Morocco

Population: 37.4 million (2022)
GDP per capita: USD 3,442 (2022)
Life expectancy: 74 years (2021)
Total health expenditure: 5.7% 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 **26%** of all cancer deaths among women in Morocco.
- 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, 82% of cases in Morocco were in women below the age of 65.

8 out of 10 women diagnosed with breast cancer in Morocco are under 65 years.

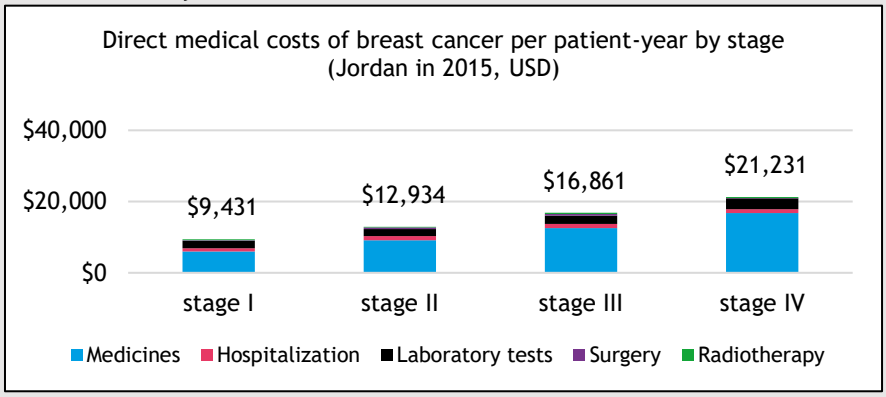
Health system and governance of breast care

Description

- Morocco has undertaken major initiatives toward achieving universal health coverage, with the establishment of the Haute Autorité de la santé (High Health Authority) in 2023. This move aims to ensure a seamless operation of compulsory basic health insurance (AMO).

Morocco's leap towards Universal Health Coverage
As of 2017, the combined coverage of AMO and RAMED (a previous scheme aimed at aiding impoverished and vulnerable households) reached approximately 47% of the population. The National Agency for Health Insurance (ANAM) launched an ambitious initiative spanning from 2020 to 2024, with the goal of expanding basic medical coverage to cover more than 95% of the population by 2025. By September 2022, this strategy had already borne fruit, with the coverage rate under AMO increasing to 80%. With the discontinuation of RAMED by the end of 2022, its beneficiaries were integrated into AMO, thereby granting around 9.4 million Moroccan citizens access to AMO's services by the year's end.

- Many women, previously beneficiaries of RAMED, face difficulties due to their limited access to computers or lack of computer skills, which was required to transition to AMO.
- The first national cancer plan for 2010-2019 led to the creation of specialized breast cancer centers in Casablanca and Rabat. A key goal of the second national cancer plan for 2020-2029 plan is to improve early detection of breast cancer, focusing on: **enhancing access to free, high-quality screenings, improving diagnostic services and monitoring, and promoting public-private partnerships.**
- Diagnostic and treatment centers are available throughout the country, with major cancer care facilities located in Casablanca and Rabat, including the leading institutes CM-VI and INO. Treatment for patients covered by AMO is fully funded without co-payments, while others may use private insurance or receive assistance from the Lalla Salma Foundation.
- **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 countries similar to Morocco, such as Jordan, can be more than twice as costly as treating early-stage breast cancer, underscoring the critical value of early detection to reduce the economic burden.



Main recommendations

Establish physical access points, e.g., at community centers, equipped with computers and trained staff to help women transition from RAMED to AMO.

Emphasize and strengthen the participation of patient organizations in the decision-making processes.

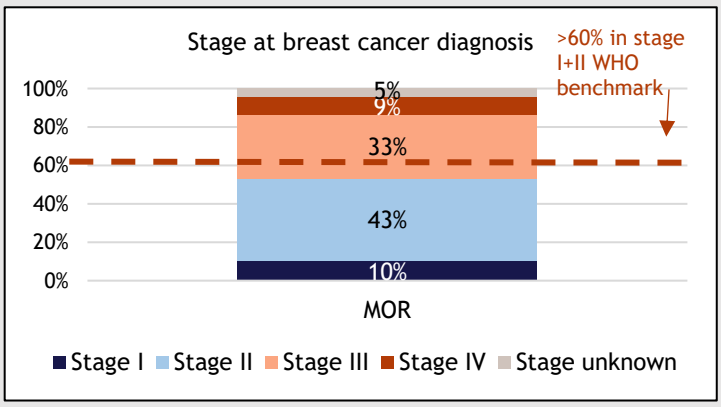
Continue prioritizing the downstaging of breast cancer at diagnosis to reduce the economic burden of breast cancer.

- Women showing symptoms of breast cancer typically visit public health centers for a clinical breast examination (CBE). If abnormalities are found, they are directed to diagnostic centers for further tests, including mammography. A confirmed diagnosis of breast cancer leads to referral to treatment centers. As of 2020, Morocco had **2,126 primary health care centers where all women could receive a CBE.**

Early detection

Main challenges

- The National Breast Cancer Screening Program, targeting women aged **40-69** years, was established in 2010. As part of this program, women within the target population are invited to undergo CBE when they visit primary health care centers. The program lacks a mechanism to systematically identify and invite eligible women, relying on an opportunistic approach where women visiting for unrelated reasons are offered a CBE. The Cancer Screening in Five Continents project by the IARC reports a screening coverage rate of 56%, which is slightly below the annual target of **60%**.
- The annual October breast cancer awareness campaign significantly boosts screening rates, as evidenced by a surge in screenings at primary health centers following the campaign. However, most patients at major oncology centers are symptomatic at diagnosis, indicating late detection. There is a recognized need for continuous breast cancer awareness throughout the year, beyond the October campaign, to improve health literacy, particularly in rural areas where misinformation and lack of education contribute to delays in seeking care.
- Despite general practitioners' awareness of early detection's importance, the actual practice of conducting CBE is low, highlighting a **disconnect between knowledge and practice**. Some studies have also found that there is **lack of breast cancer knowledge among nurses.**
- The formal training for CBE providers at primary health centers is described as non-structured and lacks certification. **Some nurses and midwives perform CBEs without formal training, relying instead on informal training from general practitioners**, highlighting the need for periodic refresher training.
- According to data from women diagnosed in 2008-2017 in INO Rabat (n=1,020) and CM-VI Casablanca (n=635) approximately **42%** of diagnosis were at advanced stage (stage III and IV).



- BRCA genetic tests are not currently reimbursed, but discussions with ANAM are ongoing about potentially offering reimbursement, especially for high-risk individuals like family members of BRCA mutation carriers. However, there is a notable absence of specialized training in genetic counseling for geneticists as of 2016, indicating a gap in the health care system's capacity to offer these critical services.

Main recommendations

- Enhance training for primary care workers to better recognize early breast cancer symptoms, with mandatory continuous medical education.
- Establish a nationally recognized training curriculum for CBE and possibly extend the 4-day training program for CBE proficiency.
- Continue campaigns to raise awareness about screening and tailored them to specific communities.
- Improve access to BRCA1/2 tests and genetic counseling to identify and follow-up women carrying mutations.
- Partner with medical institutions to offer specialized courses in genetic counseling and integrate this service into breast cancer care.

Diagnostic services

Main challenges

- Morocco has **44** mammography units, equating to 18 units per 1 million women aged 50-69, with local experts noting that geographical accessibility to mammography services is generally not a concern due to diagnostic centers in each province, each equipped with mammography and ultrasound machines.
- One of the main issues is the notable shortage of radiologists, with only **402** radiologists across the country in 2019, making the availability of trained radiologists at each diagnostic center difficult.

Main recommendations

- Explore telemammography to enable remote interpretation of mammograms by expert radiologists.

- **A lack of quality assurance in diagnostic activities, highlighted by the absence of accreditation of mammography and pathology units**, compromising the reliability and effectiveness of diagnostic services.
- There is a significant shortage of pathologists in the public sector, which often results in the need to send biopsy samples to private laboratories.
- Essential biomarkers for breast cancer are publicly reimbursed. BRCA testing is not universally performed, but the use of next-generation sequencing (NGS) to identify targetable mutations, including BRCA, is advancing, with NGS testing currently available in some private centers in Rabat and Casablanca and expected to expand to more cities.

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

- While essential biomarkers are reimbursed, there are gaps in their utilization in clinical practice, as evidenced by a study showing incomplete documentation of ER, PR, and HER2 statuses in pathology reports.

Improve access to novel biomarker testing by subsidizing costs.

Address the shortage of pathologists by expanding the number of residency positions and improving their compensation packages.

Ensure quality control in pathology by accrediting laboratories and diagnostic centers with international health bodies.

Evaluate the absence of documented essential biomarker testing in pathology reports.

Treatment

Main challenges

- Significant progress has been made in multidisciplinary medical decision-making in Morocco, with the National Institute of Oncology in Rabat establishing specialized teams, including one for breast cancer. However, **patients in rural, semi-urban, and private sectors face challenges accessing these discussions, impacting optimal treatment planning.**

Pioneering patient care in Africa

Morocco was the first country in the region to have developed local clinical guidelines tailored for its population, with the current availability of the 5th edition and ongoing work on the 6th edition. Also, Morocco stands out in Africa for adopting new cancer treatments, including endocrine therapy, HER2 targeted treatments, dual HER2 blockade, and CDK4/6 inhibitors in metastatic disease.

- Geographical barriers limit access for rural patients to leading oncology centers, with a study showing underrepresentation of rural breast cancer patients at CM-VI and INO despite a significant rural population.
- There is a **shortage of surgical oncologists**, leading to patients often undergoing surgeries by general surgeons.
- As of 2023, there are a total of **56 radiation therapy machines** available in the country. There has been considerable progress in increasing the availability of radiation therapy units over the past decades. However, the current number is still **below the standards set by international recommendations.**
- Some newer medicines have secured reimbursement but still require approval from expert committees. This **bureaucratic step** could potentially delay the timely administration of treatments.
- The process for regulatory approvals for new medicines takes an extended amount of time, which delays the introduction of effective breast cancer medicines, reducing accessibility in both private and public sectors.

Main recommendations

Review challenges in cancer care access for rural populations.

Boost investment in medical education and training to expand the pool of surgical oncologists.

Improve availability of radiation therapy. Explore hypofractionated radiation therapy as a solution to complete radiation therapy courses more quickly and save resources.

Streamline the approval process for cancer medicines that offer substantial health benefits. Also, reevaluate the need for expert committee approvals for reimbursing certain medicines.