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RESEARCH ARTICLE

EPIDEMIOLOGY OF BREAST CANCER IN THE ARAB REGION BETWEEN 1999 AND 2024: A NARRATIVE REVIEW

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Abstract

Breast cancer (BC) poses a significant health challenge in both developed and developing countries, with limited research in the Arab region compared to the West. The aim of this review was to provide a comprehensive perspective on breast cancer incidence and mortality trends between 1999 and 2024, considering diverse socio-cultural and economic factors.A thorough literature review was conducted using sources such as PubMed, Medline, and recent WHO publications. Findings revealed that the incidence of breast cancer in the Arab world increased gradually during the period studied. However, the incidence of breast cancer among women in the Arab region was lower than the global average, and the mortality rate among women with breast cancer in the Arab region was lower than the global average. Age-standardized incidence and mortality rates have increased since 1990.The country-specific data showed that the more developed Arab countries tended to have a higher burden of breast cancer. Factors such as urbanization, increased life expectancy, and adoption of westernized lifestyles have been associated with the observed increase in breast cancer rates. Despite promising breast cancer screening initiatives, most Arab countries lack a structured universal screening program and participation rates are very low.The increasing incidence and burden of BC in the Arab region is remarkable, especially considering the limited resources of developing countries in this region. Appropriate strategies such as expansion of screening programs and careful resource management are needed to effectively manage the burden of BC.

Introduction:-

Breast cancer (BC) is a major health burden in both developed and developing.The World Health Organization (WHO) has rankedBC as one of the most serious global health problems (Mohammed, 2022).

There are substantial variations in BC burden by region and country due to the rapid population growth and aging, and changes in the prevalence and composition of the main risk factors. Additionally, there areconsiderable geographic and temporal variations in BC mortality in different regions that appear to be linked to the level of coverage of essential health services(Ginsburg et al., 2017).

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Breast cancer has been reported as the most frequently diagnosed female malignant disease in Arab populations (Chouchane et al., 2013).The epidemiology of breast cancer in the Arab region is understudied as compared with Western countries(Hashim et al., 2018). The region-specific publications investigating the attributable burden of breast cancer, and the resources for epidemiological descriptions are limited compared to many Western countries (El Saghir et al., 2007).Therefore, this narrative review seeks to provide a comprehensive perspective on the breast cancer incidence and mortality trends between 1999 and 2024taking into consideration the diverse socio-cultural and economic situation within the Arab region. In addition, we analyzed the prevailing breast cancer risk factors, screening practices, diagnostic modalities, and the available treatment options in the Arab Region. The findings of this study might facilitate the planning and prioritization of preventive cancer control initiatives, help policymakers make decisions about how to allocate public health resources and help evaluate specific primary prevention programs.

Methodology:-

Data Sources

We performed a literature search to review and collect research and/or reports on BC epidemiology, risk factors, diagnosis, and management published between 1999 and 2024 from 22 Arab countries. We reviewed PubMed/Medline and Google Scholar for peer-reviewed articles and reports, searched the ASCO and ESMO congresses for relevant abstracts presented during the studied time frame, and the most recent WHO and International Agency for Research on Cancer (IARC) publications such asGlobal Cancer Observatory (WHO, 2024), and GLOBOCAN 2022. GLOBOCAN is a comprehensive cancer registry database that provides contemporary estimates of cancer incidence and mortality for 36 cancers at the national level for 185 countries (Bray et al., 2024). Also, the available national cancer registry reports for each of the 22 Arab countrieswere reviewed.

Search Strategy

We performed a comprehensive literature review of reports of breast cancer in Arab countries by using the following keywords (“breast cancer” OR “breast malignancy” OR “breast tumor “OR “breast neoplasms”) AND (“epidemiology” OR “pattern” “incidence” OR “mortality rate” OR “death rate” OR “sociodemographic”) AND (“Arab region” OR “Arab countries” OR “Arab nations” OR “Arab populations”) AND (“risk factors”)AND (“screening programs”)AND (“diagnosis” OR “detection”)AND (“treatment” OR “therapy” OR “cure”).

Inclusion and Exclusion Criteria of the Studies

All national and international studies and reports published in English within the time frame 1999-2024on the epidemiology, screening, and management of BC in the Arab countries were included in this study.

Data Collection

We retrieved the available data on epidemiological trends and management of breast cancer in Arab countries and compared it to current international standards. These included the incidence and mortality rates and trends, age-standardized incidence rates (ASR), risk factors, availability of screening and mammography, methods of diagnosis, technical and professional expertise, availability of chemotherapy, radiotherapy, hormonal therapy, and infrastructure for supportive care for breast cancer patients.

Main findings

Overall Incidence and Mortality Trends of Breast Cancer in the Arab Region

Hashim et al. (Hashim et al., 2018) used the Global Burden of Disease (GBD) 2016 database to extract the incidence, and mortality, of female breast cancer in Arab countries from 1990 to 2016. They also estimated the future trends in breast cancer incidence in the region between 2016 and 2025. They reported that the incidence of breast cancer in the Arab world has risen gradually between 1990 and 2016, and the rate of increase appears to be similar to the global trend. Without any intervention, it is predicted that the incidence is likely to continue to rise over the next 10 years, both globally and in the Arab world**.**

The incidence of breast cancer in 2016 among women in the Arab region (28/100,000) was lower than the global mean (46/100,000). However, compared with those in Western Europe(148/100,000), the incidence rates were strikingly lower. The mortality rate in 2016 among women having BC in the Arab region (11/100,000) was lower than the global mean (15/100,000). However, compared with those in Western Europe (39/100,000), the incidence rates were lower(Hashim et al., 2018).Furthermore, Safiri et al. (Safiri et al., 2022) analyzed the incidence and death data retrieved from the Global Burden of Disease 2019 study for the 21 countries and territories in the Middle East

and North Africa. In 2019, the age-standardized incidence rate (ASR) was37.5 (95% UI: 32.7, 42.9) per 100,000, which had increased by 90.9% (95% UI: 54.6, 122.1) since 1990. Also, the age-standardized death rate was 15.2 (95% UI: 13.3, 17.3) per 100,000, which was 24.0% (95% UI: − 0.8, 45.6) higher than in 1990.

Trend Changes in Breast Cancer Incidence in the Arabian Gulf Countries

Reports from the Gulf Center for Cancer Registration (GCCR) representing data from six Gulf countries: TheKingdom of Saudi Arabia, the United Arab Emirates, the Kingdom of Bahrain, the Sultanate of Oman, the State of Qatar, and the State of Kuwait, revealed that breast cancer is the most common in the Gulf states between January 1998 to December 2004. About 6,882 breast cancer cases were reported from all the states accountingfor 11.8% of all cancers and 22.7% of cancers among women. Bahrain reported the highest incidence. Between 2011 and 2022, recent reports from Arabian Gulf countriesrevealed that BC was the leading cancer in all Gulf countries, with a consistent increase in BC incidence over the past decades(Al-Shamsi et al., 2023a).

Trend Changes in Breast Cancer Incidence and Mortality in Different Arabian Countries

The country-specific data revealed that the more developed Arab countries tended to have a higher burden of suffering from breast cancer. Lebanon had the highest incidence rate (84/100,000) among Arab nations, followed by Bahrain and Morocco (44/100,000 each). On the other hand, Djibouti (10/100,000) Comoros and Mauritania (12/100,000 each) showed the lowest incidence rates in 2016 (Hashim et al., 2018).

The age-standardized incidence rate (ASR) of female breast cancer varied substantially between countries. According to Safiri et al. (Safiri et al., 2022),Lebanon [122.5 (95% UI: 92.1, 160.7)], Qatar [103.7 (95% UI: 80.2, 131.2)] and Bahrain [67.5 (95% UI: 54.0, 83.1)] had the highest ASR per 100,000 females. In contrast, Yemen [95% UI: 22.7 (16.6, 31.3)] and Sudan [95% UI: 24 (16.2, 33)] had the lowest rates. Furthermore, Qatar [36.9 (95% UI: 28.9, 45.8)], Lebanon [35.5 (95% UI: 27.2, 46.4)], and the United Arab Emirates [26.2 (95% UI: 20.0, 33.6)] had the three highest age-standardized death rates in 2019, whereas Syria [11.3 (95% UI: 8.1, 15.5)] had the lowest rate.

There were substantial differences in the percentage change in the age-standardized incidence rates between 1990 to 2019, with Saudi Arabia [189.8% (95% UI: 79.0, 358.9)], Lebanon [152.9% (95% UI: 76.0, 255.6)] and Oman [131.5% (95% UI: 45.4, 263.8)] having the highest increases, while Kuwait [3.4% (95% UI: − 18.3, 36.7)], and the United Arab Emirates [41.0% (95% UI: − 6.9, 112.1)] had the lowest. For the percentage change in the age-standardized death rate, Egypt [49.0% (95% UI: − 2.0, 106.6)], Yemen [46.9% (95% UI: − 6.7, 159.1)] and Libya [46.7% (95% UI: − 8.3, 126.5)] had the largest increases over this period, while Kuwait [− 26.7% (95% UI: − 41.3, − 4.2)], Bahrain [− 8.1% (95% UI: − 28.5, 16.6)] and Jordon [− 5.1% (95% UI: − 31.0, 33.8)] were the only countries with decreased death rates (Safiri et al., 2022).

The mortality rates are comparable across all low, medium, and high SDI groups (10/100,000 each). The country-specific data revealed that Tunisia and Morocco had the highest mortality rate (18/100,000) among Arab nations, in comparison, Syria (5/100,000), Saudi Arabia and Oman (6/100,000), and Egypt (7/100,000) had the lowest death rate as reported by Hashim et al. (Hashim et al., 2018).

Lebanon

Breast cancer in Lebanon accounts for approximately 38.6%of all female cancers with an incidence of 94.5 per 100,000 females in 2010(Lakkis et al., 2010). The available data from the Lebanese national cancer registry for the years 2005 to 2016 revealed a 56.0% increase in the total number of female BC incidence cases, rising from 1451 cases in 2005 to 2264 cases in 2016 (Lakkis et al., 2024). Moreover, the incidence of breast cancer in Lebanon is higher than in any other Middle–Eastern country, is diagnosed at a younger age than women in Western countries(52vs. 63 years) and is more aggressive and fatal (Badr et al., 2018). Another study collected BC data for the years 2005–2015 from the National Cancer Registry of Lebanon and it found that BC accountedfor 20% of all cancer cases, with an average ASRof 96.5 per 100,000 which was the highest among the Middle-Eastern countries, and among the highest in the world. The ASRshowed a significantly increasing trend with an annual percent change of +4.6 during the study period(Fares et al., 2019).According to the Center for Disease Control statistics, there has been a decline in BC mortality rates by 1.9% per year from 2003 through 2012, reflecting the adoption of national mammographic screening as the gold standard for BC detection (Sbaity et al., 2021).

Qatar
In Qatar, breast cancer continues to be the most commonly diagnosed cancer among women. According to the estimation of the Global Cancer Observatory, breast cancer ranks highest, accounting for 14.7% of new cancer cases and 37.5% of new cancer cases in females recorded in Qatar during 2020(Cancer., 2021).Data from the Qatar National Cancer Registry in 2018 show that Qatar has an ASR of 87.07 per 100,000 of the female population at risk (Al-Shamsi et al., 2023a).

United Arab Emirates
Regarding the UAE, BC ranked first among female cancers between 1998 and 2001, with an ASR ranging between 17.1 and 19.2 per 100,000 (Radwan et al., 2018). In 2017, BC accounted for 36.7% of female cancers, with a crude incidence rate of 28.6 per 100,000 and an age-standardized rate of 42.1 per 100,000. It was also the leading cause of cancer deaths both overall (11.5% of cancer deaths) and in women (24.4%)(Al-Shamsi et al., 2023b). The Annual Report of the UAE National Cancer Registry in 2019 described 883 cases of BC in the UAE, accounting for 20.2% of all malignant cases (Prevention., 2019).

Saudi Arabia
A national-level study from Saudi Arabia breast investigated cancer incidence trends during 1999-2014. It revealed that breast cancer was the first rank malignancy among women, and it accounted for 28.7% of all malignancies reported among females in Saudi Arabia in 2014. The age-standardized incidence rate for the female population has increased over the 15 years from 13.6/100,000 in 1999 to 22.7/100,000 in 2014. Furthermore, a forecasting study of the data suggested a continuous increase in the cases of breast cancer; 4316 cases are projected to be diagnosed in 2030. Furthermore, the incidence of breast cancer has been noted in all age groups, however, the greatest rise was noticed in the 30-44 and 45-59 age groups (Ahmed et al., 2019).Amore recent study from Saudi Arabia documented an alarmingly increasing incidence of BC, and that BC disease is currently the most diagnosed cancer in Saudi Arabia. According to the National Cancer Registry (SCR) data, the age-standardized incidence (ASR) of BC has almost tripled over the last few decades in the country (Basudan, 2022).

Kuwait
Data from the Kuwait Cancer Registry showed that the annual number of new cases remarkably increased from 212 cases in 2012 to 608 cases in 2017.The age-standardized rate (ASR) was 61.0 and 41.3 cases per 100,000 populations for Kuwaiti and non-Kuwaiti females, respectively. Breast cancer among males represents <1% of breast cancer cases. As for Kuwaiti females, BC had the highest incidence; it increased by three-fold over the last 44 years (18.5 to 63.5 cases per 100,000 people per year). The trend of the ASR of Kuwaiti female breast cancer cases throughout 2013–2017 was 64.6 per 100,000, where the crude rate was 47.85 per 100,000, while the trend of non-Kuwaiti female breast cancer cases over the period was 45.2 per 100,000, and the crude rate was 29.06 per 100,000(Al-Shamsi et al., 2023a; Weber et al., 2017).Data from the Kuwait Cancer Registry 2010-2019 Breast cancer is the commonest in Kuwait. Between January 2010 and December 2019((JCCC). 2023), 5,719 breast cancer cases were collected by Kuwait Cancer Registry accounting for about one-fifth of all cancers (21.7%) and 38.9% (5,656/14,538) from cancers among females. The ASR was 63.3 and 43.7 /100,000 person-years for Kuwaiti and non-Kuwaiti females respectively. The mean age at diagnosis (95%CI) was 54.8 (54.3- 55.2) years for Kuwaitis and 49.6 (48.2-50.1) years for non-Kuwaitis. Breast cancer among males represents 1.1% of breast cancer cases.

Jordan
Breast cancer is the most common malignancy in Jordan and the third leading cause of cancer death after lung and colorectal cancers. Although the incidence of breast cancer in Jordan is lower than that in industrialized nations, the number of new cases has been significantly increasing, and women present with breast cancer at a younger age and with more advanced disease than women in Western countries. Jordan is a medium-income country with limited resources and a young population structure. Therefore, breast cancer poses a particularly challenging burden on the country's health care system.In Jordan, cancer is the second leading cause of death after cardiovascular disease, and breast cancer is the third most common cancer death after lung and colorectal cancers(Abdel-Razeq et al., 2020).

Oman
In Oman, the number of new cancer cases increased from 787 in 1996 to 1,632 in 2015 while the age-standardized rate increased by 10.5% from 95 per 100,000 in 1996 to 105 per 100,000 (Diseases, 2019). Oman Cancer Registry shows the highest age-specific incident rate for BC among the Omani female population of 112.2 at the age of 50 (Al-Shamsi et al., 2023a).The cancer ASR in the Omani population increased by 23% (from 95/100,000 in 1996 to

117.2/100,000 in 2019), with the increase being more pronounced in females (48% vs. 7% in males)(Al-Sayegh et al., 2024).

Epidemiological variations by demographic factors

Age Distribution

In 2019, the number of BC incidence cases increased and, reached its peak in the 45–49 age group and then it showed a decrease with advancing age. The incidence rate per 100,000 females increased consistently from the early ages up to the older ages, except in the 70–74 age group, which showed a decrease, before increasing again to its peak in the 80–84 age group, before decreasing again. Furthermore, the total number of deaths attributable to female breast cancer increased by age up to the 50–54 age group, followed by a decrease for the rest of the age groups. However, the death rate increased constantly with age and peaked in the oldest age groupas reported bySafiri et al. (Safiri et al., 2022).

Furthermore,in the age groups younger than (30–59-year-olds), the rates of BC incidence werenot significantly different from the global counterparts. On the contrary, rates among older Arab women (60 and above) were significantly lower(Hashim et al., 2018).

Among the Arab countries, Lebanon has one of the highest rates of breast cancer in younger age groups, with 1.5 cases per 100,000 occurring in the age group 20-24, in 2010. Lebanon has the highest reported worldwide age-specific rates for ages 35-49. Nearly half of the incident breast cancer cases occur in patients younger than 50 years(Lakkis et al., 2010).

The average age of onset of breast cancer in Arab women showed controversies. Najjar et al.(Najjar and Easson, 2010), in 2010, reported that the average age at diagnosis of breast cancer among Arab females was 48 (SD 2.8), and it ranged between 43 and 52 years old, and it seems to be a decade earlier in Arab countries than in western countries. Alternatively, Hashim et al. (Hashim et al., 2018), in 2016, reported that age at onset of BC,based on age-specific incidence rates, in Arab women is comparable with global rates.

Gender Distribution

Female gender is the strongest risk factor for breast cancer. Approximately 99% of breast cancers occur in women. A recent systematic review reported that male BC in the Arab world varies from less than 1% in some countries to 4% in others, and the average age at diagnosis is 59.4 years (El Sett et al., 2022). A study from Saudi Arabia documented that women have a much higher risk of breast cancer than men. Breast cancer in men accounted for 43/7130 (0.6%) of all male malignancies in 2014 (Ahmed et al., 2019).

Socioeconomic Status

Striking inequalities have been observed in the BC burden according to the human development index (HDI) of the Arab countries. The HDI is measured by a country's level of health domain as measured by life expectancy at birth, knowledgeas measured by mean and anticipated years of schooling, and standard of living or quality of life as measured by gross national income(Sabzalizadeh-Ardabili et al., 2019). In countries with a very high HDI, 1 in 12 women will be diagnosed with breast cancer in their lifetime and 1 in 71 women die of it. By contrast, in countries with a low HDI; while only one in 27 women is diagnosed with breast cancer in their lifetime, one in 48 women will die from it(Ghoncheh et al., 2015).Women in lower HDI countries are 50% less likely to be diagnosed with breast cancer than women in high HDI countries, yet they are at a much higher risk of dying of the disease due to late diagnosis and inadequate access to quality treatment (Arnold et al., 2022). Additionally, Safiri et al. (Safiri et al., 2022) reported a positive association between the sociodemographic index of the Arab countries and the disability-adjusted life years rate of female breast cancer.

Risk factors of breast cancer in the Arab region

The World Health Organization (WHO) linked the rising rates of breast cancer to factors such as urbanization, extended life expectancy, and the adoption of Westernized lifestyles (Mutar et al., 2019). Many risk factors have been implicated in the rising BC incidence in the Arab world. Non-modifiable risk factors included female gender, age, genetic traits such as familial or personal breast cancer history, early initiation of menstruation, and late age of menopause onset. In contrast, modifiable risk factors involve several elements, such as physical inactivity, obesity, alcohol intake, advanced age at first birth, fewer children, less breastfeeding,and exposure to hormone therapy (estrogen) (Youn and Han, 2020).

In men, age, genetic mutations (BRCA2 >BCRA 1), elevated estradiol serum levels, obesity, gynecomastia, history of radiation exposure, diabetes, and orchitis/epididymitis are associated with an increased risk for developing breast cancer (El Sett et al., 2022).

Safiri et al. (Safiri et al., 2022)and Azadnajafabad et al. (Azadnajafabad et al., 2023)revealed that high fasting plasma glucose, second-hand smoke, and a diet high in red meat as the largest contributors to BC among females. High fasting plasma glucose had the largest attributable burden in almost all countries. But, in Lebanon, smoking had the largest attributable burden. High body mass index was associated with a higher risk up to the 50–54 age group, however, it resulted in a lower burden for those in older age groups.

A systematic review looking at the association between obesity, physical inactivity, and BC incidence in the six Gulf Cooperation Council countries including Bahrain, Saudi Arabia, Kuwait, Oman, Qatar, and the United Arab Emirates did not report any association between BC and neither obesity nor physical inactivity between 1999 and 2019 (Tanner and Cheung, 2020).

In Saudi Arabia, Alghamdi, et al. (Alghamdi et al., 2013) found that women of ages 30-44 and 45-59 years old were associated with a higher rate of breast cancer incidence as compared to young women of ages < 30 years old. The high rate of breast cancer in women of age groups 30-44 and 45- 59 years could be explained by the widespread usage of hormone therapy to treat symptoms of menopause in these age groups (Suhrke et al., 2012).

A study in Qatar identified a prediction model that included age, age at menarche, age at first birth, family history, and age at menopause as significant predictors of the 5-year and lifetime risks of BC. Overall, the model was found to be an appropriate risk assessment tool in the Gulf region (Bener et al., 2017).

In the Northern Emirates, after adjusting for age, body mass index, and menopause status, women with serum 25-hydroxyvitamin D [25(OH)D] levels lower than 20 ng/mL were found to be at higher risk of breast cancer (odd ratio, 4.63; 95% CI, 2.61-8.23) (Bendardaf et al., 2020).

Discussion:-

The Arabs in general are genetically diverse due to the admixture of the original Arabs with other populations extending from East and South Asia to Europe and Africa. However, Arab populations share common demographical characteristics that encompass broad family size, elevated rates of consanguinity,and rapid population growth (Teebi and Teebi, 2005). Thus, the epidemiology of breast cancer in this region is complex, and multiple risk factors appear to be involved.

Most of the studies reported a consistent increase in BC incidence over the past decades, which was particularly attributed to the adoption of a Westernized lifestyle in the region and the implications of emerging risk factors and other environmental and societal factors, as well as to the increase in screening uptake(Albeshan et al., 2018).

Lifestyle changes of Arab women such as late marriage, delayed first pregnancy, having fewer children, taking oral contraceptives, lack of physical activity/obesity, and smoking contribute to the increased BC burden(Fares et al., 2019). Improved detection and diagnosis in some Arab countries over the past 26 years due to the availability and utilization of BC screening methods such as self-breast examinations and mammography could also be possible factors. Zahedi et al. (Zahedi et al., 2020) also attributed the incremental trend of BC incidence to the improved data availability and quality in cancer registry systems. However, well-structured cancer registries in most of these countries are still lacking.

While the incidence of breast cancer in Arab countries is rising, it is still less than the global average. This might be a true difference or due to the presence of undetected cases. Furthermore, the incidence rate is higher in high-SDI countries as compared with low-SDI countries. The explanation of this observation is not clear. This might be due to better reporting in high SDI countries as well as a higher prevalence of risk factors such as obesity(Al-Shamsi et al., 2023a).

The differences between the countries, in terms of the incidence and burden of breast cancer, could be due to the different levels of exposure to the risk factors in each country, the disparity in the implementation of screening programs and awareness campaigns, and the willingness of people to participate in these programs(Lakkis et al.,

2010).Lesser degrees of awareness and infrequent practices of screening procedures in regional countries like Egypt, Tunisia, and Saudi Arabia have led to the high frequency of advanced breast cancer cases in their population, and lower reported incidence rates (Ibrahim et al., 2008). On the other hand, Lebanon's increased attention regarding awareness campaigns and screening procedures explains the higher incidence rates among its population (Fares et al., 2019). In addition, the variation in cancer registration between different regions and countries is another contributing factor. Some registries might include cancers in situ together with invasive cancers, and this yields different outcomes when comparing countries to one another (Lakkis et al., 2010). Likewise, there are significant social, economic, and political stability differences that have great implications on breast cancer care and outcomes.

Recommendations and implications:-

The increasing trend of breast cancer burden in the Arab world and the complexity of risk factors associated with this malignancy warrant a multidimensional approach. Appropriate policies such as the expansion of screening programs and careful resource management are needed to effectively manage the burden of BC. It is essential to emphasize the importance of breast cancer awareness and early detection through more organized and widespread use of breast cancer screening programs. This will increase the number of early BC diagnoses, reduce mortality, and contribute to a reduction in the future global burden of BC. Improvements in public awareness and lifestyle, better access to affordable treatment, and more palliative care are all important issues that need to be addressed. These changes can only be effectively implemented through the combined efforts of policy makers, healthcare professionals and the general public.

Conclusion:-

Accurate data on breast cancer incidence and mortality have improved but are still lacking in most Arab countries due to the absence of well-structured cancer registries in most of these countries. In addition, mortality registries and disease-specific mortality data are lacking.

The increasing incidence and burden of BC in the Arab region is remarkable, especially considering the limited resources in the developing countries of this region, and the new westernized lifestyle in the region and the impact of emerging risk factors and other environmental and societal factors partly explain these rising trends. In addition, breast cancer screening practices have improved, but the effectiveness of routine screening faces several barriers, including cultural beliefs, social stigma, and lack of knowledge about breast cancer risks.

Although high-quality breast cancer care is available in some comprehensive cancer centers, the social, financial, and political instability of many countries plays a major role in hindering the development of standardized, structured programs capable of providing high-quality care.

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