



## THE ROLE OF SCREENING IN DETECTION OF BREAST CANCER IN ASYMPTOMATIC WOMEN AT ALYARMOOK TEACHING HOSPITAL IN BAGHDAD 2021-2022

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### ABSTRACT

**Introduction:** Breast cancer is the most commonly diagnosed cancer in women worldwide, and organised national mammographic screening has become the gold standard for early breast cancer detection in the majority of developed nations. **Objective:** To evaluate and emphasize the performance of breast cancer screening program and to determine the role of screening in detection of Breast Cancer in asymptomatic women at Alyarmook Teaching hospital in Baghdad. **Materials and Methods:** This retrospective study during the period from January 2021- December 2022 done in breast clinic at Alyarmook Teaching hospital in Baghdad. In 2021, the total number of patients (6331) from which symptomatic patients was (5645) while (672) asymptomatic. In 2022 was (8744), from which (6968) symptomatic while (1776) come for screening (asymptomatic). Self-referring women under and over age 40 years, for screening purpose done by using digital mammography and ultrasound. **Results:** the total number of participants in this study was 6331 during 2021, from there 672 were screened to detect cancer without symptoms, (348) patients who screened had results of U/S & Mammography BIRAD.<sup>[1,2,3]</sup> while (13) patients who screened had BIRAD.<sup>[4,5]</sup> The number of symptomatic patients was 5659 (89.38%). The number of patients with breast cancer was 59 (0.93%). Total number of participants in this study was (8744) during 2022, and that 1776 (20.3%) of them were screened to detect cancer without symptoms. Patients who screened with results of U/S, mammography BIRAD.<sup>[1,2,3]</sup> was 1729 (19.77%), while with BIRAD.<sup>[4,5]</sup> was 47 (0.56%). Also symptomatic patients was 6968 (79.68%) and number of patients with breast cancer was 74 (0.84%) during 2022. **Conclusions:** Individual opportunistic breast cancer screening programmers increase the early detection rate of breast cancer and increase asymptomatic women's health awareness of the importance of breast cancer screening.

**KEYWORDS:** Breast Cancer, Screening, Detection, Asymptomatic, Role.

### INTRODUCTION

The global cancer burden is increasing, especially in the Eastern Mediterranean region (EMR), where many countries are experiencing demographic, social, and economic disruptions.<sup>[1,2]</sup> Breast cancer is estimated to be the second most prevalent malignant tumour worldwide and the most frequently diagnosed female cancer. It remains the leading cause of cancer-related mortality among women in developing regions, including the Middle East and North Africa.<sup>[3]</sup> Poor breast cancer survival is a direct result of the prevalence of advanced stages of diagnosis in those regions. This confirms the imperative need to strengthen breast cancer prevention

strategies by raising awareness of the significance of early detection, examination, and treatment.<sup>[4,5]</sup>

Breast cancer is presently the second leading cause of death among women in Iraq, following cardiovascular disease. 23% of cancer-related fatalities.<sup>[6,7]</sup> It is the most prevalent malignancy among the general Iraqi population, and the number of registered cases is double that of bronchogenic cancer, the second most prevalent form of cancer. The most recent editions of Iraqi Cancer According to the registry, there were 19,5% newly diagnosed malignancies, 34% of which were cancers in females, and an incidence of 22 per 100,000 females.<sup>[6]</sup>

Previous studies have demonstrated that the disease recurrence rate is highest among younger women in their fourth and fifth decades of life who are frequently in advanced stages at the time of diagnosis.<sup>[6,8,9,10]</sup> To improve breast cancer screening, a fellowship for cancer screening was established, and publications on asymptomatic female breast cancer consultation are scant. Consequently, this research was conducted.

**Aim of the study:** To evaluate and emphasize the performance of the initiative opportunistic breast cancer screening program in Alyarmook Teaching hospital and to determine the role of screening in detection of breast cancer in asymptomatic women.

**MATERIAL AND METHODS**

The investigation was conducted among hospital staff at Baghdad's Alyarmook Teaching Hospital. A review of hospital records was conducted. Identification of those

with and without complaints among those consulting. Using digital mammography, women who self-refer for screening purposes. Ultrasound examination is performed as a complementary investigation in specific instances, and all cases are graded according to the BIRADS classification system. Following BIRADS categories 4 and 5, cytopathological analysis was conducted.

**RESULTS**

Table 1 and (fig. 1) illustrated that the total number of participants in this study was 6331 during 2021, and that 672 of them were screened to detect cancer without symptoms, and 348 patients who screened with results of U/S, Mammography BIRAD.<sup>[1,2,3]</sup> while 13 who screened with results of BIRAD.<sup>[4,5]</sup>

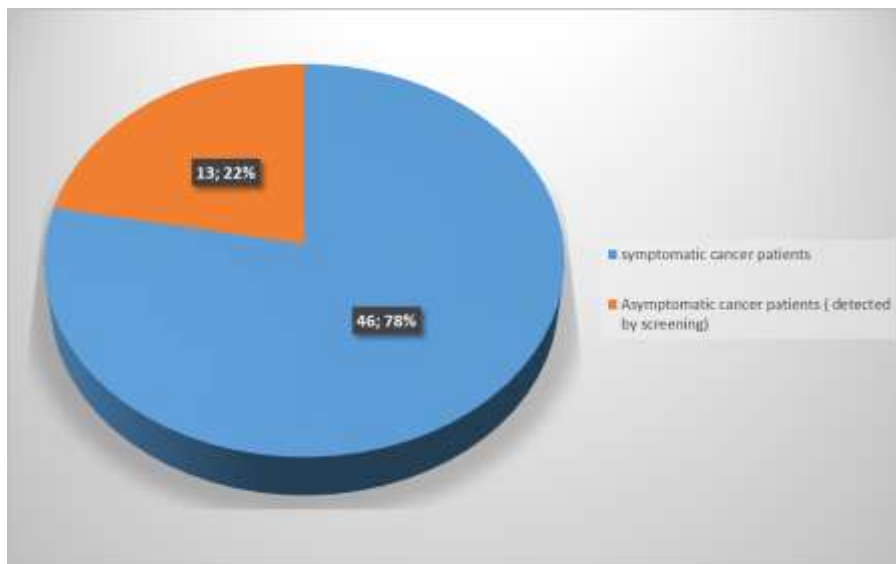
Total number of patients with symptoms was 5659 (89.38%).

**Table (1) Patients screened in Al -Yarmook Teaching Hospital-breast clinic- 2021.**

Parameters	Frequency	Percentage
Patients who were screened in 2021	672	10.61
Patients who screened with BIRAD. <sup>[1,2,3]</sup>	348	5.49
Patients who screened with BIRAD. <sup>[4,5]</sup>	13	0.20
Patients with symptoms	5659	89.38
Total	6331	100%
BIRAD = [Breast Imaging Reporting and Data System]		

Total number of patients diagnosed with breast cancer in the breast clinic for the year 2021 was 59 patients. Figure (1) illustrates the distribution of cancer diagnosed

patients by the chief complaint (asymptomatic/screened, symptomatic).



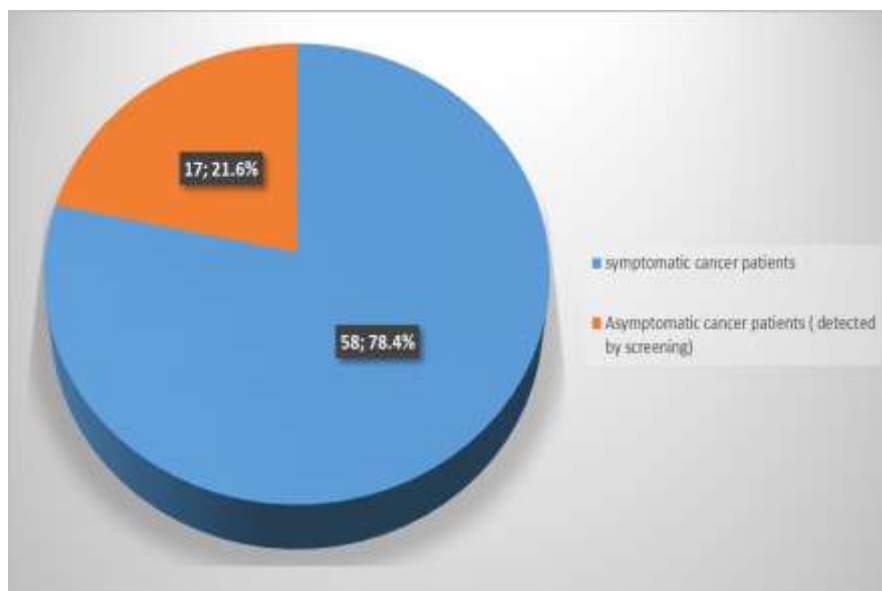
**Figure 1: Cancer diagnosed patients in the breast clinic year 2021, according to chief compliant (screen: asymptomatic, or Symptomatic).**

In Table 2 show the total number of participants in this study was 8744 during 2022, and that 1776 (16.72%) of them were screened to detect cancer without symptoms. Number of patients who screened with results of U/S, Mammography BIRAD.<sup>[1,2,3]</sup> was 1729 (16.53%), and

number of breast cancer was 74 (0.84%), while screened patients with results of U/S, Mammography BIRAD.<sup>[4,5]</sup> was 47 (0.56%). Also total number of symptomatic patients was 6768 (83.27%).

**Table 2: Patients screened in Al- Yarmook Teaching Hospital-breast clinic- 2022.**

Parameters	Frequency	Percentage
Patients who were screened in 2022	1776	20.3
Patients who screened with BIRAD <sup>[1,2,3]</sup>	1729	19.77
Patients who screened with BIRAD <sup>[4,5]</sup>	47	0.56%
Patients with symptoms	6968	79.68
Total	8744	100%
BIRAD = [Breast Imaging Reporting and Data System]		



**Figure 2: Cancer diagnosed patients in the breast clinic year 2022, according to chief complaint (screen: asymptomatic, or Symptomatic).**

And in figure (2) which shows Cancer diagnosed patients in the breast clinic year 2022, according to chief complaint (screen: asymptomatic, or Symptomatic).

intestinal coefficient  $P \leq 0.05$  that there is a strong significant relationship between the number in the year 2021 based on symptomatic and asymptomatic cases and the number in the year 2022 based on symptomatic and asymptomatic cases, where the P-Value value was ( $p = 0.0202$ ), as shown in Table 3

Table 3 shows the total number of patients with breast cancer for the years 2021 and 2022 who have symptoms and those who screened, and the results were found at an

**Table 3: Total no. of patients who were symptomatic and asymptomatic for two years 2021-2022.**

Symptomatic		Asymptomatic		P-value
Total No. of Ca Breast in 2021	46 (61.33%)	Total No. of Ca Breast in 2021	29 (38.66%)	
Total No. of Ca Breast in 2022	59 (78.66%)	Total No. of Ca Breast in 2022	16 (21.62%)	
P-value $\leq 0.05$				

Figure (3) shows number of patients with breast cancer according to their ages (less than 40 years (14.5%) and  $\geq 40$  years (85.5%) in Alyarmook teaching hospital in 2021, while (9.5%) with patients < 40 years and (90.5%) in > 40 years during 2022.

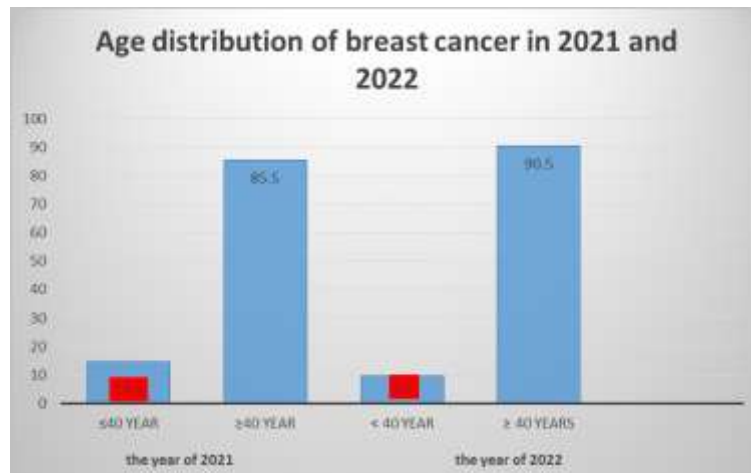


Fig. 3: Distribution of breast cancer patients according to age in 2021 & 2022.

## DISCUSSION

The role of screening in the early detection of breast cancer is essential, particularly for those who are unaware of the severity of cancer or exclude it, which leads to neglecting the investigation of the disease even in the absence of symptoms. This study demonstrates that there is an important role of screening in the early detection of breast cancer for those who are asymptomatic for two years between the beginning of the year 2021 and the end of the ensuing year. Based on our findings, establishing National Programmes for Early Detection and Research in our country would likely be advantageous.<sup>[3,8,11,12,14-16]</sup> For the entire year of 2021, 59 patients were diagnosed with breast cancer at the breast clinic. Figure (1) depicts the distribution of cancer-diagnosed patients by the chief complaint (asymptomatic/screened, symptomatic), which is consistent with what Tehillah et al depicted in their study (seven percent of the women in both age groups had an abnormal CBE (466; in women under 45, and 525 in women over 45). The results in Tables 1 and 2 indicate that the number of participants who came to investigate cancer without exhibiting symptoms increased by a factor of two between 2021 and 2022. This provided a greater opportunity to treat the disease at an early stage, which may be the result of social media and other educational programmes promoting disease awareness. Previous research highlighted the gaps in the knowledge, attitudes, and behaviours of Iraqi women regarding breast cancer.<sup>[9,10]</sup> and paved the way for promoting the adoption of a comprehensive national breast cancer control strategy based on public education campaigns and early detection and treatment protocol guidelines.<sup>[11,6,12,13]</sup> Changes in the distribution patterns of the stage at diagnosis are crucial indicators of the ineffectiveness of awareness campaigns and the need for a more efficient screening programme. However, the stage distribution of breast cancer in the United States is still significantly higher than that reported in cancer registries of high-resource settings, where at least 50 to 60 percent of breast cancers are diagnosed in localised stages.<sup>[14,15]</sup> In 2022, n= (74) of total n = (8280) breast

cancer patients at Alyarmook Teaching Hospital were less than 40 years of age, while n= (67) were older than 40 years of age. In figure (3), the number of participants older than 40 years is greater than the number of participants younger than or equal to 40 years; this corresponds to Lars et al's study, which showed that (the common metric is the number needed to screen (NNS), which reports how many women must be screened to prevent one breast cancer death. The NNS decreases with age because the incidence of breast cancer is higher in elderly women).<sup>[16-23]</sup>

## CONCLUSIONS AND RECOMMENDATIONS

Individual opportunistic breast cancer screening programmes have increased early detection and health awareness among asymptomatic women. Due to increased awareness and health education of our community to breast cancer risk by increasing meeting numbers and screening facilities, 2022 had more patients tested than 2021. Social media message, co-operative causes, and more fascinating organisations in our country's directorates. Still, patients go to the doctor once symptoms arise or when a family member has breast cancer. The breast clinic at AL-Yarmook Teaching Hospital has a poor screening rate. Organised screening programmes reduce advanced and complex breast cancer cases by finding disease early. Early cancer detection reduces the expense of chemotherapy and radiotherapy.

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