



Jordan

Population: 11.2 million ⁽²⁰²²⁾
 GDP per capita: USD 4,311 ⁽²⁰²²⁾
 Life expectancy: 74 years ⁽²⁰²¹⁾
 Total health expenditure: 7.3% of GDP ⁽²⁰²¹⁾
 Source: World Bank






Breast cancer

- Breast cancer is the most common cancer type in women (**40%** of all new cancer cases) and responsible for **27%** of all cancer deaths among women in Jordan.
- Breast cancer tends to be diagnosed at an earlier age in the Middle East and Africa (MEA) region than in Western countries, approximately 10 years earlier. In 2022, 85% of cases in Jordan were in women below the age of 65.

9 out of 10 women diagnosed with breast cancer in Jordan are under 65 years.



Health system and governance of breast care

Description	Main recommendations										
<ul style="list-style-type: none"> An estimated 68% of Jordanians are covered by public health care, with overlap due to enrollment in multiple insurance programs. The private sector mainly serves non-Jordanian residents and uninsured Jordanians, with around 72% of Jordanians having some form of health coverage as of 2022 (including private insurances). The lack of insurance is an issue for both certain Jordanians and refugees, though both groups can access MoH services at a subsidized rate. Public hospitals, Royal Medical Services (RMS), university hospitals, and the King Hussein Cancer Center (KHCC) provide cancer care. KHCC, founded in 1997, handles 60-70% of Jordan's cancer cases and is the country's sole specialized cancer center. Efforts to launch a National Cancer Control Plan (NCCP) in Jordan have been delayed due to financial constraints and competing priorities, with the plan still under revision and expected in the coming years. Data fragmentation across various health care facilities and institutions in Jordan hampers the ability to perform comprehensive data analysis on breast cancer care. Breast cancer care often starts with self-examination, leading to clinical assessments. While public health care offers free screening and diagnosis to insured individuals, one-third of the population, being uninsured, faces challenges to access preventive care services. Around half of the economic burden associated with breast cancer comes from indirect costs, which include productivity losses due to working-age patients' inability to work, either temporarily or permanently, or premature death. This burden is especially acute in the MEA region, where breast cancer presents about a decade earlier than in Western countries. The direct medical costs for breast cancer treatment escalate with the stage at diagnosis. For instance, treating late-stage breast cancer in Jordan is more than twice as costly as treating early-stage breast cancer, underscoring the critical value of early detection to reduce the economic burden. 	<ul style="list-style-type: none">  Prioritize the development of a National Cancer Plan.  Emphasize and strengthen the participation of patient organizations in the decision-making processes.  Standardize data collection methods across the health system.  Initiate efforts to ensure that all women can access early detection services without dependence on insurance coverage. 										
<div data-bbox="172 1534 1053 1915"> <p>Direct medical costs of breast cancer per patient-year by stage (Jordan in 2015, USD)</p> <table border="1"> <caption>Direct medical costs of breast cancer per patient-year by stage (Jordan in 2015, USD)</caption> <thead> <tr> <th>Stage</th> <th>Total Cost (USD)</th> </tr> </thead> <tbody> <tr> <td>stage I</td> <td>\$9,431</td> </tr> <tr> <td>stage II</td> <td>\$12,934</td> </tr> <tr> <td>stage III</td> <td>\$16,861</td> </tr> <tr> <td>stage IV</td> <td>\$21,231</td> </tr> </tbody> </table> </div>	Stage	Total Cost (USD)	stage I	\$9,431	stage II	\$12,934	stage III	\$16,861	stage IV	\$21,231	<ul style="list-style-type: none">  Continue prioritizing the downstaging of breast cancer at diagnosis to reduce the economic burden of breast cancer.
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Early detection

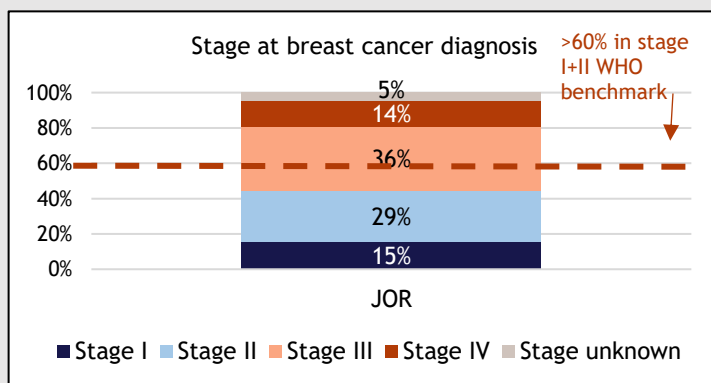
Main challenges

- The fragmented nature of the Jordanian health system poses challenges in patient navigation and clarity in the health care journey.

Empowering Early Detection

The Jordan Breast Cancer Program (JBCP) was initiated in 2007 by the King Hussein Cancer Foundation in collaboration with the Ministry of Health. The JBCP has conducted extensive community outreach and awareness campaigns on the importance of early detection to reduce breast cancer morbidity and mortality and aims to increase early-stage diagnosis. It has provided over 45,000 underprivileged women with free screening services via mobile units and referrals, established screening, and diagnostic centers, and offered training to health care professionals.

- The JBCP promotes early breast cancer detection, recommending **yearly clinical breast examination (CBE) for women aged 25-39** and **yearly mammography plus CBE for those aged 40 and older**.
- Continuous surveys indicate an increase in breast cancer knowledge and the importance of early detection, with growing community interest and reduced taboos around the topic. However, translating this knowledge into practice remains a challenge. For instance, a survey found that while **80%** recognized the importance of CBE, only **34%** stated they had undergone one in the last two years. The primary barrier to undergoing a CBE is the prevalent belief among women that it is unnecessary to do in the absence of symptoms. In addition, health care providers often do not recommend screening to women who appear healthy.
- 54%** of breast cancer cases in Jordan were found at advanced stages (III-IV) in 2015-2016, as seen in the figure below. Although this number suggests that many cases are diagnosed late, local experts have expressed that there has been significant improvement, particularly in the detection of early-stage cases (stages 0 and I). **According to local experts, the proportion of cases diagnosed at late stages is currently around 40%**, although this data has not yet been published.



- In 2015, a genetic counselling clinic was established at the KHCC, catering to high-risk groups and family members. Outside of the KHCC, BRCA testing is not routinely performed.

Main recommendations



Explore patient navigation strategies to create easy-to-follow referral pathways between primary health care centers and hospitals.



Explore including early detection in the essential package of primary health care services provided at MoH health centers.



Start the foundations of a reminder system where patients receive SMS, calls, or emails about their upcoming screenings.



Keep growing the specialized training programs for primary care workers.



Improve access to BRCA1/2 tests and genetic counseling to identify and follow-up women carrying mutations.

Diagnostic services

Main challenges

- The health care sector in Jordan is fragmented, lacking a centralized entity for managing and coordinating health services. **This fragmentation affects the continuity of care, as not all services from screening to diagnosis are equally available or of the same quality everywhere.**
- Diagnostic services are primarily available in major cities like Amman, Irbid, and Zarqa. Women in remote areas face additional challenges, including **travel expenses and longer travel times** to access these services.
- There is a noted **shortage of specialized radiologists and trained female technicians**. Efforts are underway to address this through training programs, but retention in the public sector remains a challenge and migration of radiologists to the private sector is common.
- Typically, most cancer patients at the KHCC and the RMS undergo biomarker testing. In contrast, outside of these institutions, the rate of such testing is significantly lower.

Main recommendations



Continue implementing quality improvement programs, such as the Breast Imaging Accreditation Program by JBCP.



Explore telemedicine to enable additional interpretation of mammograms.

Test	Access to biomarker testing in the RMS
Essential biomarkers (ER, PR, HER2, Ki-67)	Available for all
Gene expression profiles (Oncotype DX, Mamma Print, etc.)	Limited public reimbursement
Newer biomarkers (PIK3CA, BRCA1/2, PD-L1, NTRK, dMMR/MSI-H, TMB-H)	NTRK and TMB-H are not publicly reimbursed while the rest are routinely reimbursed.



Ensure that essential biomarker tests and further molecular diagnostic tests that are prerequisites for administering modern cancer medicines are widely accessible.

Treatment

Main challenges

- **The fragmentation in the health care system leads to a lack of standardized cancer treatment protocols across different institutions.** Each institution tends to adopt its own approach. Notably, there were endeavors in 2017 to align protocols between the KHCC and the MoH, but significant advancements are still pending.
- In the public sector there is often an increased demand for services that leads to long waiting times. The time from diagnosis to treatment initiation typically ranges from **2 weeks to 2 months**, with an average of **23 days**.
- Most cancer patients in Jordan receive their treatment at the KHCC, followed by the Military Oncology Center and Al Bashir Hospital. Plans are underway to improve geographical accessibility to cancer care, including the establishment of a sub-center of the KHCC in Aqaba in the southern region in the third quarter of 2024. **However, patients in the north and underprivileged areas are still required to travel to bigger cities to be treated.**
- The financial burden of cancer treatment for uninsured patients is often alleviated by government assistance, such as the Royal Court exemption, thus reducing the out-of-pocket expenses for individuals.
- **Approximately half of the breast surgeries are performed by specialized surgical oncologists, with the rest are conducted by general surgeons**, sometimes resulting in less optimal outcomes.
- Jordan has a total of **20 radiation therapy machines**. The equipment is located in only a few facilities in Amman, including at the KHCC, the RMS, one public hospital, and private hospitals. The current number of radiation therapy machines falls below international standards, indicating a need for increased investment.
- A major challenge in cancer care in Jordan is the rising cost of new cancer medicines, which increases the financial burden of cancer management. The escalation in prices risks restricting access to lifesaving or life-prolonging treatments. To address this issue, **the KHCC has begun conducting cost-effectiveness analyses as a strategy to negotiate medicine prices and ensure treatments provide value for money.**

Main recommendations



Improve health care quality in the north and other underserved areas.



Continue efforts for the establishment of unified treatment guidelines.



Invest in medical education and training programs for surgical oncologists.



Explore opening smaller regional cancer treatment centers to enhance radiation therapy availability.



Enhance the availability of newer breast cancer medicines beyond the KHCC.