

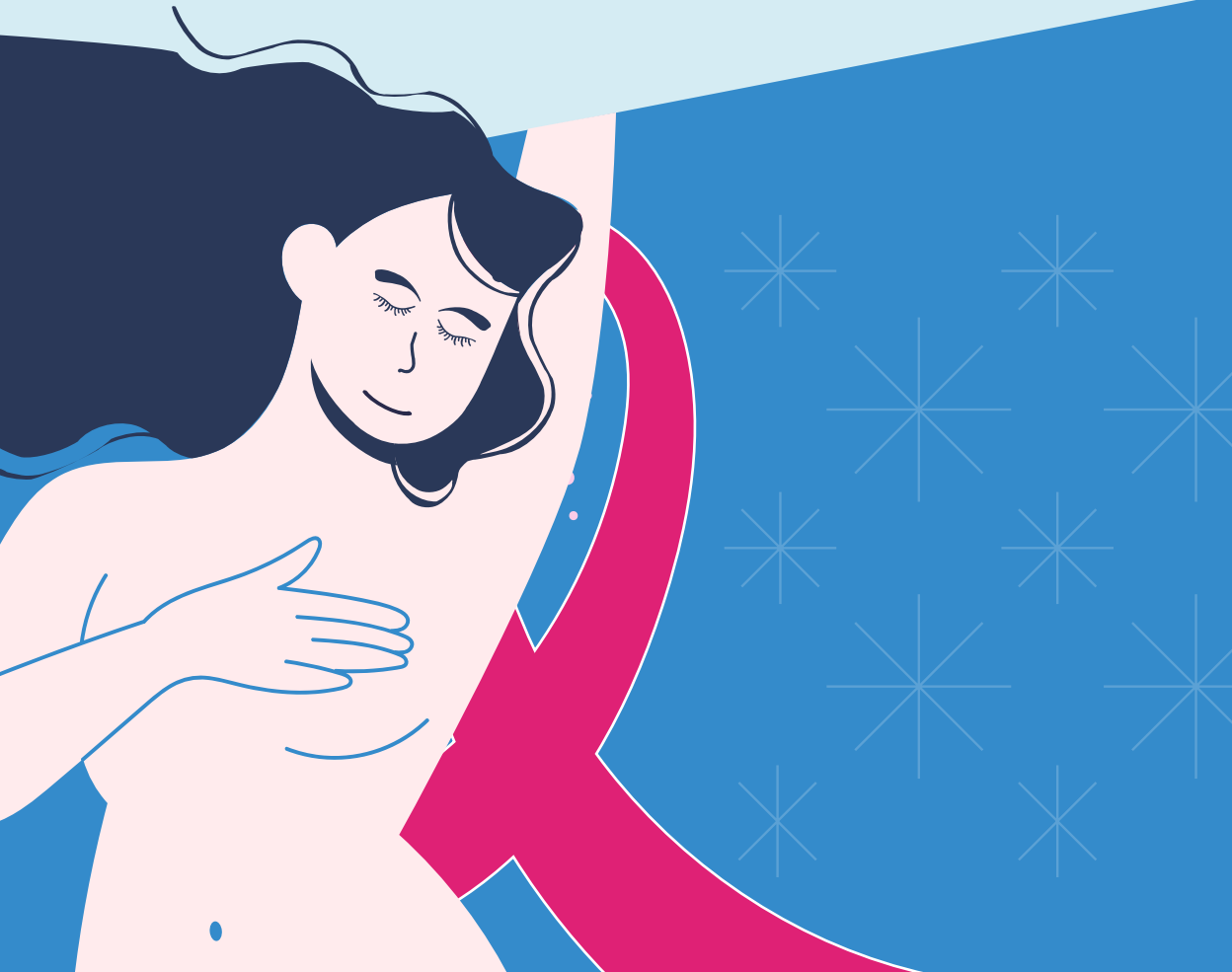


World Health
Organization

Global Breast Cancer Initiative Implementation Framework

Assessing, strengthening and scaling
up services for the early detection and
management of breast cancer

Executive summary





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Global breast cancer initiative implementation framework: assessing, strengthening and scaling-up of services for the early detection and management of breast cancer. Executive summary

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Breast cancer from the global health perspective

Breast cancer has become the most diagnosed form of cancer globally, accounting for nearly 12% of all cancer cases worldwide, and is the leading cause of cancer deaths among women.¹ During 2020, 2.3 million women were diagnosed with breast cancer, with 685 000 deaths globally. At the end of 2020, 7.8 million women who had been diagnosed with breast cancer in the previous five years were still alive, making breast cancer the most prevalent malignancy. Breast cancer is the most common cancer among women in 158 of 183 countries (86%) and the leading cause of female cancer deaths in 107 of 183 countries (58%). It is the leading or second leading cause of female cancer-related deaths in 173 of 183 countries (95%), suggesting that no ministry of health can overlook breast cancer if they intend to address cancer as a significant public health issue in their country.

Global breast-cancer control is a gender-equity and human rights issue. Women play central roles in society; protecting women from breast cancer also protects their families, communities, and the economy as a whole. The burden of avoidable breast-cancer deaths disproportionately affects low- and middle-income countries (LMICs) where over 70% of breast-cancer deaths are premature, occurring in individuals under 70 years of age.

1 Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M et al. Cancer today. Lyon: International Agency for Research on Cancer; 2020 (<https://gco.iarc.fr/today>, accessed 3 January 2023).

The 5-year breast-cancer survival rates exceed 90% in high-income countries (HICs), compared to 66% in India and 40% in South Africa. In Sub-Saharan Africa, where half of all breast-cancer deaths occur in individuals under 50 years of age, 100 deaths from breast cancer at this young age causes 210 children to become maternal orphans.² Thus, the chronic social disruption and financial harm that come with breast cancer will continue to have an impact on LMICs for generations to come.

If current trends remain unchecked, the breast-cancer burden is projected to increase to 2.74 million new cases and 857 000 deaths annually by 2030, and to 3.19 million cases and 1.04 million deaths by 2040.³ The projected increases in breast cancer incidence and mortality will impact all WHO regions (Table ES.1) with a greater relative impact on countries with the most limited resources as measured by the United Nations Human Development Index (HDI) (Table ES.2).

Major improvements in breast-cancer outcomes have been achieved over the past four decades. Between 1990 and 2020, 20 countries successfully achieved reductions in breast-cancer mortality of at least 2% per year for three consecutive years.⁴ This led to an overall 40% reduction in breast-cancer mortality in several HICs during the same period. By contrast, limited progress has been made in LMICs, a striking inequality that also marks an opportunity for improving the lives of women globally. Higher breast-cancer fatality rates in LMICs and among disadvantaged populations result from late-stage diagnosis and limited access to quality treatment, which in several LMICs is compounded by a lack of awareness regarding the benefits of early detection and effective therapies.⁵

There is a clear need to strengthen health systems if they are to be able to respond to the growing burden of breast cancer, using sustainable, cost-effective, and equitable breast-cancer early detection and treatment services, particularly in LMICs. To be successful and sustainable, these efforts must be integrated within a community-health framework that engages primary-care facilities, secondary (district) level hospitals, and tertiary-care centres. These efforts would not only support health promotion, but also empower women to seek and receive health care throughout the life cycle.

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Table ES.1. Estimated increases (%) in new cases of and deaths from breast cancer, WHO regions, 2020–2040³

Projected increases in 2020–2040 (both sexes, all ages)	WHO Regions					
	African Region	Region of the Americas	South-East Asia Region	European Region	Eastern Mediterranean Region	Western Pacific Region
	%					
New breast-cancer cases	91.2	39.1	50.7	12.8	80.5	21.0
Breast-cancer deaths (both sexes, all ages)	93.0	52.3	62.3	25.5	94.2	45.2

Table ES.2. Estimated increases (%) in new cases of and deaths from breast cancer based on country classification, using the United Nations Human Development Index (HDI), 2020–2040³

Projected increases in 2020–2040 (both sexes, all ages)	Low HDI	Medium HDI	High HDI	Very High HDI
		%		
New breast-cancer cases	97.2	59.6	30.8	15.8
Breast-cancer deaths (both sexes, all ages)	98.9	69.2	53.6	30.0

3 Ferlay J, Laversanne M, Ervik M, Lam F, Colombet M, Mery L et al.. Cancer tomorrow. Lyon: International Agency for Research on Cancer; 2020 (<https://gco.iarc.fr/tomorrow>, accessed 3 January 2023).

GBCI: evidence-based framework to reduce breast-cancer mortality

To provide strategic guidance and coordination aimed at reducing global breast-cancer mortality in LMICs, WHO established the Global Breast Cancer Initiative (GBCI) in 2021. The goal of the Initiative is to provide evidence-based recommendations for a phased approach to implementing interventions focused on improving early detection, diagnosis, treatment, and supportive services. To improve existing health-care delivery systems, it is necessary to monitor programmatic inputs, outputs, and outcomes to determine possible gaps in care delivery. Three evidence-based key performance indicators (KPIs) have been proposed to identify system gaps that may exist.



GBCI has established the following **three pillars** towards achieving its primary objective.

Pillar 1

Health promotion for early detection (pre-diagnostic interval)

**KPI: >60% of invasive cancers are
stage I or II at diagnosis**

Pillar 2

Timely breast diagnostics (diagnostic interval)

**KPI: diagnostic evaluation, imaging, tissue
sampling and pathology within 60 days**

Pillar 3

Comprehensive breast-cancer management (treatment interval)

**KPI: >80% undergo multimodality treatment
without abandonment**

Health promotion for early detection

Breast-cancer risk factors include inherited high-risk gene mutations, such as BRCA1 and BRCA2, but these inherited mutations only explain 10–20% of breast cancers at the population level. Hormone-related risk factors associated with reproduction, such as ages at puberty and menopause, pregnancy history and breast-feeding history, have a low impact on breast-cancer risk. However, these factors, like inherited gene mutations, largely cannot be manipulated or controlled to reduce breast-cancer risk. One of the strongest modifiable breast-cancer risk factors is alcohol consumption, which in 2016 contributed to 3 million deaths globally and was responsible for 5.1% of the global burden of disease and injury.^{6,7} Unfortunately, the significant majority of breast cancers cannot be prevented or avoided through risk-factor modification (“primary prevention”). Therefore, countries need to focus on breast-cancer early-detection programmes so that at least 60% of breast cancers are diagnosed and treated early in their progression (stages I or II), when treatment is most effective, best tolerated and least costly.



6 Global status report on alcohol and health 2018. Geneva: World Health Organization. 2019 (<https://apps.who.int/iris/handle/10665/274603>, accessed 10 January 2023).

7 Anderson BO, Berdzuli N, Ilbawi A, Kestel D, Kluge HP, Krech R et al. Health and cancer risks associated with low levels of alcohol consumption. *Lancet Public Health*. 2023;8(1):e6–e7. doi:10.1016/S2468-2667(22)00317-6.



The KPI benchmark of Pillar 1 (at least 60% of invasive breast cancers are stage I or II at diagnosis) is based on data showing that every country that has undergone a sustained decline in breast-cancer mortality rates of 2% per year or more for at least three consecutive years has achieved this level of early detection. Conversely, no country where late-stage breast cancer detection is below this level has shown a sustained decline in breast cancer mortality. These findings urge governments to focus on the development of functional, resource-appropriate early-detection programmes.

Early-detection programmatic strategies will vary based on health-system readiness at the national and/or subnational levels. In settings where late-stage breast-cancer presentation is common, and women present with cancers that are easily felt or seen, **stage shifting** is required to increase the fraction of patients initially diagnosed with early-stage disease. Early detection begins with breast-health awareness through the establishment of **early-diagnosis** programmes. These programmes focus on identifying people with signs and symptoms suggesting malignancy and linking them with cancer diagnostic services. **Breast-cancer screening** (an alternate early-detection programmatic strategy in which women in a target age group without recognized signs or symptoms of breast cancer are invited to undergo testing yearly or every other year) may be an aspirational goal once health-system prerequisites have been established. However, organized, population-based screening is not an appropriate or practical initial step in any setting until the required infrastructure and quality-control measures are in place and fully functional. Thus, all health-care systems require the capacity to diagnose symptomatic breast complaints, such as lumps, thickenings or other clinical detectable abnormalities, regardless of whether they can afford and effectively organize mammographic-screening programmes.

Pillar 2

Timely breast diagnostics

The KPI benchmark of Pillar 2 (breast cancers diagnosed within 60 days (two months) of initial presentation) are based on the concept that the clinical detection of breast cancers early in their course will improve breast-cancer outcomes only if the pathologic diagnosis and initiation of high-quality treatment are timely. Cancers vary in terms of time to progression, depending on their underlying biology. Thus, health systems must be able to distinguish promptly between malignant and benign breast findings.





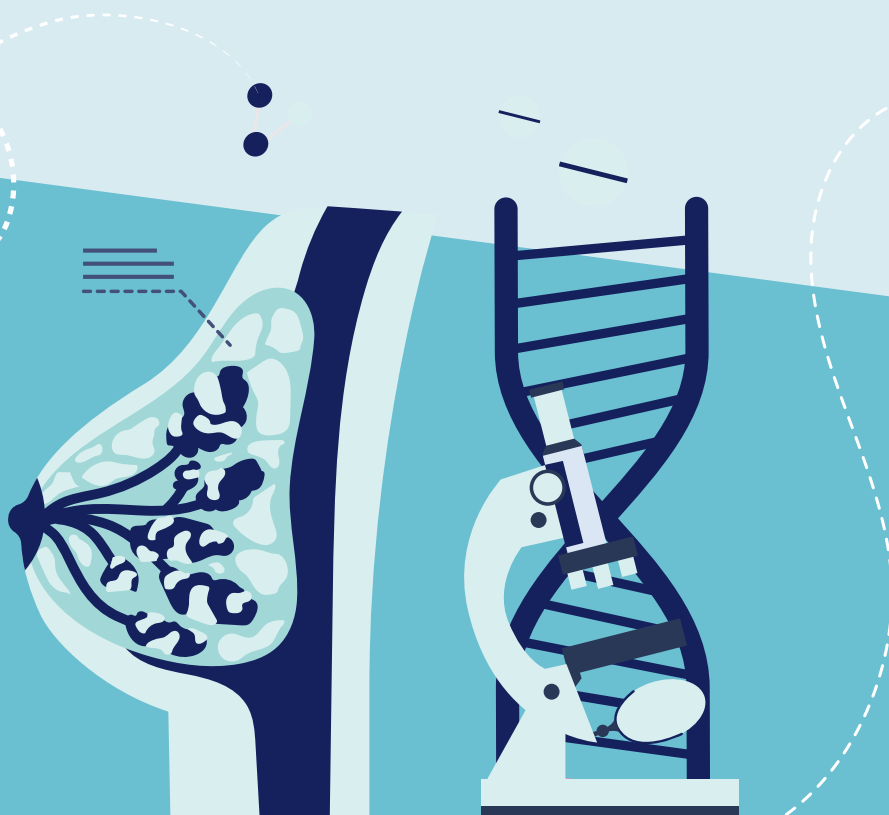
Treatment should start within three months of diagnosis as studies have identified that delay beyond this period leads to lower rates of breast-cancer survival. By securing a definitive diagnosis within two months, the stage is set for initiating treatment within three months.

A **balance between the centralization and decentralization of diagnostic services** is required to achieve prompt breast diagnosis. The achievement of prompt diagnosis within two months of referral requires the coordinated effort of radiologists, pathologists and surgeons and depends on having an **organized patient navigation system** from the primary-care level facility where the patient first presents to the higher-level facility where diagnostic evaluation takes place. A diagnostic centre needs to be available and accessible to conduct a work-up of breast abnormalities. By centralizing diagnostic services, quality is better maintained; however, centralized services are less convenient for patients who need to travel to access them, and this can be a source of diagnostic delay. It is undesirable to locate all diagnostic services at a tertiary-care facility, since the number of patients requiring services would be many times larger than the number of those who are ultimately found to have cancer. **Secondary-level hospitals may be the best location for breast diagnostic services** as they are more likely to be geographically accessible, if they can secure the specialized expertise required to maintain quality.

Pillar 3

Comprehensive breast-cancer management

Access to and the affordability of standard breast-cancer treatment is a major obstacle to improving breast-cancer outcomes. The KPI benchmark of Pillar 3 (>80% of breast-cancer patients complete their recommended treatment) is based on the notion that access to, including the affordability of, standard breast-cancer treatment is a major barrier in most LMICs. A large problem in LMICs is the failure to complete treatment, or to its being delayed to such a degree that its therapeutic benefits are limited.





Patients might not be able to complete the full course of treatment for a variety of reasons, including inadequate access to services and unaffordable out-of-pocket expenses. Incomplete treatment leads to poorer patient outcomes, including recurrence and death. Lack of treatment completion also negatively affects quality of life; patients suffer the side-effects of treatment while it is ongoing but do not have the possibility of receiving the full clinical benefits that it has to offer.

Treatment begins with **multidisciplinary planning** whereby a patient-specific management plan based on **evidence-based, resource-adapted guideline-compliant treatment** is formulated. The term “abandonment” refers to failure to complete the planned treatment in its designated time course for reasons other than medical indications for treatment disruption. Abandonment is often the result of health-system failures that are beyond the patient’s control. **The rates of, and reasons for, abandonment** should be tracked with the aim of addressing system failures that may have contributed to it. The health system is responsible for assessing itself to determine whether the delivery of cancer treatment for individual patients is in fact realistic and feasible. The standardization of **patient-centred metrics** regarding access to treatments – including patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs) – is necessary. In addition to the cancer-directed treatments (surgery, radiotherapy, systemic anti-cancer medications), **supportive services** are essential to patient compliance and effective care delivery during treatment, as well as to recovery following therapy.

Implementation strategies for success

The GBCI Implementation Framework document aims to provide guidance on resource-appropriate strategies for improving the prompt diagnosis of breast cancer at an early-stage and the timely completion of multimodality treatment to improve breast-cancer mortality rates in LMICs. It is anticipated that these measures will stimulate the following.



1

The establishment of national priorities and countrywide engagement to:



Raise political will for improving outcomes in cancer and other noncommunicable diseases (NCDs)



Integrate national strategies in a common stepwise approach to health-system strengthening



Align multiple United Nations and international partners through stakeholder mapping and engagement



Assess current country capacity and workforce utilization and identify opportunities for improvement



Establish coherency within national cancer-control planning (including the development of national action plans)



Generating investments cases for mobilizing domestic and external resources for breast-cancer programmes



Help in prioritizing technology and infrastructure investments for cancer management not limited to breast cancer

2

The implementation of shared work plans on:



Developing national standards for the diagnosis and treatment of cancer and the supportive care of people with the disease



Providing education and training opportunities to balance workforce delegation and ensure task-specific competency



Improving access to essential medicines and health products



Promoting community participation

3

Measurement of the impact and quality of steps taken to:



Strengthen registries and information systems



Develop quality improvement processes and procedures



Develop a monitoring and evaluation framework for breast health as an essential component of women's health care, aimed at supporting stakeholders in monitoring and evaluating implemented strategies for addressing deficits in breast-health care



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