



# Türkiye

Population: 84.9 million <sup>(2022)</sup>  
 GDP per capita: USD 10,674 <sup>(2022)</sup>  
 Life expectancy: 76 years <sup>(2021)</sup>  
 Total health expenditure: 4.6% of GDP <sup>(2021)</sup>  
 Source: World Bank




## Breast cancer

- Breast cancer is the most common cancer type in women (**25%** of all new cancer cases) and responsible for **16%** of all cancer deaths among women in Türkiye.
- 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, 75% of cases in Türkiye were in women below the age of 65.

7 out of 10 women diagnosed with breast cancer in Türkiye are under 65 years.



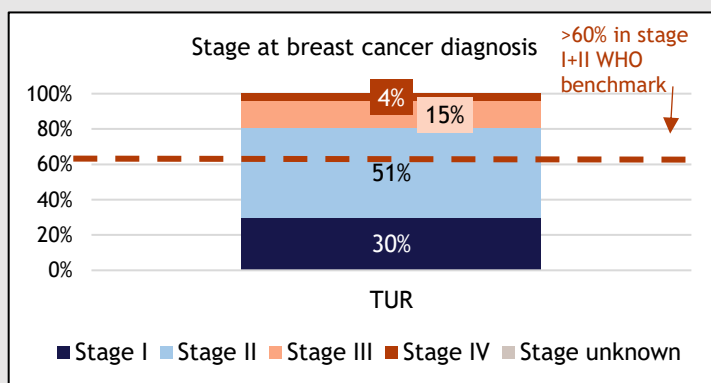
## Health system and governance of breast care

Description	Main recommendations										
<ul style="list-style-type: none"> <li>There is universal public health insurance administered by the Social Security Institution (SSI) which covers 99% of the population. Despite widespread public coverage, an increasing number of people are opting for supplementary private health insurance to cover additional costs, such as treatment in private hospitals. This private insurance typically covers examination costs but not newer medicines that are not yet reimbursed by the SSI.</li> <li>The public health expenditure as percentage of GDP is <b>3.6%</b> which falls below the informal <b>5%</b> WHO target of public health spending.</li> <li><b>Around half of the economic burden associated with breast cancer comes from indirect costs</b>, 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.</li> <li>The direct medical costs for breast cancer treatment escalate with the stage at diagnosis. For instance, <b>treating late-stage breast cancer in similar countries like Jordan and Saudi Arabia can be more than two to five times as expensive as treating cancer detected at an early stage</b>. This highlights the crucial importance of early detection in reducing the economic impact.</li> </ul> <div data-bbox="172 1234 1054 1599"> <p>Direct medical costs of breast cancer per patient-year by stage (Jordan in 2015, USD)</p> <table border="1"> <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> <p>Legend: Medicines (blue), Hospitalization (red), Laboratory tests (black), Surgery (purple), Radiotherapy (green)</p> </div> <ul style="list-style-type: none"> <li>The third National Cancer Control Plan (NCCP), launched in 2021, focuses on enhancing and expanding breast cancer screening as one of its five key initiatives. Specific measures for diagnostics and treatment of breast cancer are not included. <b>The primary measure of success for breast cancer screening is the patient participation rate in the screening program.</b></li> <li>Public health insurance through the SSI provides comprehensive coverage for all cancer services in public health care facilities. Despite this, patients must make co-payments for services at primary, secondary, and tertiary levels of care.</li> <li>Women exhibiting breast cancer symptoms have multiple referral options for screening, including their gynecologist, primary care physician, or breast surgeon, and they also have the choice to directly visit screening centers. Although the national screening program fully covers mammography costs, opportunistic screenings are not covered.</li> </ul>	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"> <li> Prioritize an increase in public spending on health care more aligned with global standards.</li> <li> Emphasize and strengthen the participation of patient organizations in the decision-making processes.</li> <li> Prioritize downstaging of breast cancer at diagnosis to reduce the economic burden of breast cancer.</li> </ul>
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## Early detection

### Main challenges

- Public health centers provide training and guidance to encourage women to conduct monthly self-examinations once they turn 20 years old. Despite reported rates of breast self-examinations in around 80% of women, effectiveness is low, with correct practice under **1%**, according to some studies.
- Younger women, especially those aged 30 to 39, tend to delay seeking medical care due to low symptom awareness and health literacy.
- Patients, particularly in the public sector, experience long waits for clinic appointments.
- The graph below indicates that in 2005-2017 most breast cancer cases were diagnosed in stage II according to data from the National Breast Cancer Registry. This aligns with the goal of the WHO GBCI to have more than 60% of breast cancer cases diagnosed at stages I and II.



### Türkiye's Organized Screening Program for Early Cancer Detection

Since 2004, an organized screening program has been available in Türkiye that offers mammography every two years to women aged 40-69 years. The Cancer Early Diagnosis, Screening, and Training Centers (KETEM), in collaboration with community health centers, execute early diagnosis and screening programs, including the "Mobile Mammography Project". There are a total of 331 cancer screening centers in Türkiye, with 42 of them being mobile.

- The proportion of women aged 50-69 who were screened with mammography in the past 2 years in 2019 was close to **36%** and in 2020 it decreased to **27%**. These numbers are well below the **70%-aim** specified in the Turkish NCCPs from 2009 and 2013.
- The eligible population is supposed to be invited to screening by SMS and phone calls. However, a previous study noticed that **only 22%** of the patients in the target age group admitted receiving invitations.
- According to a survey study, only **39%** of women were aware that mammography screening is recommended to begin at the age of 40.
- Primary care providers often do not proactively recommend preventive mammography.
- Fear of a cancer diagnosis leads many women to delay screening appointments.
- There is a need at first and second level health services for physicians and nurses who can provide genetic counseling and refer patients to the appropriate tertiary centers.
- BRCA mutation tests for healthy women are not covered by the SSI, and women are required to pay for the tests out-of-pocket.

### Main recommendations



Provide primary care practitioners with patient education materials about breast cancer screening to distribute during ordinary appointments.



Continue working on a call-recall system to alert patients about screenings via SMS, calls, or emails, especially targeting women aged 40-49 not previously in the early detection program.



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



Train primary health care professionals in basic genetic counseling.

## Diagnostic services

### Main challenges

In 2021, Türkiye had a notably high availability of mammography and MRI units, with 11.8 and 11.3 machines per million inhabitants, respectively, surpassing countries with similar GDP like Mexico, Costa Rica, and Israel. This indicates Türkiye's significant strides in enhancing its health care infrastructure for breast cancer screening and diagnosis.

### Main recommendations



Improve quality assurance and reporting practices in imaging diagnostics.

- While there is an adequate number of mammography machines there are problems with the quality of mammography reports. For instance:
  - ❖ Many mammography images from private hospitals fail to meet quality standards, mainly due to incorrect positioning.
  - ❖ Many mammography reports lacked essential details, rendering them insufficient in quality.
- The lack of coordination among health care providers impedes timely diagnosis efforts. Patients with public insurance face longer waits for diagnosis, including tests and results.
- A 2020 study revealed that the median time to receive histopathologic results was **12 days**. Key challenges identified include a **lack of quality control, with pathology services lacking necessary accreditation to guarantee high-quality breast cancer screening and diagnostics**. Moreover, a 2021 survey on Turkish **pathologists' job satisfaction** highlighted that only half were content with their lab's physical conditions, and many reported working with inexperienced technicians.
- There are notable regional disparities in the quality of pathology reports, with molecular subtype analysis included in **87%** of reports overall, but only **50%** in the Eastern Anatolia region, indicating significant geographical variations in diagnostic quality.

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.)	Limited reimbursement in the private sector.
Newer biomarkers (PIK3CA, BRCA1/2, PD-L1, NTRK, dMMR/MSI-H, TMB-H)	Only PD-L1 has routine reimbursement in the public sector. PIK3CA, BRCA1/2 and dMMR have limited reimbursement in the private sector.



Improve quality control of pathology units by ensuring that laboratories and diagnostic centers get accredited by international health bodies.



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



Work on feedback mechanisms where pathologists can voice their concerns.



Invest in expanding health care facilities, including diagnostic centers, to reduce waiting times.

## Treatment

### Main challenges

- Long waiting times for oncologist appointments and treatment start in public hospitals extend the care process. There is a shortage of breast surgeons and surgical slots, which delays surgeries. There is also a **shortage of radiation oncologists and technicians**, with current numbers falling below the suggested range. In addition, a lack of comprehensive breast centers within oncology units may lead to fragmented care.
- Geographical disparities are evident, with treatment initiation times varying significantly across regions and remote areas facing access issues. In a study the delay time between clinical appointments and initiation of treatment was **29 days**. However, in the Southeast Anatolia region the waiting time was more than double, **66 days**.

Significant progress has been made in standardizing breast cancer care, with a notable increase in breast-conserving surgery rates from 35% in 2008 to 57% in 2018. The Turkish Federation of Breast Diseases Societies prioritizes ongoing education for health care professionals and requires weekly multidisciplinary tumor boards, achieving an 87% national participation rate.

- There is a **low per capita number of radiation therapy machines** compared to countries at similar economic levels, leading to longer wait times and limited access to advanced treatments. The ratio in Türkiye is 2.87 per 100,000 inhabitants, below the OECD average of 8 per 100,000. In addition, **there are regional disparities in the availability of linacs for radiation therapy, with some areas, especially East and Southeast Anatolia, having much lower ratios than the recommended level**.
- There are significant delays between the regulatory approval of new medicines and their subsequent reimbursement. This situation leads to a scenario where these medicines are accessible only to patients who can afford to pay for them out-of-pocket.
- The SSI rarely reimburses new medicines for early-stage treatment, and only a select few are covered in the metastatic setting. Patients with TNBC or gBRCA+ status receiving treatment in the public sector for metastatic cancer do not have access to immunotherapies or targeted therapies. In contrast, private insurance policies offer broader access to newer medicines, although the extent of coverage varies based on individual insurance plans.

### Main recommendations



Improve geographical accessibility to cancer centers, especially for patients in rural areas.



Expand breast surgery training programs and increase radiology residency slots.



Explore hypofractionated radiation therapy to expedite treatment and save resources, especially for patients in East and Southeast Anatolia.



Ensure consistent use of health technology assessment to evaluate new cancer medicines and reimburse those with high clinical benefit and acceptable cost-effectiveness profile.