



## Breast cancer screening: An outpatient clinic study

Mustafa Girgin<sup>1</sup>, Kazim Duman<sup>2</sup>, Salih Burcin Kavak<sup>3</sup>, Ebru Kavak<sup>3</sup>

### ABSTRACT

**Introduction:** Systematic screening for breast cancer is performed to reduce the current mortality rate and incidence by diagnosing the patients during the early stage and asymptomatic phase of the disease. A high quality screening program may produce a long-lasting decrease in mortality only if the treatment is of an equal standard.

**Patients and Method:** 350 patients' medical records, including breast physical examinations, age, gender, mammography findings, number of gravidity, parity and abortion, curettage, whether or not there is systemic and endocrinological disease present and pelvic masses were analyzed retrospectively.

**Result:** Most of the patients (91.1%) had no breast pathological findings. 2.6% of patients had fibroadenoma and 4.6% had fibrocystic breast changes exhibited through mammography. One patient was found to have a breast mass. In that patient, tru-cut biopsy revealed infiltrating ductal carcinoma.

**Conclusion:** A multidisciplinary cancer screening program should be maintained. With such a process, the aim is to reduce the morbidity and mortality of the disease without adversely affecting the health conditions of asymptomatic individuals based on the screening. Success is brought about by the combination of individual features.

**Key words:** Breast cancer, screening, early diagnosis

### Introduction

Breast cancer (BC) is the most common (24.1%) malignancy among women. It is the second most frequent cause of cancer deaths (18%) in women, after lung cancer [1]. 10,000 women develop breast cancer each year in Turkey [2]. 1/40 of cases are in the fifth decade of life and 1/66 of all cases are in the fourth decade [3]. The likelihood of being diagnosed with breast cancer is 12.3% during a woman's lifetime [4]. According to World Health Organization (WHO), the overall frequency of BC is increasing rapidly [5]. Prominent geographical variation in frequency rates

are described, with the highest frequency of diagnosis in the developed countries and the lowest in developing countries, including Africa, the Middle East and Asia, though this range has been narrowing continually over the last few years according to the International Agency for Research on Cancer (IARC-2012). Early awareness of breast masses by patients depends on the patient's social and educational status. There are many studies related to early detection of breast cancer by patients and its significance [6]. The authors believe studies in this field should particularly focus on rural populations. Breast self-examination, physical exami-

**Author affiliations** : Department of General Surgery, <sup>1</sup>Faculty of Medicine, Firat University, <sup>2</sup>Elazig Military Hospital, <sup>3</sup>Department of Obstetrics and Gynecology,

**Correspondence** : Faculty of Medicine, Firat University, Elazig, Turkey

Kazim Duman, MD, Department of General Surgery, Elazig Military Hospital, Elazig, Turkey. e-mail: drkduman@gmail.com

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nation, and mammography are among the most emphasized topics in recent times [7]. Breast masses are addressed by general surgeons in Turkey. Especially in rural areas, women often do not go to a health institution with breast complaints. Therefore, diagnosis might be skipped, and therefore come too late. For over 40 years, female patients have visited the authors' clinic to undergo screening with mammography and breast ultrasounds, and here, the aim is to assess the state of this hospital with respect to incidence of breast pathology.

### Patients and Methods

This study was performed during the period between January 2014 and April 2015 at Firat University, Faculty of Medicine. Approval for the study was obtained from the Local Institutional Ethics Committee of Firat University Faculty of Medicine, Elazig, Turkey (04.08.2015/86879). Patients over 40 years who had not complained of breast cancer-related pathology were evaluated by a gynecologist. Patient's medical records were completed. 350 patients' records, including demographic data, age, mammography images, number of gravidity, parity and abortion, curettage, whether or not there is systemic and endocrinological disease and whether they had pelvic masses, were analyzed retrospectively. To investigate the data obtained for the study, the software suite, SPSS 22.0 for Windows (Chicago, USA) was used. Descriptive statistics were given in numbers and percentages for categorical variables and as mean±standard deviation or median (minimum-maximum) for continuous variables.

### Results

In the sample of 350 adult female patients admitted to the obstetrics and gynecology outpatient clinic, the average age was 43.6±2.2 (range:40-48 years). 315 patients (90.5%) were married and 196 patients (55.7%) were educated for less than nine years. 296 patients were housewives (84.6%) and most were living in a rural region (96.4%). 100 patients (28.6%) had a family history of BC, 221 patients (63.3%) had two children, 47 patients (13.4%) were current smokers, and only one patient (0.2%) drank alcohol. Descriptive statistics of patient characteristics are presented in Tables 1 and 2.

Breast examinations of the patients were conducted in the menopause clinic or general surgery clinic when necessary. Breast masses were detected through exami-

nation of 20 patients, with 10 being applied through cyst aspiration. Tru-cut biopsy was performed in 6 of those patients, pathological examination showing that breast fibroadenomas were present. The remaining 4 patients were taken to the outpatient clinic for follow-up.

Among the patients, 198 (56.6%) had vulvovaginitis, 39 (11.1%) had menstrual cycle disorders, 36 (10.3%) had urinary incontinence, 33 (9.4%) had pelvic masses, 31 (8.8%) had myoma uteri and 13 (3.8%) had urinary tract infection. None of the patients had any actual diagnosis related to breast health issues.

Most of the patients (91.1%) had no breast pathological findings from the mammography or breast ultrasonography. As mentioned before, 9 patients (2.6%) had fibroadenomas, and 16 (4.6%) had fibrocystic breast changes visualized through mammography. 3 patients (0.8%) had confirmed reactive lymph node pathology. One patient (0.3%) had lipoma and one other

**Table 1.** Patient characteristics (SD: Standard deviation).

| Parameter          | Minimum | Maximum | Mean±SD  |
|--------------------|---------|---------|----------|
| Age (year)         | 40      | 48      | 43.6±2.2 |
| Gravidity (number) | 1       | 6       | 3.7±1.1  |
| Parity (number)    | 0       | 5       | 2.5±0.9  |
| Abortion (number)  | 0       | 4       | 0.8±0.7  |
| Curettage (number) | 0       | 3       | 0.4±0.6  |

**Table 2.** Complaints of the patients (N: Number).

| Complaints                | N   | %    |
|---------------------------|-----|------|
| Vulvovaginitis            | 198 | 56,6 |
| Menstrual cycle disorders | 39  | 11,1 |
| Urinary incontinence      | 36  | 10,3 |
| Pelvic mass               | 33  | 9,4  |
| Myoma uteri               | 31  | 8,8  |
| Urinary tract infection   | 13  | 3,8  |

**Table 3.** Mammography findings of the patients (N: Number).

| Mammography Findings          | N   | %    |
|-------------------------------|-----|------|
| No breast pathology           | 319 | 91,1 |
| Fibroadenoma                  | 9   | 2,6  |
| Fibrocystic breast changes    | 16  | 4,6  |
| Reactive lymph node           | 3   | 0,8  |
| Infiltrating ductal carcinoma | 1   | 0,3  |

patient (0.3%) had accessory breast. The overall mammographic findings are shown in Table 3. After mammography and breast ultrasonography, one (0.3%) patient was found to have a breast mass. The breast mass was 1.5 cm. Pathological analysis with tru-cut biopsy revealed infiltrating ductal carcinoma. This patient underwent modified radical mastectomy in the authors' general surgery clinic. The patient was determined to have stage 1 breast cancer (tumor size was 1.5 cm, no lymph node involvement and no metastases). There were no complications in the postoperative period.

### Discussion

Examining and studying the individuals at risk for a particular disease (e.g. breast cancer in women in an age group of high incidence) for the purposes of early diagnosis and treatment is called "population-based screening", while screening individuals for the purposes of routine medical counseling in the case of a potentially high risk for the disease in question (e.g. in the presence of family history of the disease or other known risk factors) is referred to as "opportunistic screening" [8]. The present study may be defined as a population-based screening study as a number of the women were in the risk group. 100 (28.6%) patients had a family history of breast cancer and 280 (80%) gave birth to their first child before the age of 25. A third risk factor considered for this study could be benign breast disease. 25 patients (7.2%) did indeed have benign breast disease. Systematic screening for breast cancer is generally performed to reduce the current mortality rate and incidence by diagnosing the patients in the early and asymptomatic phases of the disease [9]. A high quality screening program may produce a long-lasting decrease in mortality only if the treatment of the women in which breast cancer is detected is of an equal measure [1]. As a matter of fact, in this study, the authors have been at quite a disadvantage based on the fact that more than half of the cases involved patients with low levels of education living in rural areas.

In the literature, there are various studies utilizing breast cancer screening in different types of societies using various examination and test methods. The effect of "breast self-examination" on mortality was reviewed with respect to breast cancer and it was determined that it, in fact, had no effect [10,11]. The number of pa-

pers claiming a reduction in mortality associated with breast cancers was achieved based on the precise results from the programs and courses developed has recently increased [12].

"Physical examination of the breast" is used as a screening method, as well. Even though its use and worth is questioned today, breast cancer used to be diagnosed with this method strictly [13,14]. Although there are no randomized clinical study results available yet which suggest a contribution to the reduction of breast cancer mortality through physical breast examinations, they are considered to be complements to mammography [15]. In the UK, breast cancer screening involves mammography for the age group between 50 and 64 every 3 years. However, it was found that 20% of the detected breast cancers were diagnosed by screening while 80% of the cases were diagnosed as a result of physical examination by general practitioners [16].

The published randomized controlled studies of mammography screening and the information obtained from countries practicing regular mammography screening show that it significantly diminishes the mortality associated with breast cancer. The specific contribution of mammography screening to the reduction of mortality is reported to be approximately 25%-30% [17,18]. The ideal age for beginning mammography screening is considered to be 40 [ ], and it has also been observed that annual screening is more effective [19, 20]. The American Cancer Society recommends annual mammography controls for screening purposes for individuals above 40 years of age [21]. In Turkey, healthy women above 40 are screened by mammography every 2 years, and all women above 20 are encouraged and taught how to perform breast self-examination. In the current study, for which patients were examined in the menopause clinic of the hospital, the overall age range was between 40 to 48 years of age.

In the present study, in one case, a woman with no complaints about her breasts was diagnosed with breast cancer by mammography screening, and her survival was increased by early treatment onset. Cancer screening programs should be maintained within a multidisciplinary framework. During the screening process, the goal should be to reduce the morbidity and mortality of the disease without adversely affecting the health con-

ditions of asymptomatic individuals based on screening. Favorable outcomes are brought about by the combination of individual and institutional qualities, and positive developments in both respects will increase the number of detection successes.

#### Conflict of interest statement

The authors have no conflicts of interest to declare.

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