

## Pathological Profile of Breast Cancer among Yemeni Patients

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### ABSTRACT

**Background:** The incidence of breast cancer is increasing in the developing country due to increase life expectancy, increase urbanization and adoption of western lifestyle, lack of population awareness, delayed health seeking behavior and low levels of female education. In Yemen, Breast cancer considered the first cancer among Yemeni women and the most leading cause of death. The aim is to study the demographic distribution and histopathological pattern of breast cancer among Yemeni women.

**Methods:** Retrospective study of breast specimens from 354 women was taken from the private modern histology lab and Ibn Sina lab in Aden; between 2006- 2013.

**Result:** The results show 44% of the cases was from Ibb Governorate followed by cases from Aden 33%. The age of the women with breast cancers was range from 20 years to 87 years mean of  $46.9 \pm 12$  years. Lumps in the right breast 56.2%. left breast was 41.3%.and 3.5% of the cases affecting the both breasts at the time of diagnosis. Overall pattern of breast cancer invasive ductal carcinoma was the commonest finding (57.5%) followed by invasive lobular carcinoma (20%), in situ ductal carcinoma (13.2%) and in situ lobular carcinoma. (3.4%). the less frequent subtypes were, Malignant phyllodes represented (2.3%). Papillary carcinoma, Medullary carcinoma and Mucinous carcinoma were (1.1%) each respectively.

**Conclusion:** Ibb and Aden have the highest frequency. Malignant neoplastic breast lesions are common beyond 4th decade. Invasive carcinoma was the most common malignant tumor among Yemeni women. Measures are needed to establish more oncology centers in Yemen

**Key words:** Malignant breast lesions Yemeni women.

### INTRODUCTION

There is a rising trend in breast diseases worldwide, with an annual incidence of 200, 000. [1] The incidence of breast cancer is increasing in the developing country due to increase life expectancy, increase urbanization and adoption of western lifestyle, lack of population awareness, delayed health seeking behavior and low levels of female education. [2]

Breast cancer is the commonest malignancy of women in western countries and second most common in developing countries after cervical cancer and it is also the most common cause of cancer mortality in women. [3]

There is marked geographical variation in incidence rates, being highest in the developed world and lowest in the developing countries in Asia, Middle East, and Africa. [4] Breast cancer rates are increasing in developed as well as developing countries. According to the World Health Organization (WHO) each year over 1.4 million women worldwide are diagnosed with breast cancer as it accounts for 23% of all newly diagnosed cancer [5]

The most common risk factors are age over 40, history of mammary gland diseases, history of cancer in first-degree relatives, early menarche and late childbearing (after 35 years of age), woman's age and others. [6, 7]

In Yemen, Breast cancer considered the first cancer among Yemeni women [8] and the most leading cause of death. [9]

Therefore, every change in the breast should be evaluated carefully for early detection of possible precancerous elements.

In Yemen, the magnitude of the problem of breast diseases is not yet known.

The aim of current study is to study the demographic distribution and histopathological pattern of breast cancer among Yemeni women.

**Materials and Methods:**

A descriptive retrospective study of breast specimens from 354 women was taken from the private modern histology lab and Ibn sina lab in Aden; between 2006-2013. The data were collected from the referral sheet. All women with breast cancer underwent Fine Needle Aspiration Cytology (FNAC) or/and biopsy due to the presence of breast cancer for the purpose of diagnosis were included. Four cases were excluded from the study as they were male cases. Therefore, the remaining 354 biopsies were included for the study.

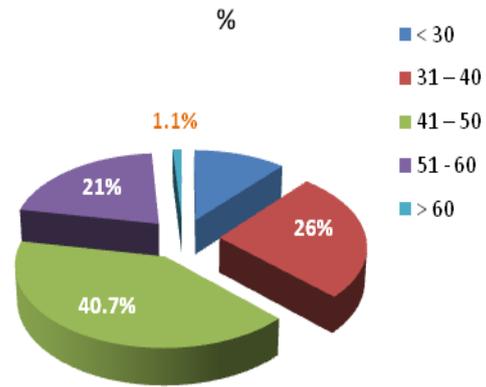
**RESULTS**

The total number of patient sheets reviewed was 354. The results show 158(44%) of the cases was from IBB Governorate, followed by cases from Aden118 (33%). While Al-Hudaida 2(0.6 0.3%) and Al-Baidha1(0.3%) have the least frequency of (Table 1)

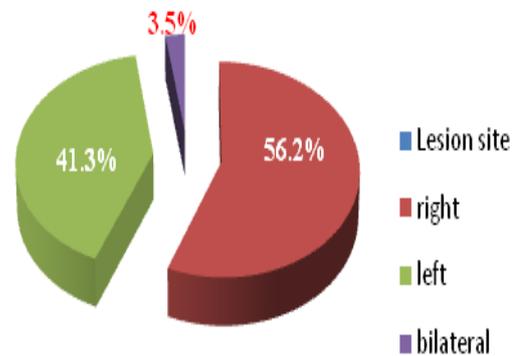
**Table 1: Distribution of breast cancer according to area of residency.**

Governorate	Frequency	Percent (%)
Aden	118	33.3
IBB	158	44.6
Al-Dhale	8	2.3
Abyan	19	5.4
Shabowa	8	2.3
Hadhrmout	24	6.8
Taiz	5	1.4
Lahaj	11	3.1
Al-Baidha	1	.3
Al-Hudaida	2	.6
Total	354	100.0

Figure 1: Regarding the age of the patient the highest percentage of carcinoma was found in 41 – 50 age category, followed by 31-40 and 51-60,< 30, > 60 respectively, as shown in figure 1. The age of the women with breast cancers was range from 20 years (youngest patient) to 87 years (oldest patient) with a mean of 46.9 ± 12 years.



**Figure 1: Distribution of breast cancer according to age group**



**Figure 2: Distribution of breast cancer according to site of lesions**

Figure 2: 56.2% of lumps were in the right breast. Left breast was the next common (41.3%). 3.5% of the cases affecting the both breasts at the time of diagnosis, as shown in figure 1.

**Table 2: Distribution of breast cancer according to histopathological pattern**

Type of cancer	No. of patients	%
In situ ductal carcinoma	46	13.2
Invasive ductal carcinoma	206	57.5
In situ Lobular carcinoma	12	3.4
Invasive lobular carcinoma.	71	20
Malignant phyllodes	8	2.3
Medullary carcinoma	4	1.1
Mucinous carcinoma	4	1.1
Papillary carcinoma	4	1.1
Metaplastic carcinoma	1	0.3
Total	354	100.0

Overall pattern of breast cancer invasive ductal carcinoma was the commonest finding (57.5%) followed by Invasive lobular carcinoma (20%), in situ ductal carcinoma (13.2%) and in situ lobular carcinoma. (3.4%). the less frequent subtypes were, Malignant phyllodes represented (2.3%). Papillary carcinoma, Medullary carcinoma and Mucinous

carcinoma were (1.1%) each respectively. Metaplastic carcinoma (0.3%) is rare and one case 63 years old on the left breast and living in Aden. (Table 2)

## DISCUSSION

Breast cancer is the most common neoplasia in women. [10] Most of our patients come from rural area IBB Governorate, followed by cases from Aden, which were consistent with other study. [11-13]

Mean age of breast cancer presentation was in 46.9 years. Similar results were reported in other studies from Arab countries including 48.49 years in Saudi Arabia, [15] 49 years in Jordan, [16] 49 years in Lebanon, [17] 48 years in Egypt, [18] and 44 among Yamani patients. [11] Alhaj [19] found a significant higher frequency of subjects in the breast cancer group regarding age between 40-59 years. Sulhyan et al [20] showed that tumors were seen beyond 4th decade.

Of the 354 malignant lesions, the primary site of lesion in majority of women was detected in right site. It is similar to the rate reported in the literature, [1,4,17] Sulhyan et al [20] found all tumors involved upper outer quadrant, contrarily some authors reported the left breast was more affected than the right one. [18,21]

In our study invasive ductal carcinoma becomes the most common variety of breast cancer as indicated in published data. [17,21-23] Sulhyan et al [20] reported that invasive carcinoma was the most common malignant tumor. Invasive lobular carcinoma was the second most common histologic type in this study accounting for 20% of cases which is similar to the study of Raina et al. [24]

Malignant phyllodes tumor is a rare lesion of the breast that can mimic benign masses such as fibroadenomas on clinical diagnosis but is characterized by a typical rapid growth. [25] Which represent roughly 0.3%-0.9% of all breast cancers, [26] in our study they represented 2.3% of all cases it was more frequent than Medullary

carcinoma, Mucinous carcinoma and Papillary carcinoma.

## CONCLUSION

Ibb and Aden have the highest frequency. Malignant neoplastic breast lesions are common beyond 4th decade. Invasive carcinoma was the most common malignant tumor among Yemeni women. Measures are needed to establish more oncology centers in Yemen

## REFERENCES

1. Malik M, Salahuddin O, Azhar M, Dilawar O, Irshad H, Sadia SA: Breast diseases: spectrum in Wah Cantt; POF hospital experience. Professional Med J Sept 2010, 17(3); 366 – 372.
2. Brinton L, Figueroa J, Adjei E, Ansong D, Biritwum R, Edusei L, et al. Factors contributing to delays in diagnosis of breast cancers in Ghana, West Africa. Breast Cancer Res Treat. 2017;162:105–14.
3. Bray F, McCarron, Parkin DM. The changing global pattern of female breast cancer incidence and mortality. Breast cancer Res. 2004, 6:229 – 239.
4. Ferlay J, Shin H, Bray F, Forman D, Mathers C and Parkin DM: Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. International Journal of Cancer. 2010;127: 2893–2917.
5. Jemal A, Siegel R, Ward E, Hao Y, Xu J, Murray T, Thun MJ. Cancer statistics, 2008. CA Cancer J Clin. 2008 Mar-Apr;58(2):71-96
6. Ahmed, Hussain Gadelkarim, et al. “Role of some risk factors in the etiology of breast cancer in the Sudan.” Breast Cancer Journal. 2010; 2: 71-78.
7. Kamińska, Marzena, et al. “Breast cancer risk factors.” Przegląd menopauzalny Menopause Review. 2015; 14(3): 196.
8. Al-Thobhani AK, Raja’a YA, Noman TA. The pattern and distribution of malignant neoplasms among Yemeni patients. Saudi Med J. 2001; 22: 910-13.
9. Bucholc M, Łepecka-Klusek C, Pilewska A, et apinii kobiet. Ginekol Pol: Breast cancer risk factors. Prz Menopauzalny. 2015; 14(3): 196-202
10. Bawazir AA, Abdul Hamid G, Moralles E. Available data on cancer on the South-

- Eastern governorates of Yemen. Eastern Mediterranean Health J. 1998; 4: 101-13.
11. R. Kumar. A Clinicopathologic study of Breast Lumps in Bhairahwa, Nepal. Asian Pacific Journal of cancer prevention. 2010; 11:18-31.
  12. Ba Saleem HO, Bawazir AA, Moore M, Al Sakkaf KA. Five years cancer incidence in Aden Cancer Registry, Yemen (2002-2006). Asian Pac J Cancer Prev. 2010; 11(2):507-11.
  13. Bawazir AA (2018):Cancer incidence in Yemen from 1997 to 2011: a report from the Aden cancer registry. BMC Cancer. 2018; 18(1):540
  14. Moss JL, Liu B, and Feuer EJ. Urban/rural differences in breast and cervical cancer incidence: The mediating roles of socioeconomic status and provider density. Women Health Issues. 2017; 27(6): 683–691.
  15. Jamal AA. Pattern of breast diseases in a teaching hospital in Jeddah, Saudi Arabia. Saudi Med J. 2001; 22(2):110-3.
  16. Aghassi IM, Green M, Shohat S. Familial risk factors for breast cancer among Arab women. Eur J Cancer Prev. 2002; 11: 327-31.
  17. El Saghir NS, Shamseddine AI, Geara F, et al. Age distribution of breast cancer in Lebanon: increased percentages and age adjusted incidence rates of younger-aged groups at presentation. J Med Liban. 2002; 50(1-2):3-9.
  18. Ibrahim A.S., Komodiki C., Najjar K., et al. Cancer Profile in Gharbiah, Egypt. Methodology and Results. Ministry of Health and Population Egypt and Middle East Cancer Consortium; Cairo, Egypt: 2002.
  19. Alhaj A. Serum Prolactin Level in Yemeni Females with Breast Cancer. YEMENI Journal for Medical Sciences. 2012; 6: 1-6
  20. Sulhyan K.R, Anvikar A.R, Mujawar I.M, Tiwari H. Histopathological study of breast lesions. Int J Med Res Rev. 2017; 5(01):32-41
  21. . Devi KR, Kuruvila S, Musa MM. Pattern of breast neoplasms in Oman. Saudi medical journal, 1999, 20:38–40
  22. A.K. Al-Thobhani,<sup>1</sup> Y.A. Raja'a,<sup>2</sup> T.A. Noman<sup>3</sup> and M.A. Al-Romaimah<sup>3</sup>. Profile of breast lesions among women with positive biopsy findings in Yemen. Eastern Mediterranean Health Journal, Vol. 12, No. 5, 2006
  23. Ahmad M and Manzoor F. Histopathological analysis of breast lump in a tertiary care hospital. Int. J. Adv. Res. 2016; 5(1), 1334-1337.
  24. Raina V, Bhutani M, Bedi R, Sharma A, Deo SV, Shukla NK, et al. Clinical features and prognostic factors of early breast cancer at a major cancer center in North India. Indian J Cancer 2005;42:40-5.
  25. Testori A., Meroni S., Errico V., Travaglini R., Voulaz E., Alooisio M. Huge malignant phyllodes breast tumor: a real entity in a new era of early breast cancer. World J Surg Oncol. 2015;13:81
  26. Roberts N., Runk D.M. Aggressive malignant phyllodes tumor. Int J Surg Case Rep. 2015;8:161–165.

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