-known that in about 20 - 40% of patients with breast cancer tumor cells show an amplification over expression of the tyrosine kinase receptor HER 2/neucc-erb2) or both. This protein (P185) is a member of epithelial HER family (2, 3).

### Materials and methods

In this retrospective study, it was examined the medical records of 168 women with breast cancer admitted to African Oncology Institute in Sabratha, Libya between January 2009 to December 2010. We looked at the following patients characteristics: age, nationality, marital status, parity, age at first pregnancy, duration of symptoms, side and site of the

tumor, family history for cancer, presence of metastasis, diagnostic means, type of treatment and follow up. Data was recorded and computerized for analysis. The breast neoplasms were classified according to the coding schemes of International classification of Disease and TNM staging system.

### Results

Over the two years period of study, we treated 168 women with breast cancer. One Hundred and sixty-two (96.4%) were Libyan while the remaining were foreigners. The age of the patients ranged from 23 years to 90 years (median 45.5 years). The peak incidence of breast cancer occurred between the ages of 41 and 50 years affecting 33.3% of our patients (Table 1).

**Table 1:** Frequency of breast cancer in relation to age

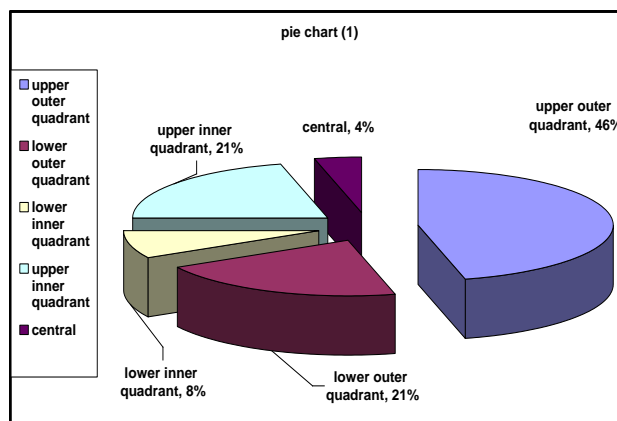
Percent	Frequency	Age ( years )
9.5	16	21 – 30
29.2	49	31 – 40
33.3	56	41 – 50
15.5	26	51 – 60
12.5	21	< 60
100	168	Total

Data on the age of first pregnancy were present for 76 patients. The median age was 19.2 years. More than 70% of the patients presented with a painless lump in the breast while the remaining patients presented with various other complaints which included in order of frequency, nipple discharge, and pain in the breast, nipple retraction and enlargement of the involved breast. Four patients (2.4%) presented in addition with backache and were subsequently found to have metastatic cancer lesion. Cancer affected the right breast in 87 patients (51.8%), the left breast 75 patients (44.6%) and bilateral in 3

**Table 2:** Parity of the patients

Percent	No. of patients	Parity
5.9	10	Unknown
31.5	53	No. children
32.7	55	1-5 children
29.7	50	> 5 children
0	0	Missing system
100	168	Total

patients (1.8%) and missing in the files in 3 patients (1.8%). Fifty three patients (31.5%) have no children, while the remaining ten patients (5.9%) unknown, 55 patients have 1 - 5 children (32.7%) and 50 patients (29.7%) have more five children Table (2). Of these patients 91% practiced breast feeding of their children for an average period of 10 months. The age at menarche was missing in the files of 100 patients. However, the median age at menarche was 12.2 years. The age at menopause was determined in only 20 patients (47.8 years).



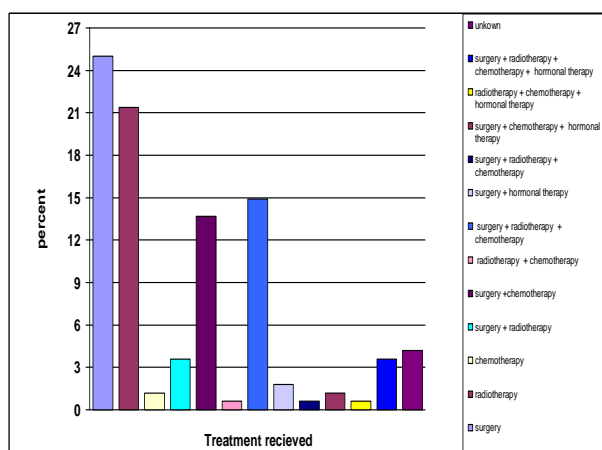
**Figure 1:** Site of carcinoma in the affected breast

The diagnosis of breast carcinoma was made by excision biopsy in 85% of the cases and by FNA in the remaining. Surgical treatment was performed on 108 patients (65%) and 42 patients treated by surgery only. The most common type of surgeries in these series is modified radical mastectomy plus axillary clearance 48 patients (28.6%), the vest with others. Thirty-six patients treated by radiotherapy only (21.4%) and two patients (1.2%) treated by chemotherapy only. Twenty-three patients (13.7%) were treated by surgery and chemo-therapy and 25 patients (14.9%) were treated by surgery, radiotherapy and chemotherapy. Only six patients (3.6%) were treated by surgery, radio-, chemo- and hormonal therapy.

**Table 3:** Type of treatment

Percent	Frequency	Valid s
25.0	42	r
21.4	36	c
1.2	2	s + r
3.6	6	s + c
13.7	23	r + c
0.6	1	s + r + c
14.9	25	s + h
1.8	3	s + r + h
0.6	1	s + c + h
1.2	2	r + c + h
0.6	1	s + r + c + h
3.6	6	unknown
4.2	7	total
92.3	155	missing system
7.7	13	Total
100.0	168	

**TREATMENT**



s = surgery    r = Radiotherapy    c = Chemotherapy  
 s + r = surgery + Radiotherapy  
 s + c = surgery + Chemotherapy  
 r + c = Radiotherapy + Chemotherapy  
 s + h = surgery + hormonal therapy.

Infiltrating ductal carcinoma occurred in 103 patients (61.3%); infiltrating lobular carcinoma occurred in 16 patients (9.6%) both in three patients (1.89%) whereas medullary carcinoma occurred in 11 patients (6.5%). In 26 patients (15.6%), the cancer was not otherwise specified. Axillary lymph nodes were clinically palpable in 84 patients (49.4%) and one patient (0.6%) with liver metastasis only. Twenty-five percent had no metastasis. Analysis of the tumor size, histological typing, lymph node involvement and presence of distant metastasis show that (56.5%) presented late (i.e. stage three and four) while (35.6%) presented relatively early, Table 4.

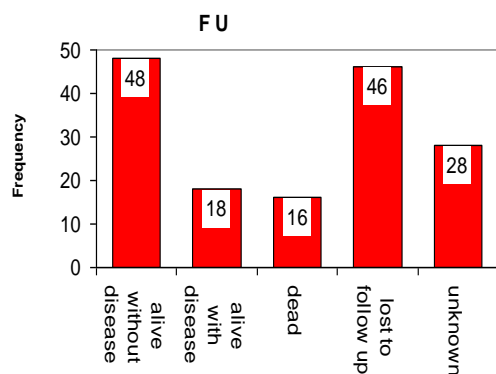
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**Table 4:** Staging of breast cancer

Percent	Frequency	Metastasis
23.8	40	no metastasis
46.4	78	Lymph node
22.6	38	Distance metastasis
92.9	156	Total
7.1	12	Missing
100.0	168	Total

**Table 5:** Metastasis and frequency of breast cancer

Percent	Number of patients	Stages
3.6	6	Unknown
8.3	14	One
27.3	46	Two
33.9	57	Three
22.6	38	Four
7.1	12	Missing system
100.0	168	Total



**Figure 2:** Data of follow up

## Discussion

The number of breast cancer patients seen at different hospital within the Libya appears to be increasing. Several reports have shown that breast cancer is common malignancy among women (1-3). However, the incidence of cancer in general is not yet known due to lack of a national cancer registry. This increase in the frequency of breast cancer seen may be attributed to an increased awareness of the population, the availability of medical facilities and that our women are becoming less reluctant to be examined by the surgeons who are mostly males.

Data suggest that breast cancer occurs in a relatively younger age group compared with the west (8) and most patients presented in late stage with only less that 40% presented at an early stage. Early marriage, high parity, breast feeding and lack of positive family history of breast cancer did not appear to be protective against breast cancer. It is difficult to be sure about the role of these factors in breast cancer in our women, because of the absence of data on the number of Libyan women who are at risk of developing breast cancer. There is no demographic data on the proportion of women

That remain unmarried or who never became pregnant, nor is there nationwide screening for breast cancer. Surgery is the primary modality of treatment but without adjuvant therapy, up to 50% patients with early breast cancer and 80% of patients with advanced breast cancer develops metastasis and die (12). The vast majority of our patients accepted the advice of surgical management, but only after a firm diagnosis of cancer. In the west, much emphasis is focused nowadays on breast self-examination which may be a major factor for late presentation (9-13). Because of the unavailability of radio-therapy and chemotherapy in some other hospitals most of the patients were referred to the African Oncology Institute for completion of the management and hence they lost for follow up.

In conclusion, it can be recommend that doctors working on cancer disease will work closely to establish a National cancer Registry, carry out joint studies and implement public education and cancer screening programmers

malignant disease. Breast cancer is an under estimated problem in Libya as there are different factors affecting its clinical picture.

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