

# Clinicopathological Pattern of Breast Cancer Presentation in Allied Hospital Faisalabad

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## ABSTRACT

**Objective:** To determine the pattern of presentation of breast cancer in Allied Hospital Faisalabad regarding age, stage, histological type, tumor grade and receptor status. **Study design:** An observational study. **Settings:** Department of Surgery Allied Hospital Faisalabad-Pakistan. **Duration:** January 2014 and January 2015. **Methodology:** 500 diagnosed breast cancer patients, who were either treated surgically or referred to Oncology department for neo adjuvant or adjuvant therapy, were included in the study after obtaining informed consent. Patients were interviewed using a questionnaire. Staging was done using triple assessment and relevant investigations and then followed for histopathology reports for histological type, grade, margin clearance and receptor status for ER, PR, and HER 2 Neu receptors. The collected data was analyzed using SPSS version 17. 0. **Results:** In this study, 500 patients were included with age ranging from 23 years to 80 years. 40 to 50 years is the most prevalent age group for carcinoma breast (57%). 64% females presented with advanced breast cancer (stage III and IV). Invasive ductal carcinoma is the commonest pathological type (93%). Majority (55%) of patients had grade II tumors on histopathology. **Conclusion:** According to this study majority of the patients presented between 40-50 years. Invasive ductal cell carcinoma is the most common type. Majority of the patients presents in advance stage.

**Keywords:** Breast Cancer, Invasive ductal carcinoma, delayed presentation.

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## INTRODUCTION

Breast cancer is the most common malignancy of women worldwide.<sup>1</sup> In Pakistan also, it is the commonest malignancy among females i.e., 45% of female cancer patients have carcinomas breast.<sup>2</sup> Approximately one in every nine Pakistani women is likely to suffer from breast cancer.<sup>3</sup> Majority of breast cancer patients present with advanced disease in Pakistan, more than half being stage III or IV.<sup>4,5</sup> Breast cancer is considered a common problem presenting at young to middle age group with invasive ductal carcinoma being the commonest variety with a high grade.<sup>6</sup> Estrogen receptors (ER) and progesterone receptor (PR) status are biological markers commonly evaluated in breast cancer to predict patient response.<sup>7</sup> The frequency of expression of hormonal receptors in breast cancer patients from Pakistan is the same as reported in western literature. ER and PR negativity and HER 2 Neu positivity are associated with more advanced disease and poor outcome.<sup>8</sup>

Since population-based cancer registries do not exist in developing countries including Pakistan, hospital and institution-based studies can provide data to compare data from other parts of country and international research.

The purpose of our study is to evaluate the above features in our setting which will provide data to compare data from other parts of country and international research.

## METHODOLOGY

**Study Design:** This was an observational study

**Settings:** Department of surgery Allied Hospital Faisalabad-Pakistan.

**Duration:** From January 2014 to January 2015

**Methods:** done in the Allied Hospital is a tertiary care institution which covers the population of about 20 million people.

All patients diagnosed to have breast cancer clinically and histopathologically in the above duration were included in the study.

Those patients who refused to undergo assessment and treatment in the unit or who left against medical advice after a provisional diagnosis was made were excluded.

All patients were counseled about their condition and informed consent was taken from all patients for their management and for inclusion in the study. Patients were interviewed using a questionnaire; staging was done after triple assessment and relevant investigations. The patients treated accordingly and then followed for histopathology reports for histological type, grade, margin clearance and receptor status for ER, PR, and HER 2 Neu receptors. The collected data was analyzed using SPSS version 17. 0

## RESULTS

In this study, 500 patients were included with age ranging from 23 years to 80 years. Out of total sample, 285 (57%) females were of the age group 40 to 50 years, 100 (20%) females were more than 50 years, 75 (15%) females were between 30 to 40 years of age and 40 (8%) females were below 30 years of age. (Table1)

**Table 1: Age at presentation**

Sr	No. of Patients	Percentage	Age Years
1	285	57%	40-50
2	100	20%	>50
3	75	15%	30-40
4	40	08%	<30

On staging, according to UICC 80 (16%) were stage I, 100 (20 %) stage II, 250 (50 %) stage III and 70 (14 %) stage IV carcinoma breast. So, 64 % females presented with advanced breast cancer. (Table 2)

**Table 2: Stage at presentation (UICC)**

Sr	No. of Patients	Percentage	Stage
1	80	16%	Stage 1
2	100	20%	Stage 2
3	250	50%	Stage 3
4	70	14%	Stage 4

On Histopathology, out of 500 patients, 465 (93%) were found to have invasive ductal carcinoma, 20 (4%) had invasive lobular carcinoma, 10 (2%) had mixed lobular and ductal carcinoma and 5 (1%) had metastatic adenocarcinoma (Table 3).

**Table 3: Type at presentation**

Sr	No. of Patients	Percentage	Type
1	465	93%	Invasive Ductal Carcinoma
2	20	04%	Invasive Labular Carcinoma
3	10	02%	Mix Labular & Ductal Carcinoma
4	5	01%	Metastatic Adenocarcinoma

Out of total sample, 275 (55 %) females were grade II, 210 (42 %) females grade III and only 15 (3%) were found to have grade I tumors. (Table 4)

**Table 4: Grade at presentation**

Sr	No. of Patients	Percentage	Age Years
1	275	55%	Grade II
2	210	42%	Grade III
3	15	3%	Grade I

Estrogen progesterone and HER 2 NEU Receptors were also studied. 380 out of 500 patients had receptor studies done out of those 250 (65.8 %) were found to be estrogen and progesterone receptor positive and 130 (34.2%) had negative ER, PR studies. 130 had HER-2 Neu positive result and rest of 250 had negative HER-2 Neu studies. (Table 5)

**Table 5: Receptor status**

No. of Patients	Percentage	ER	PR	HER-2-Neu
250	65%	+ ve	+ ve	- ve
130	34%	- ve	- ve	+ ve

75 (15%) patients were having ER, PR, HER-2Neu positive studies and 55 patients (11%) with HER-2Neu positive status were ER, PR negative.

## DISCUSSION

This study was conducted to see the pattern of presentation of breast cancer in Allied Hospital Faisalabad regarding age, clinical stage, histological type, grade and receptor status.

The presenting age of breast cancer patients ranges from 23 to 80 years with a mean of 51.5 years, the most prevalent age group being 40 to 50 years (57%). This is in accordance with study of Wani et al<sup>3</sup> where mean age at presentation was 46 ± 10.2 years, Naeem M et al<sup>7</sup> 40 to 49 years and Baloch A H et al<sup>4</sup> 41 to 50 years being most prevalent age group reviewed from various areas of Pakistan.

Invasive ductal carcinoma is the commonest histological type found in 93% of patients. This is in accordance with many other studies done in different areas of Pakistan.<sup>10,4,1</sup> invasive ductal carcinoma found in 95.5 % of patients in Balochistan<sup>4</sup> 92 % from a study in INMOL Lahore.<sup>10</sup>

64% patients presented with advanced breast cancer (stage III, IV) which is exactly in accordance with study of Khokhar S-et al and Naeem M. et al.<sup>10,1</sup> a study in England revealed only 11.8 % of British females having tumor in stage 3 or 4 at presentation.<sup>12</sup> Another study from UK revealed 42 % patients presenting in stage 1 disease from the northern and York shire region.<sup>13</sup> This is quite better as compared to that found in our study.

## CONCLUSION




According to this study majority of the patients presented between 40-50 years. Invasive ductal cell carcinoma is the most common type. Most of the patients pretended with grade II disease. Majority of the patients presented in advance stage. This reflects the lack and need of active awareness program as well as screening facilities for breast cancer in our setup.

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### **AUTHORSHIP AND CONTRIBUTION DECLARATION**

AUTHORS	Contribution to The Paper	Signatures
<b>Dr. Soofia Irfan</b> Senior Registrar, Surgery Allied Hospital, Faisalabad	Study Design, Collection of Data, Manuscript Layout	
<b>Dr. Muhammad Akram</b> Associate Professor of Surgery, FMU / Allied Hospital, Faisalabad	Comparison of Results Review of Statistical Analysis	
<b>Dr. Sajid Rehman</b> Assistant Professor, Surgery FMU / Allied Hospital, Faisalabad	Tabulation of Results Editing the Manuscript	
<b>Prof. Dr. Muhammad Sajid</b> Professor of Surgery FMU / Allied Hospital, Faisalabad	Literature review Comparison of finding, Proof reading	