ASSESSMENT OF BARRIERS AND INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES IN LATIN AMERICAN AND CARIBBEAN COUNTRIES

OUTCOMES OF THE CANSCREEN5/CELAC PROJECT

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International Agency for Research on Cancer

World Health Organization

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PAHO Pan American Health Organization World Health Organization Americas

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CanScreen5/CELAC is a collaborative project of

The International Agency for Research on Cancer (IARC)

and

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IARC, 2024

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Foreword

Population-based screening for certain cancer types (notably, breast cancer, cervical cancer, and colorectal cancer) is a very effective strategy to achieve significant reductions in mortality from the targeted cancer types. In the Community of Latin American and Caribbean States (CELAC), enormous efforts have been made by the respective governments to make cancer screening available to the eligible population. To enhance the effectiveness of the screening programmes in achieving their intended objectives, the available services need to be accessible, affordable, and acceptable to the population, and – most importantly – the screening services need to be adequately quality-assured.

This report on the status and performance of cancer screening programmes in CELAC countries and barriers to the implementation of quality-assured cancer screening in the region highlights many of the key drivers for improving the quality and reach of cancer screening in the 27 participating countries. This technical report prepared by the International Agency for Research on Cancer (IARC) through the Cancer Screening in Five Continents (CanScreen5)/CELAC project will be a very important tool for policymakers, health professionals, and other stakeholders in the CELAC region to identify the areas to prioritize for investment to improve the cancer screening programmes in their respective countries.

The CanScreen5/CELAC project, a collaborative initiative of IARC and the Pan American Health Organization/World Health Organization (PAHO/WHO), mapped barriers to the implementation of quality-assured cancer screening from the health system perspective in each of the participating countries using a validated tool. The identified barriers, along with information about the status and organization of cancer screening in each country, are listed in the country fact sheets included in this report. Some of the barriers came up as recurring themes among the countries; these include out-of-pocket expenditure for screening and treatment services, the absence of a robust information system to implement and monitor screening, and no built-in mechanism for quality assurance of the programme. It is important for the countries to focus on these issues at the health system level to ensure access to affordable and acceptable cancer screening services. The CanScreen5/CELAC project also identified interventions that are already in place in the region to overcome many of these barriers, such as universal health coverage, a reminder and recall system, and patient navigation. The countries need to learn these best practices from their neighbours and adapt them to their own local contexts in consultation with various national stakeholders.

I take this opportunity to thank our collaborators PAHO/WHO, the Centre for Global Health Inequalities Research (CHAIN) at the Norwegian University of Science and Technology (NTNU), and the health authorities of all the participating countries for their significant contributions to the project and the contents of this technical document. I am sure that this technical report will be a very useful guidance for all CELAC countries to make cancer screening programmes more impactful and will stimulate similar initiatives across other regions of the globe.

Dr Elisabete Weiderpass
Director, International Agency for Research on Cancer

Executive summary

Introduction

This technical report is based on a project by the International Agency for Research on Cancer (IARC) that evaluated barriers to accessing cancer screening services from the health system perspective in the Community of Latin American and Caribbean States (CELAC). In the CELAC region, the first and third most common causes of cancer deaths among women are breast cancer and cervical cancer, respectively. Colorectal cancer is the third most common cause of cancer deaths among men and the fourth most common cause among women.

IARC's Cancer Screening in Five Continents (CanScreen5) project, which was launched in 2019, aims to collect information about the characteristics and performance of cancer screening programmes around the world in a standardized manner, for effective programme evaluation and quality improvement. The objectives of the CanScreen5/CELAC project are to report on the status and performance of cancer screening programmes in CELAC countries and to assess the barriers to the implementation of quality-assured cancer screening in the region.

Although research has been conducted on barriers to accessing health services in the CELAC region from the population's perspective through household surveys, there is a gap in the understanding of the barriers to cancer screening and compliance with downstream management. This project aimed to assess barriers to the cancer screening pathway from the health system perspective and interventions that are in place to improve cancer screening programmes in the CELAC region.

Methods

IARC, in collaboration with the Pan American Health Organization/World Health Organization (PAHO/WHO), approached the health authorities of 33 countries in CELAC to identify and nominate experts responsible for cancer screening implementation, to participate in a Train the Trainers programme organized by the CanScreen5 project.

During 2020–2023, 27 CELAC countries took part in the Train the Trainers programme: Antigua and Barbuda, Argentina, the Bahamas, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, the Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Uruguay.

The training programme covered the following topics: principles of cancer screening, planning and implementing a cancer screening programme, and assuring the quality of such programmes. The blended model of the Train the Trainers programme included 4 self-paced learning modules in Spanish and English (made publicly available as a self-paced online training programme), 5–7 live online sessions, 3 country-specific assignments, and a 3-day face-to-face workshop.

One of the country-specific assignments included using a standardized tool to collect information about barriers to the cancer screening pathway from the health system perspective, from the identification and invitation of the eligible population to treatment, as well as the development and updating of protocols. The survey participants had to select and prioritize barriers, and they were advised to involve different stakeholders in the screening process, to have a consensus on which barriers were the most relevant.

This report focuses on the 3 most relevant barriers at each step in the cancer screening pathway identified by participants from the 27 countries, as well as the evidence-based interventions that are in place to overcome the barriers to cancer screening.

The barriers were organized in a framework adapted from the Tanahashi conceptual model and consisted of the following dimensions: availability of services, access to services (which covers accessibility and affordability), acceptability of services, user–provider interaction, and effectiveness of services (which includes governance, protocols and guidelines, the information system, and quality assurance) (Fig. 1).

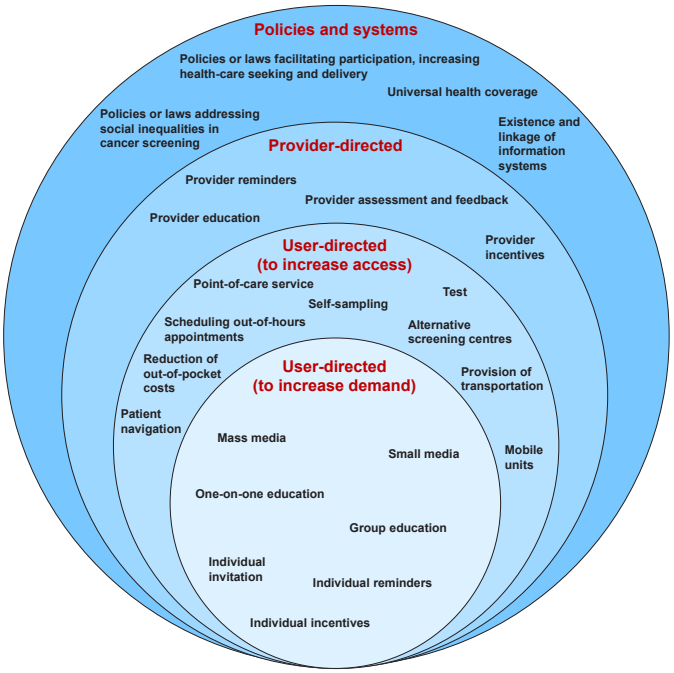
Interventions to overcome the barriers to the cancer screening pathway were classified into four levels: user-directed interventions to increase demand, user-directed interventions to increase access, provider-directed interventions, and policy and system-level interventions (Fig. 2).

This report covers the following information for each of the 27 participating CELAC countries:

- screening protocols for breast cancer, cervical cancer, and colorectal cancer in the country;
- mapping of barriers to the cancer screening pathway in the country; and
- identifying interventions that are already in place to improve cancer screening programmes in the country.

Fig. 1. Graphic representation of the framework to evaluate barriers to the cancer screening pathway. Reproduced from Mosquera et al. (2024) [27].

Fig. 2. Framework of evidence-based interventions to overcome barriers to effective delivery of cancer screening services, by the target of the intervention. Adapted from Baron et al. (2008) [12], copyright 2008, with permission from Elsevier.



Key messages

- To the best of our knowledge, this is the first systematic assessment of barriers to the cancer screening pathway from the health system perspective and existing interventions to improve cancer screening programmes in the CELAC context.

- More than 75% of the countries prioritized issues related to the availability of services, which is the first barrier that the population might face to participate in cancer screening services. This barrier covers issues related to infrastructure, financial resources, and human resources.

- All of the countries in the region prioritized barriers related to the information system, such as the population register not being accurate or complete (70%) or not being updated in a timely manner with changes of contact information (63%).

- All of the countries except one prioritized barriers related to quality assurance; the most prioritized barrier (63%) was insufficient monitoring of individuals diagnosed with precancer or cancer.

- There was diversity among the dimensions of the barriers prioritized as the most relevant by countries, with no clear pattern by region or by the level of organization of the screening programmes. The prioritization will be influenced by the socioeconomic context of each country, the health system organization, and the cancer burden.

- Ideally, the information collected in this project should be complemented with views from the population and from providers. Also, it would be important to analyse whether there are differences across socioeconomic groups.

- Most of the countries reported having universal health coverage (67%). However, women had to pay for diagnostic and treatment services for breast cancer and cervical cancer in about 40% of the countries.

- After identifying potential interventions to overcome barriers, countries will have to prioritize the interventions on the basis of the local context, enablers, the effectiveness of the interventions, the available expertise, the feasibility of implementation, the legal framework, and/or the return on investment. Then, stakeholders will need to be engaged to work on an action plan to overcome each barrier. This plan should include a SMART objective (specific, measurable, actionable, relevant, and time-bound) and a system to monitor and evaluate the interventions.

- Further analysis is required to assess why some countries that implement an intervention to overcome a specific prioritized barrier are not successful.

Abbreviations

CanScreen5	Cancer Screening in Five Continents
CBE	clinical breast examination
CELAC	Community of Latin American and Caribbean States
CHAIN	Centre for Global Health Inequalities Research
FIT	faecal immunochemical test
gFOBT	guaiac faecal occult blood test
HPV	human papillomavirus
IARC	International Agency for Research on Cancer
NTNU	Norwegian University of Science and Technology
PAHO	Pan American Health Organization
REDCap	Research Electronic Data Capture
US	ultrasound
VIA	visual inspection with acetic acid
WHO	World Health Organization

CHAPTER 1.

Background

In the Community of Latin American and Caribbean States (CELAC), the cancer burden is reflected by the age-standardized incidence and mortality rates of 178.4 per 100 000 person-years and 85.7 per 100 000 person-years, respectively, reported in 2020 [1]. Among the cancer types that are amenable to screening, breast cancer and cervical cancer are the first and third most common causes of cancer deaths, respectively, among women in the CELAC region. In 2020, the age-standardized mortality rate for breast cancer was 13.5 per 100 000 person-years and for cervical cancer was 7.6 per 100 000 person-years. Colorectal cancer is the third most common cause of cancer deaths among men (9.4 per 100 000 person-years) and the fourth most common cause among women (7.3 per 100 000 person-years) [1].

Cancer Screening in Five Continents (CanScreen5), a project of the International Agency for Research on Cancer (IARC), was launched in 2019. CanScreen5 aims to collect information about the characteristics and performance of cancer screening programmes around the globe in a standardized manner, for effective programme evaluation and quality improvement [2]. More details about the project are available from the CanScreen5 website [3] and in recent publications [4, 5]. The CanScreen5/CELAC project is supported by an extramural grant from the Norwegian Research Council awarded to the Centre for Global Health Inequalities Research (CHAIN) at the Norwegian University of Science and Technology (NTNU). The objectives of the CanScreen5/CELAC project are to report on the status and performance of cancer screening programmes in CELAC countries and to assess the barriers to the implementation of quality-assured cancer screening in the region.

Of the 27 CELAC countries that participated in this project until 2023, 22 reported having a screening programme for cervical cancer and 16 for breast cancer. Large gaps were identified in the organization and quality of screening services. Only a few of the countries systematically invited the eligible population for screening: 4 countries for cervical cancer screening and 1 country for breast cancer screening. A colorectal cancer screening programme was implemented in only 7 countries [3].

Most of the countries with a cervical cancer or breast cancer screening programme reported collecting information about the screened population and the screening test results: 18 countries (86%) for cervical cancer screening and 12 countries (80%) for breast cancer screening. There was great variability in quality assurance, in terms of having a responsible individual or organization, documented

performance indicators, and a system for tracking screen-positive individuals and cancer cases. Few of the countries were able to provide quantitative data for analysis. For cervical cancer screening programmes, only 2 countries (10%) could provide the aggregate number of women undergoing further assessment, final diagnosis, and staging of the cancers detected. For breast cancer screening programmes, only 1 country (7%) submitted data on further assessment and only 2 countries (13%) could provide final diagnosis and cancer staging information of the women screened. Some of the explanations for the reported data gap were not having an effective information system, the inability to follow up the screen-positive women because of a lack of linkage between databases, insufficient human resources to perform this linkage, and/or a lack of clarity on the target population; this underscores the need for better quality assurance mechanisms within the programmes [5].

A survey was completed by staff members from the management and leadership of the cancer screening programmes. The survey collected information about the policies, protocols, and organization of these programmes and provided valuable insights into some areas of inequality, such as out-of-pocket costs for screening, diagnosis, and treatment limiting access to services.

Although most of the countries reported that cervical cancer or breast cancer screening tests were provided free of charge in the public health system, women had to pay for diagnostic services for breast cancer in 7 countries (47%) and for cervical cancer in 9 countries (43%) and for treatment services for breast cancer in 6 countries (40%) and for cervical cancer in 8 countries (38%) [5]. This economic burden of health care among women with positive screening test results may cause them to forgo diagnosis or treatment because of unaffordable costs [6].

Although research has been conducted on barriers to accessing health services in the CELAC region from the population's perspective through household surveys [7], there is a gap in the understanding of the country-specific barriers to accessing quality-assured cancer screening and ways of improving cancer screening programmes. One of the major objectives of the CanScreen5/CELAC project was to assess barriers to the cancer screening pathway from the health system perspective, and to identify evidence-based interventions that could help individuals to overcome those barriers and thus improve cancer screening programmes in the CELAC region.

This report covers the following information for each of the 27 participating CELAC countries:

- screening protocols for breast cancer, cervical cancer, and colorectal cancer in the country;
- mapping of barriers to the cancer screening pathway in the country; and
- identifying interventions that are already in place to improve cancer screening programmes in the country.

CHAPTER 2.

Methods

2.1 Participating countries

IARC, in collaboration with the Pan American Health Organization/World Health Organization (PAHO/WHO), approached the health authorities of 33 countries in CELAC to identify and nominate experts responsible for cancer screening implementation, to participate in a Train the Trainers programme organized by the CanScreen5 project.

During 2020–2023, 27 CELAC countries took part in the Train the Trainers programme. The training programme covered the following topics: principles of cancer screening, planning and implementing a cancer screening programme, and assuring the quality of such programmes. The blended model of the Train the Trainers programme included 4 self-paced learning modules in Spanish and English (made publicly available as a self-paced online training programme [8]), 5–7 live online sessions, 3 country-specific assignments, and a 3-day face-to-face workshop.

The 27 countries that submitted data were the following: Antigua and Barbuda, Argentina, the Bahamas, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, the Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Uruguay. No information about the remaining 6 countries in CELAC (Barbados, Belize, Bolivia, Haiti, Trinidad and Tobago, and the Bolivarian Republic of Venezuela) was collected for this report.

One of the country-specific assignments included collecting information about barriers to the cancer screening pathway from the health system perspective. A questionnaire survey for staff members from the management and leadership of the cancer screening programmes was developed with Research Electronic Data Capture (REDCap) software hosted at IARC. REDCap is a secure web-based platform that is designed to support data capture for research studies and provides an intuitive interface for validated data capture, audit trails for tracking data manipulation, and export procedures [9, 10].

2.2 Questionnaire about barriers

The questionnaire used to identify barriers to the cancer screening pathway, and the related social inequalities in the CELAC context, was adapted from Priaulx et al. (2018) [11]. Questions were added about interventions that are in place to overcome those barriers. These

interventions were selected on the basis of a framework adapted from that of Baron et al. (2008) [12] (described in Section 2.4). The questionnaire, which was available in Spanish and English, aimed to collect information across the different steps in the cancer screening pathway, from the identification and invitation of the eligible population to treatment, as well as the development and updating of protocols (Fig. 3).

The specific questions about barriers included several options (Annex 1), which the survey participants had to select from and prioritize (up to the 5 most relevant). The participants were advised to involve different stakeholders in the screening process, to have a consensus on which barriers were the most relevant. However, in some countries this exercise was carried out by a small group, so the results may not be fully representative of the situation in the countries but may rather reflect the perspective of the health authorities. When the most relevant barriers to screening were different for each cancer site, the participants completed a form for each cancer site. The forms received from the first 4 countries in each language (Spanish and English) were used to pre-test the questionnaire, and some questions were reworded to improve understanding.

This report focuses on the 3 most relevant barriers at each step in the cancer screening pathway identified by participants from the 27 countries, as well as the evidence-based interventions that are in place to overcome the barriers to cancer screening. For those countries that submitted a different form about the barriers for each cancer site (Antigua and Barbuda, Argentina, and Guatemala), only one has been included: that for cervical cancer screening. The reported interventions refer to any of the 3 cancer sites. All of the questions about barriers included an "Other" option, but this was not considered in the classification of dimensions of barriers.

2.3 Framework to assess barriers across the cancer screening pathway

The barriers listed at each step were organized in a framework adapted from the Tanahashi conceptual model [13], in which the effectiveness of health services is a cross-cutting feature that underpins several of the dimensions described below (Fig. 4).

All of these dimensions are applicable to screening and to further management of screen-detected precancers and cancers.

Availability of services

Non-availability of resources (infrastructure, financial resources, and/or human resources) limits the maximum capacity of the cancer screening-related services, and this consequently limits the services available to the eligible population.

Access to services

Even when services are available, if they are not reachable by the target population this can create an access barrier. One can distinguish the following dimensions of the barriers that may prevent services from reaching the target population in a timely manner:

- **accessibility**, which refers to whether the service is reachable by the target population in terms of distance, scheduling, and language, among others; and
- **affordability,** which is related to the population being able to afford the service.

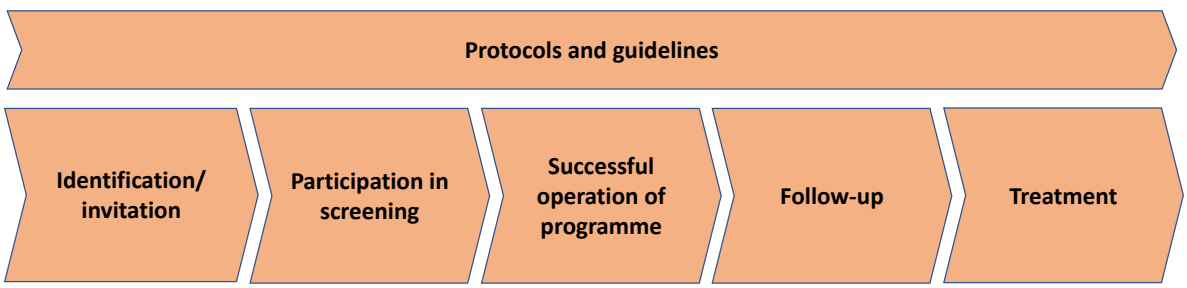
Acceptability of services

When the screening-related services are accessible, they still need to be acceptable to the population; otherwise, people may not come for screening and may even seek alternative care. These barriers relate to the perception of the care and the tests, the quality of care, and the provider. If the service is accepted by the potential user, this is another step forward in the process of service provision.

User–provider interaction

When services are available, accessible, affordable, and acceptable, the next potential barriers are associated with establishing contact between the service provider and the

Fig. 3. Steps of the cancer screening pathway covered in the questionnaire about barriers.



user. These barriers relate to lack of awareness of available screening services or insufficient understanding of the value of the service. Therefore, at this step improving awareness and health literacy are essential to ensure that the services are used.

Effectiveness of services

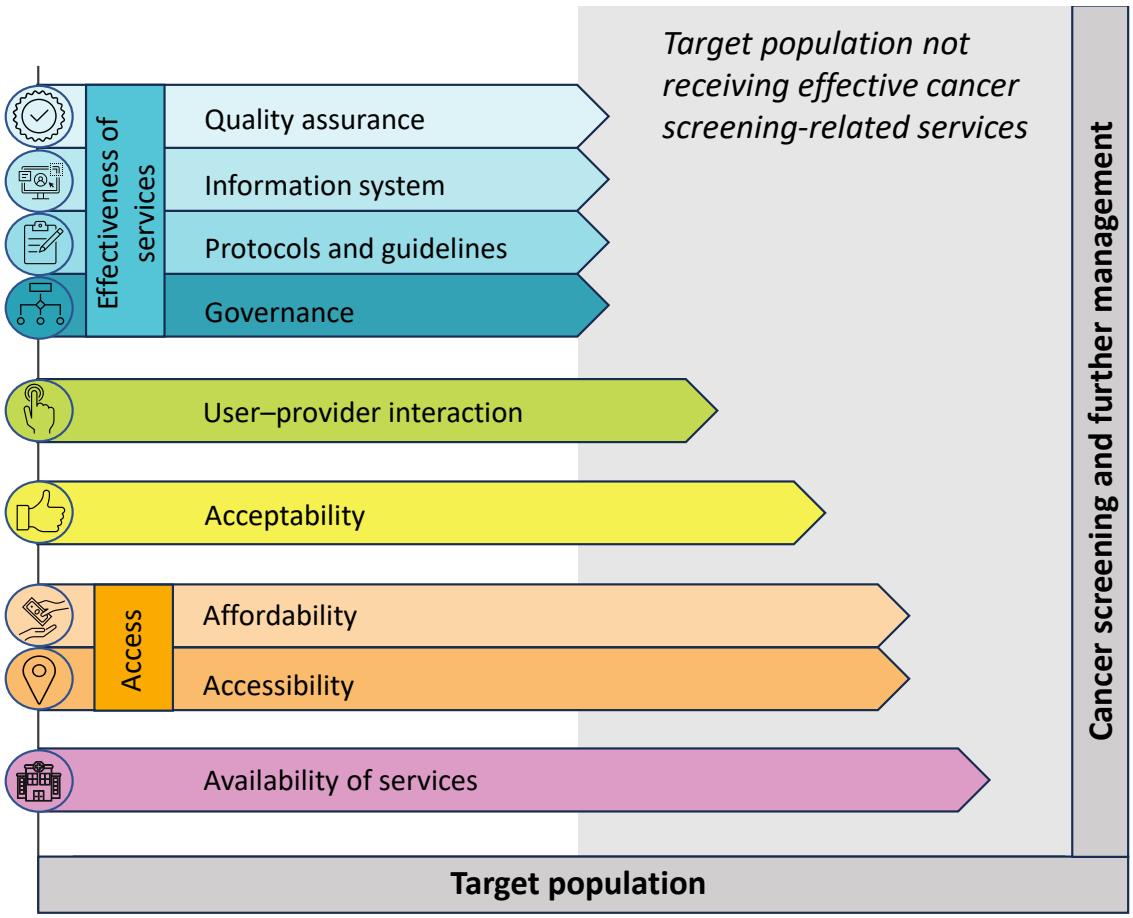
After the user has contacted and used the services, the next potential barriers to the provision of services are associated with the effectiveness of the services in achieving the desired objectives. The barriers to the provision of effective services were divided into the following dimensions.

- **Governance:** This dimension includes health system governance, organizational support, coordination of delivery of health services, and appropriate administrative processes to implement what has been developed in the dimension of protocols and guidelines, which are essential for effective services.
- **Protocols and guidelines:** This dimension encompasses the generation and dissemination of guidelines, protocols, training, and any other processes pertaining to capacity-building, which includes preparing materials.
- **Information system:** This dimension refers to the flow of information, data processing, information tracking, information technology systems, and so on.
- **Quality assurance:** This dimension refers to data control, patient monitoring, and evaluation of the screening programme.

2.4 Interventions to overcome barriers to the cancer screening pathway

Several interventions have been proposed in the literature to increase participation in breast cancer, cervical cancer, and colorectal cancer screening programmes. The classification of Baron et al. (2008) [12] was adapted by adding interventions identified from systematic reviews

Fig. 4. Framework to evaluate barriers to the cancer screening pathway. Adapted from Tanahashi [13], and adapted from [26], copyright 1978.



on interventions to increase access and on provider education, further searches on specific interventions, hand-searching, and inputs from experts across continents and disciplines. Interventions to overcome the barriers to cancer screening were classified into the following four levels (Fig. 5).

User-directed interventions to increase demand

At this level, interventions focus on increasing awareness among the eligible population of the relevance of cancer screening. This level includes mainly educational interventions, through mass media and small media, group education, and one-on-one education; it also covers individual invitation, reminders, and incentives [12, 14, 15].

User-directed interventions to increase access

This level covers reduction of out-of-pocket costs, and interventions that address structural barriers. For example, interventions to mitigate distance as a problem include self-collection of samples at home for screening, mobile screening units, alternative screening centres closer to the community, and provision of transportation [16–19].

Provider-directed interventions

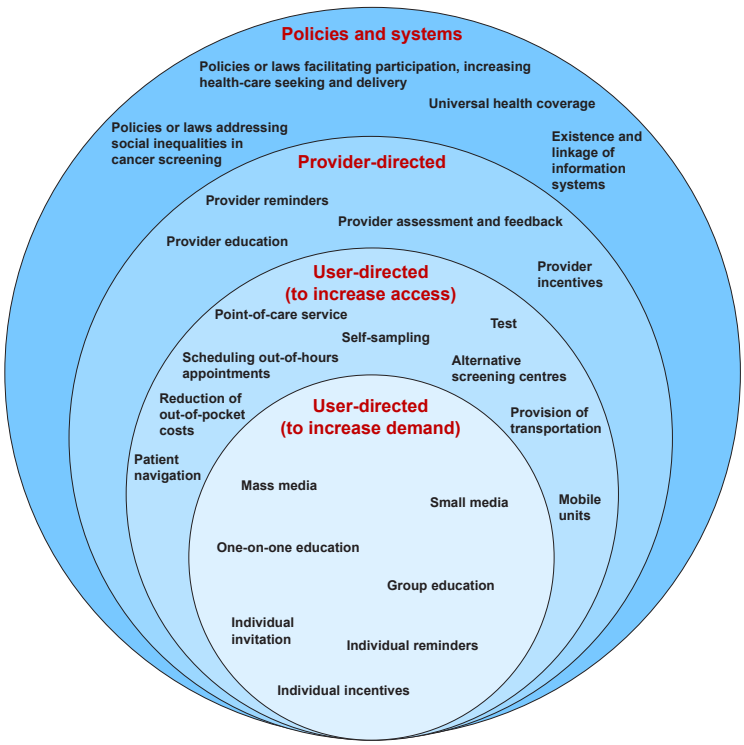
Interventions included at this level are provider education, assessment and feedback, reminders, and incentives [20–22].

Policy and system-level interventions

This refers to any intervention at a macro level that enables participation in screening. This level covers policies addressing social inequalities in cancer screening, facilitating health-care seeking and delivery, universal health coverage, and the existence and linkage of health information systems [23, 24].

The questionnaire about barriers included questions about interventions at the four levels (user-directed interventions to increase demand, user-directed interventions to increase access, provider-directed interventions, and policy and system-level interventions; Annex 1). Information about invitation to cancer screening was extracted from the countries' validated CanScreen5 qualitative data collection forms [3].

Fig. 5. Framework of evidence-based interventions to overcome barriers to effective delivery of cancer screening services, by the target of the intervention. Adapted from Baron et al. (2008) [12], copyright 2008, with permission from Elsevier.



CHAPTER 3.

Key outcomes of the CanScreen5/CELAC project

This chapter presents the outcomes on barriers to cancer screening and the interventions that are currently in place. It first provides aggregate data on barriers to the cancer screening pathway, followed by aggregate data on existing interventions to improve cancer screening programmes, and then the key messages.

3.1 Prioritized barriers to the cancer screening pathway

There was great variability among the barriers selected by countries.

For ***protocols and guidelines***, including building capacity to deliver services in accordance with the protocols, the prioritized barriers were related to inadequate governance for assessing the training needs of the screening providers, screening providers not following the recommended protocols, and insufficient monitoring of compliance with such recommendations. The least selected barrier was no regular updating of screening guidelines.

At the step of ***identification of the eligible population and invitation to screening***, most of the countries selected an inadequate population register as a prioritized barrier. The population register was not complete, was not updated in a timely manner, or was missing some of the eligible population, such as immigrants and individuals who are homeless. The least selected barriers were data protection regulations preventing access to contact information of the eligible population, and eligibility criteria varying from a defined protocol according to location.

The barriers prioritized as the most relevant to increasing ***screening participation*** were not having an adequate system for monitoring screening participation, inadequate feedback to health professionals about screening participation, difficulties in scheduling screening appointments, and health professionals not promoting screening. Many barriers at this step were selected by only 1 or 2 countries, such as a lack of trust in the health-care system, the screening centre being far away, negative attitudes of health professionals, and no financial coverage of the direct costs of screening (cost of appointment, cost of collection of test, cost of test analysis, etc.).

With respect to the ***successful operation of the programme***, countries selected the following prioritized barriers: insufficient infrastructure and/or financial resources for screening, inadequate monitoring and evaluation, and limited public promotion of the screening programme. The least selected barriers at this step of the cancer screening pathway were related to opportunistic

screening: the outcomes of opportunistic screening not being shared, and the additional financial burden on the health-care system from such out-of-programme activities.

For ***follow-up***, a large proportion of the countries selected the following prioritized barriers: insufficient monitoring of non-responders to follow-up; difficulties in sharing information because of inadequate linkage between the screening registry, primary care, and patients for the screening organization; and not having a system in place to ensure appropriate management of screen-positive individuals. Several barriers at this step were selected by only 1 country, such as poor adherence by providers to the officially adopted guidelines on follow-up management, people distrusting the health-care system, no financial coverage of the direct costs of the diagnostic workup (cost of appointment, cost of procedure, cost of test analysis, etc.), and unaffordable indirect costs of diagnosis (cost of travel, loss of a day's wages, cost related to care of dependents, etc.).

For barriers to ***treatment***, most of the countries selected the following prioritized barriers: delays in initiation of treatment, insufficient monitoring of individuals diagnosed with precancer or cancer, and a lack of systematic monitoring and evaluation of treatment outcomes. The least selected barriers were the treatment centre being far away, the unavailability of effective treatment to all people who require it, the personal beliefs of patients preventing them from undergoing treatment, no financial coverage of the direct costs of treatment, and unaffordable indirect costs of treatment.

Table 1 shows the dimensions of barriers and the most prioritized barriers within each dimension by representatives of the health authorities of 27 countries in CELAC.

Table 1. Dimensions of barriers and most prioritized barriers within each dimension by representatives of the health authorities of 27 countries in the Community of Latin American and Caribbean States (CELAC)

Dimension of barrier and most prioritized barriers	Number of countries (%)
Information system	*27 (100)*
Population register is not accurate or complete	19 (70)
Population register is not updated in a timely manner with changes of contact information	17 (63)
Inadequate system for monitoring screening participation	12 (44)
Quality assurance	*26 (96)*
Insufficient monitoring of individuals diagnosed with precancer or cancer	17 (63)
Insufficient monitoring and evaluation of non-responders to follow-up	11 (41)
Monitoring and evaluation are inadequate and insufficient	10 (37)
No systematic monitoring or evaluation of treatment outcomes	10 (37)
Protocols and guidelines	*24 (89)*
Insufficient number of professionals trained on the screening protocols and guidelines	13 (48)
Screening guidelines are not regularly developed or adopted	7 (26)
Screening protocols and guidelines are not regularly updated	6 (22)
Governance	*23 (85)*
No well-defined organizing system in place to ensure appropriate management of screen-positive individuals (fail-safe mechanism)	14 (52)
Inadequate planning and/or logistics to deliver screening services	8 (30)
Complex and/or unclear administrative procedures delay amendment of the screening protocol	8 (30)
Availability	*21 (78)*
Insufficient infrastructure and/or financial resources for screening	14 (52)
Insufficient trained human resources for screening	11 (41)
Insufficient infrastructure and/or financial resources for further assessment	10 (37)
Accessibility	*21 (78)*
Delays in initiation of treatment not related to availability of health services	15 (56)
System-level delays for diagnosis after screening	6 (22)
Appointments for screening make it difficult for people to attend	4 (15)
Expected barriers (not financial) in access to cancer diagnosis in case of a positive screening result	4 (15)
Expected barriers (not financial) in access to cancer treatment in case of a cancer diagnosis	4 (15)
The treatment centre is far	4 (15)
User–provider interaction	*16 (59)*
Health professionals not disseminating information about or promoting screening	9 (33)
Limited public promotion of the screening programme	7 (26)
Current system does not address personal beliefs about follow-up (e.g. fatalism)	1 (4)
Acceptability	*13 (48)*
Limited health literacy, or beliefs and values that lead to non-participation in screening	6 (22)
Health professionals' attitudes and established patterns of practice prevent screening	5 (19)
Patients do not undergo treatment because of a variety of personal beliefs	4 (15)
Affordability	*11 (41)*
Unaffordable indirect costs of treatment	6 (22)
No financial coverage (total or partial) of direct costs of screening	4 (15)
No financial coverage (total or partial) of direct costs of treatment	4 (15)

Source: Mosquera et al. (2024) [27].

3.2 Existing interventions to improve cancer screening programmes

All of the countries reported having implemented some forms of interventions to improve cancer screening programmes (Table 2). The definitions of interventions are included in Annex 2.

Most of the countries had some intervention in place to ***increase demand*** for screening among the eligible population. The most frequently reported interventions were group education (*n* = 23; 85%), mass media campaigns (*n* = 22; 82%), and small media campaigns (*n* = 22; 82%). Few of the countries had a system in place for inviting individuals (*n* = 4; 15%), which is done through home visits, or for providing individual incentives (*n* = 3; 11%).

The most frequently reported interventions to ***increase access*** to screening were mobile units (*n* = 16; 59%), followed by the provision of alternative screening centres (*n* = 13; 48%), scheduling out-of-hours appointments for screening (*n* = 8; 30%), and patient navigation (*n* = 6; 22%). Only 2 countries (7%) addressed out-of-pocket costs.

Patient navigation is a cross-cutting intervention that can help overcome barriers at different steps of the cancer screening pathway. Navigation to increase participation in cancer screening was reported to be implemented in 6 countries. However, 3 of those countries reported specific barriers that could be addressed by patient navigators: for example, no follow-up of non-responders to the initial screening invitation, people experiencing practical issues (care of dependents, disability, language, etc.) that lead to non-participation in screening, and health professionals not sharing information about or promoting screening.

At the ***provider level***, 19 countries (70%) reported conducting training of health professionals on cancer screening delivery. A lower proportion of the countries (*n* = 11; 41%) reported organizing training in laboratory sciences, pathology, and radiology. The least reported intervention, which was implemented in only 4 countries (15%), was having provider reminders and recall. Of the 19 countries that reported training health professionals, 5 ranked some type of barrier related to provider education as a priority: insufficient number of professionals trained on the screening protocols and guidelines, screening providers not following protocols and procedures, and health professionals not sharing information about or promoting screening.

At the ***policy and system level***, most of the countries (*n* = 18; 67%) reported having universal health coverage, which helps to overcome many of the barriers. As an intervention to promote screening participation, giving a day off work to attend screening was in place in 6 countries (22%).

Table 2. Interventions to improve cancer screening programmes by type of intervention and number of countries, from 27 countries in the Community of Latin American and Caribbean States (CELAC)

Type of intervention	Number of countries (%)
User-directed interventions to increase demand	
Group education	23 (85)
Mass media campaigns (television, radio, billboards)	22 (82)
Small media campaigns (brochures or leaflets, newsletters, flip charts, videos, social media)	22 (82)
One-on-one education	21 (78)
Individual reminders and recall	6 (22)
Individual invitation	4 (15)
Individual incentives	3 (11)
User-directed interventions to increase access	
Mobile units	16 (59)
Alternative screening centres	13 (48)
Scheduling out-of-hours appointments	8 (30)
Patient navigation	6 (22)
Provision of transportation	4 (15)
Self-sampling tests for cervical cancer	3 (11)
Reduction of out-of-pocket costs	2 (7)
Provider-directed interventions	
Training on screening delivery	19 (70)
Training in laboratories	11 (41)
Training in pathology	11 (41)
Training in radiology	11 (41)
Provider assessment and feedback	11 (41)
Provider incentives	6 (22)
Provider reminders and recall	4 (15)
Policy and system-level interventions	
Universal health coverage	18 (67)
Day off work to attend screening	6 (22)

Source: Mosquera et al. (2024) [27].

Key messages

- To the best of our knowledge, this is the first systematic assessment of barriers to the cancer screening pathway from the health system perspective and existing interventions to improve cancer screening programmes in the CELAC context.

- More than 75% of the countries prioritized issues related to the availability of services, which is the first barrier that the population might face to participate in cancer screening services. This barrier covers issues related to infrastructure, financial resources, and human resources.

- All of the countries in the region prioritized barriers related to the information system, such as the population register not being accurate or complete (70%) or not being updated in a timely manner with changes of contact information (63%).

- All of the countries except one prioritized barriers related to quality assurance; the most prioritized barrier (63%) was insufficient monitoring of individuals diagnosed with precancer or cancer.

- There was diversity among the dimensions of the barriers prioritized as the most relevant by countries, with no clear pattern by region or by the level of organization of the screening programmes. The prioritization will be influenced by the socioeconomic context of each country, the health system organization, and the cancer burden.

- Ideally, the information collected in this project should be complemented with views from the population and from providers. Also, it would be important to analyse whether there are differences across socioeconomic groups.

- Most of the countries reported having universal health coverage (67%). However, women had to pay for diagnostic and treatment services for breast cancer and cervical cancer in about 40% of the countries.

- After identifying potential interventions to overcome barriers, countries will have to prioritize the interventions on the basis of the local context, enablers, the effectiveness of the interventions, the available expertise, the feasibility of implementation, the legal framework, and/or the return on investment. Then, stakeholders will need to be engaged to work on an action plan to overcome each barrier. This plan should include a SMART objective (specific, measurable, actionable, relevant, and time-bound) and a system to monitor and evaluate the interventions.

- Further analysis is required to assess why some countries that implement an intervention to overcome a specific prioritized barrier are not successful.

CHAPTER 4.

Prioritized barriers to the cancer screening pathway and interventions to improve cancer screening programmes by country

This chapter presents a fact sheet for each country. The fact sheets include: information about the screening protocol and whether screening, diagnostic, and treatment services were provided free of charge [3] for breast cancer, cervical cancer, and colorectal cancer; the prioritized barriers to the cancer screening pathway; and existing interventions to improve cancer screening programmes. Fig. 6 represents the dimensions of prioritized barriers to the cancer screening pathway; the size of each dimension shows the importance of that dimension as a barrier.

Annex 3 provides contextual information for each country about the cancer burden, the health system, and the response. This information was obtained from assignments submitted by countries during the Train the Trainers programme and other sources [1, 25].

Fig. 6. Graphic representation of the framework to evaluate barriers to the cancer screening pathway. Reproduced from Mosquera et al. (2024) [27].

ANTIGUA AND BARBUDA

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

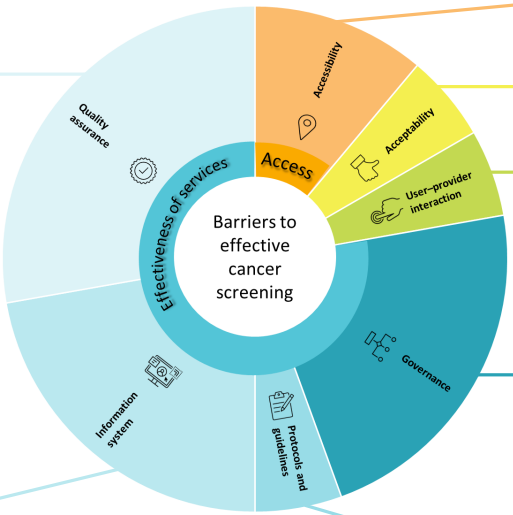
Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	–	–	–
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for breast, cervical, and colorectal cancer as of 2021.

BARRIERS TO CERVICAL CANCER SCREENING

- Screening providers not following protocols and procedures
- Inadequate and insufficient monitoring and evaluation, including of non-responders to follow-up, of individuals diagnosed with precancer or cancer, and of treatment outcomes



- Delays for diagnosis and initiation of treatment
- Limited health literacy, or beliefs and values that lead to non-participation in screening
- Limited public promotion of the screening programme
- Inadequate national governance structure for assessing training needs
- Inadequate responsiveness by management to problems found in monitoring participation and giving feedback to health professionals
- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Issues with establishing protocols, processes, and legal frameworks
- Guidelines not regularly developed or adopted

- Population register not accurate or complete, not updated in a timely manner with changes of contact information, and missing some of the eligible population
- Inadequate system for monitoring screening participation

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials and social media • Group education • One-on-one education • Individual reminders • Individual incentives	• Reduction of out-of-pocket costs	• Training	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

ARGENTINA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

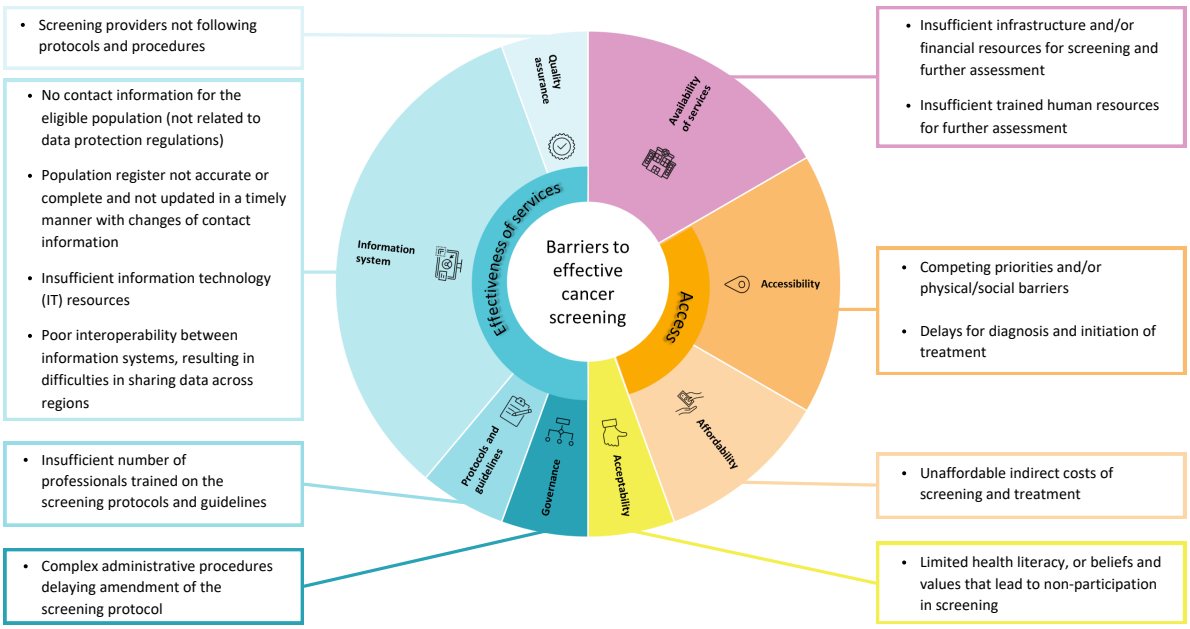
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	50–69 years	24 months
Cervical	Cytology HPV	25–64 years 30–64 years	36 months 60 months
Colorectal	FIT	50–75 years	24 months

For more information click here or scan

Screening services for breast, cervical, and colorectal cancer and diagnostic and treatment services for breast and cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials and social media • Group education	• Alternative screening centres • Mobile units • Self-sampling • Patient navigation • Scheduling out-of-hours appointments	• Provider reminders and recall • Assessment and feedback to providers • Provider incentives • Training	• Universal health coverage • Day off work to attend screening

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

BAHAMAS

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

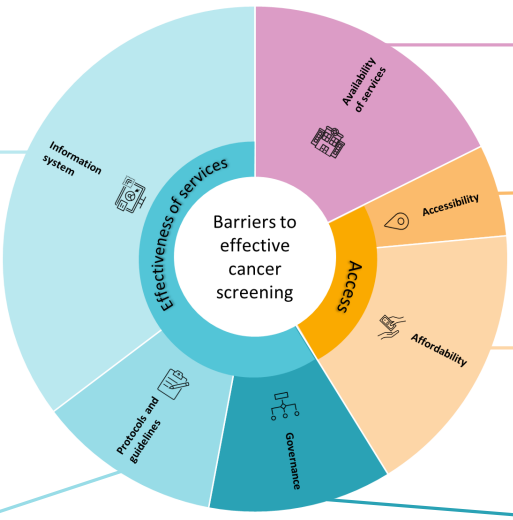
Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	Cytology Cytology HPV + Cytology	21–65 years 21–29 years 30–65 years	36 months 36 months 60 months
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for breast and colorectal cancer as of 2022.
Screening services for cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Population register not accurate or complete, not updated in a timely manner with changes of contact information, and missing some of the eligible population
- Inadequate information technology (IT) solution for running screening (software/application), including for monitoring screening participation
- Poor communication/difficulties sharing data due to inadequate linkage between screening organizations, primary care, and patients



- Insufficient infrastructure and/or financial resources for screening
- Insufficient trained human resources for screening and further assessment

- Delays for initiation of treatment

- No financial coverage of direct costs of screening and treatment
- Unaffordable indirect costs of treatment

- Guidelines not regularly developed or adopted
- Insufficient number of professionals trained on the screening protocols and guidelines

- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Significant amount of opportunistic testing

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials	• Reduction of out-of-pocket costs • Provision of transportation • Scheduling out-of-hours appointments	• None reported	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

BRAZIL

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

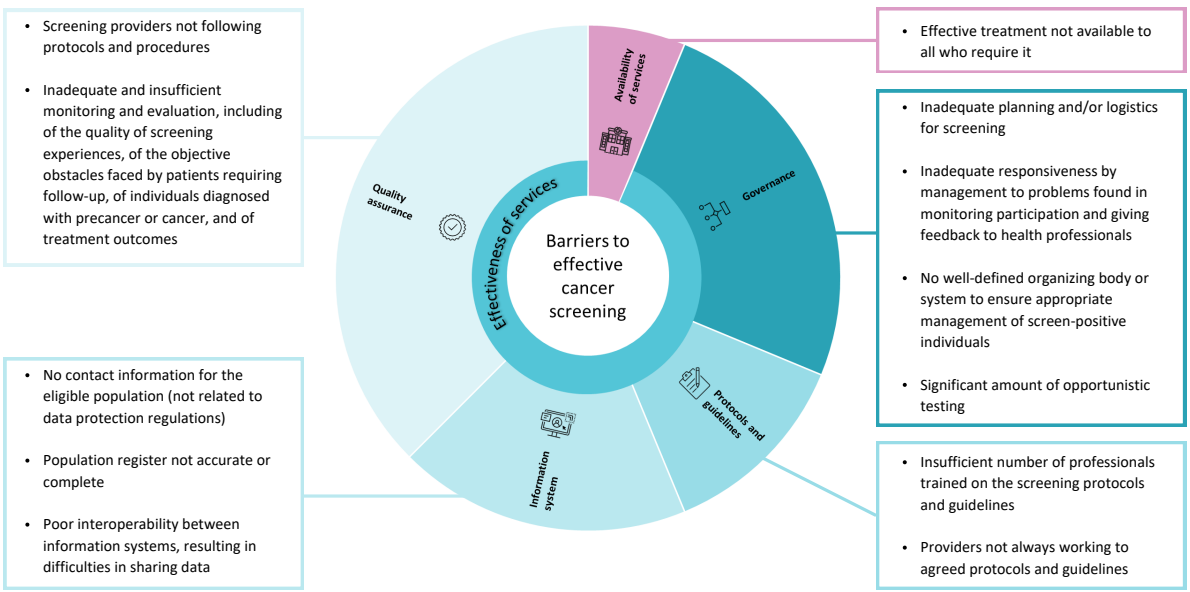
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	50–69 years	24 months
Cervical	Cytology	25–64 years	36 months
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for colorectal cancer as of 2020.
Screening, diagnostic, and treatment services for breast and cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials • Group education • One-on-one education	• Mobile units • Patient navigation	• Assessment and feedback to providers	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

CHILE

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

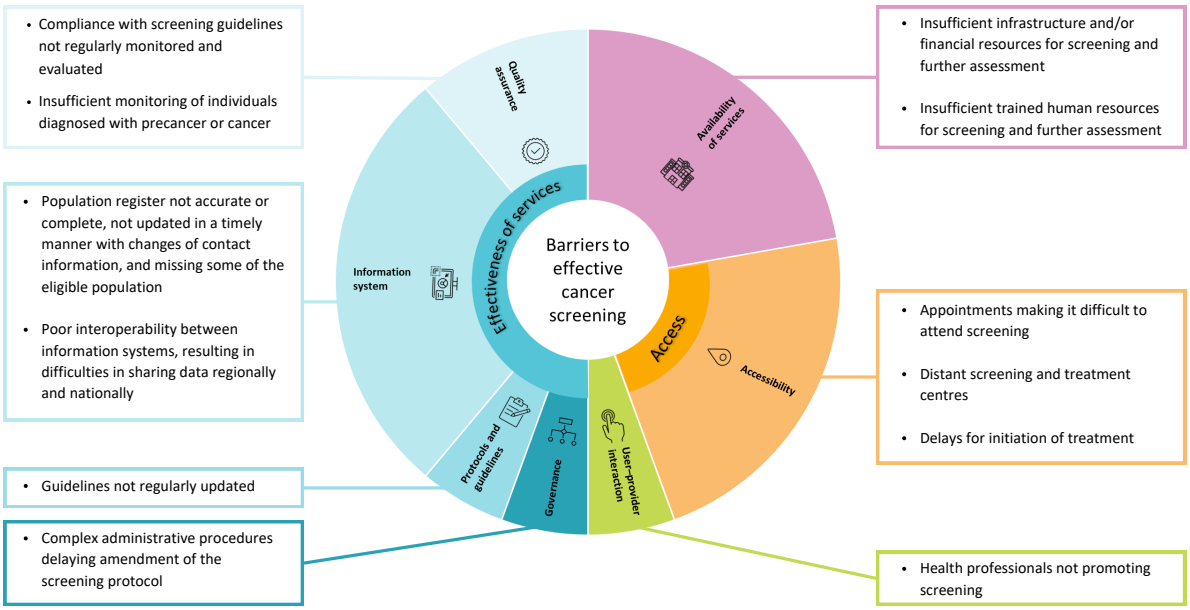
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography + CBE	50–69 years	36 months
Cervical	Cytology HPV + Cytology	25–64 years 30–64 years	36 months 60 months
Colorectal	–	–	–

There is no policy or screening protocol for colorectal cancer as of 2023.
Screening services for breast and cervical cancer are free of charge.

For more information click here or scan

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials and social media • Group education • One-on-one education • Individual reminders	• Alternative screening centres • Mobile units • Scheduling out-of-hours appointments	• Training	• Universal health coverage • Day off work to attend screening

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

COLOMBIA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

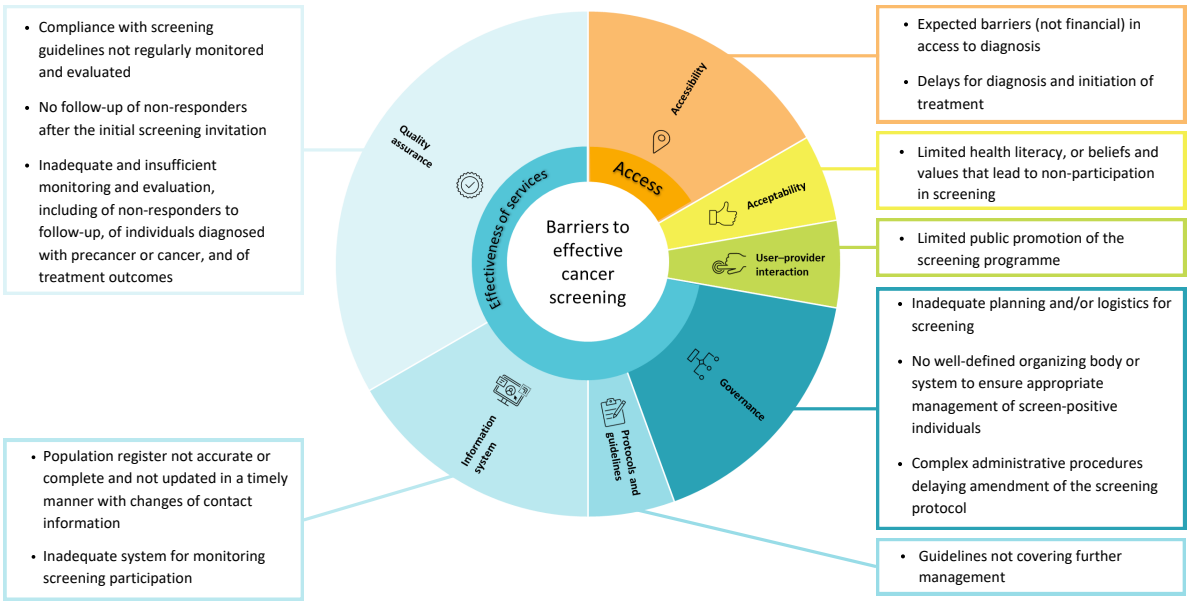
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography CBE	50–69 years 40–49 years	24 months 12 months
Cervical	Cytology HPV VIA	25–29 years 30–65 years 30–50 years	36 months 60 months 36 months
Colorectal	–	–	–

There is no policy or screening protocol for colorectal cancer as of 2022.
Screening, diagnostic, and treatment services for breast and cervical cancer are free of charge.

For more information click here or scan

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials and social media • Group education • One-on-one education	• Alternative screening centres • Mobile units	• Provider incentives • Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

COSTA RICA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

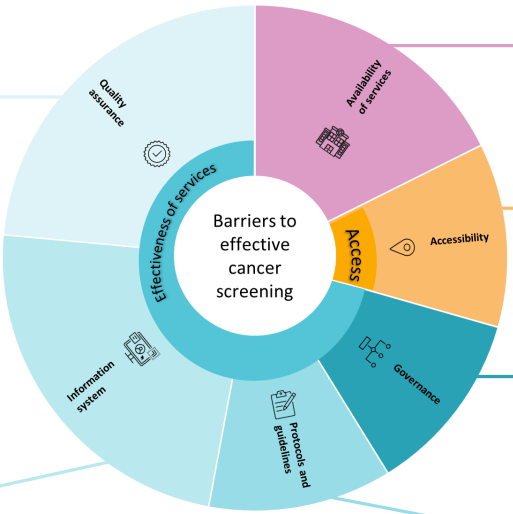
Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	50–75 years	12 months
Cervical	Cytology	20–64 years	24 months
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for colorectal cancer as of 2021.
Screening, diagnostic, and treatment services for cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Compliance with screening guidelines not regularly monitored and evaluated
- Insufficient monitoring and evaluation, including of the quality of screening experiences, of non-responders to follow-up, and of individuals diagnosed with precancer or cancer



- Insufficient infrastructure and/or financial resources for screening and further assessment
- Insufficient trained human resources for screening

- Distant treatment centre
- Delays for initiation of treatment

- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Significant amount of opportunistic testing

- Population register not accurate or complete and not updated in a timely manner with changes of contact information
- Inadequate information technology (IT) solution for running screening (software/application), including for monitoring screening participation

- Guidelines not regularly developed or adopted
- Lack of consensus on guidelines among key stakeholders

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials and social media • Group education • One-on-one education • Individual reminders and recall	• Alternative screening centres • Mobile units • Scheduling out-of-hours appointments	• Provider reminders and recall • Training	• Universal health coverage • Day off work to attend screening

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

CUBA

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	CBE	≥ 30 years	12 months
Cervical	Cytology	25–64 years	36 months
Colorectal	FIT	≥ 50 years	12 months

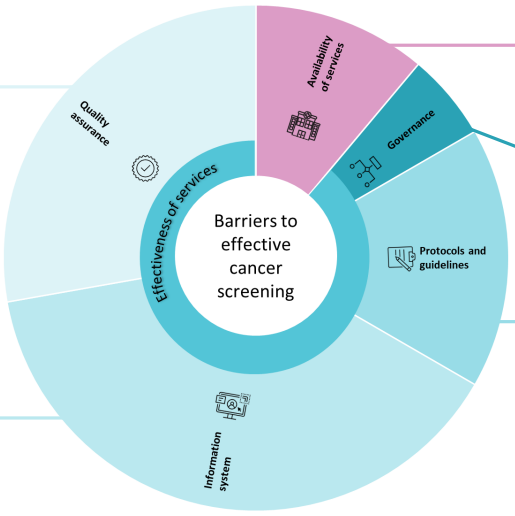
For more information click here or scan

Screening, diagnostic, and treatment services for breast, cervical, and colorectal cancer are free of charge.

BARRIERS TO CANCER SCREENING

- No follow-up of non-responders after the initial screening invitation
- Insufficient monitoring and evaluation, including of the quality of screening experiences, of non-responders to follow-up, of individuals diagnosed with precancer or cancer, and of treatment outcomes

- Population register not accurate or complete and not updated in a timely manner with changes of contact information
- Insufficient information technology (IT) resources
- Inadequate IT solution for running screening (software/application), including for monitoring screening participation
- Difficulties sharing data due to inadequate linkage between screening organizations, primary care, and patients, and between clinics regionally and nationally



- Insufficient infrastructure and/or financial resources for screening
- Effective treatment not available to all who require it

- Inadequate responsiveness by management to problems found in monitoring participation and giving feedback to health professionals

- Guidelines not regularly developed or adopted and updated, and not covering further management

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Group education • One-on-one education • Individual reminders	• Patient navigation	• Provider reminders • Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

DOMINICA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

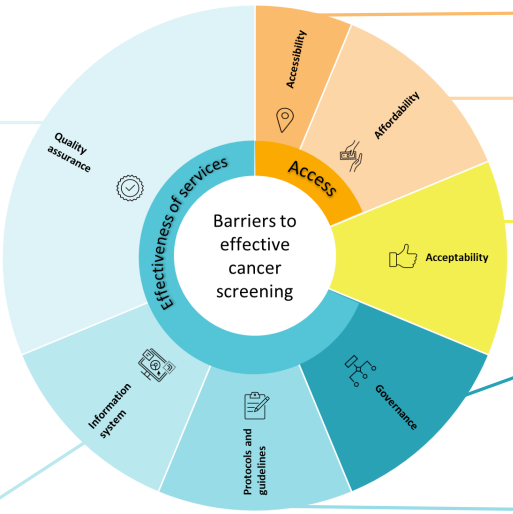
Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	–	–	–
Colorectal	–	–	–

There is no policy or screening protocol for breast, cervical, and colorectal cancer as of 2021.

For more information click here or scan

BARRIERS TO CANCER SCREENING

- Poor adherence to guidelines on follow-up management
- No follow-up of non-responders after the initial screening invitation
- Inadequate and insufficient monitoring and evaluation, including of the objective obstacles faced by patients requiring follow-up and of individuals diagnosed with precancer or cancer



- Expected barriers (not financial) in access to treatment
- No financial coverage of direct costs of screening and diagnosis
- Limited health literacy, or beliefs and values that lead to non-participation in screening and not undergoing treatment
- Inadequate national governance structure for assessing training needs
- Inadequate planning and/or logistics for screening
- Providers not always working to agreed protocols and guidelines
- Insufficient number of professionals trained on the screening protocols and guidelines

- Population register not accurate or complete
- No systematic tracking of information about the management chain (case management)

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Group education	• None reported	• None reported	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

DOMINICAN REPUBLIC

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	40–65 years	12 months
Cervical	Cytology	25–60 years	12 months
Colorectal	–	–	–

There is no policy or screening protocol for colorectal cancer as of 2022.

For more information click here or scan

BARRIERS TO CANCER SCREENING

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials • One-on-one education	• None reported	• None reported	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

ECUADOR

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

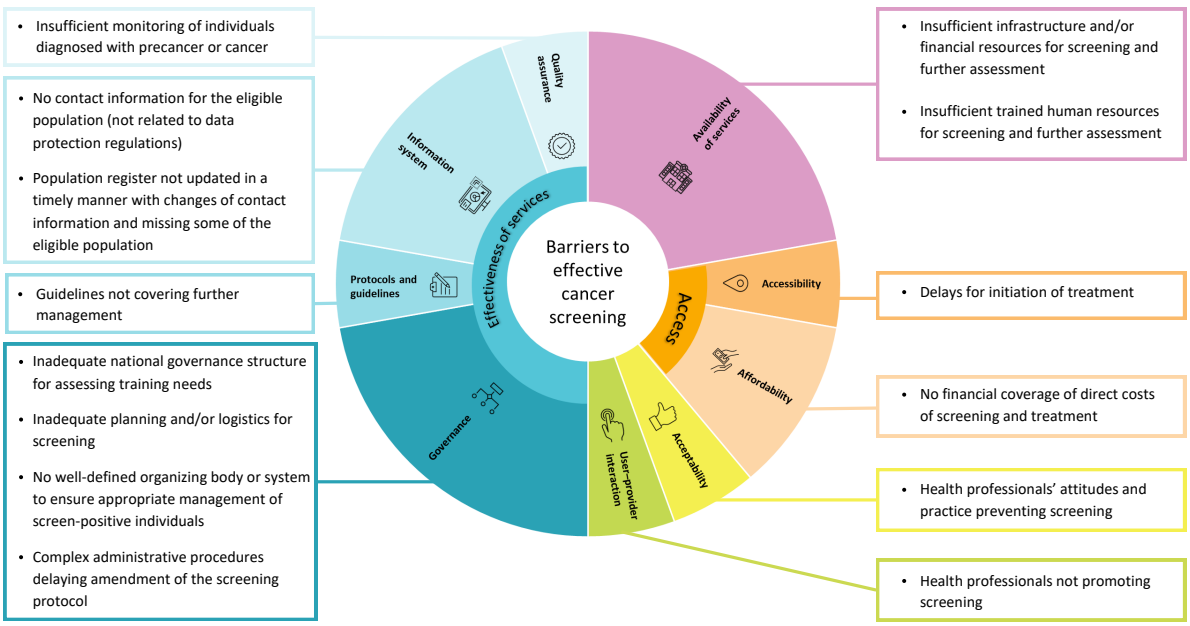
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast (pilot)	CBE	> 40 years	–
Cervical (pilot)	Cytology	> 30 years	60 months
Colorectal (pilot)	FIT	50–75 years	12 months

For more information click here or scan

There is no policy or screening protocol for breast, cervical, and colorectal cancer as of 2022.

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials • Group education • One-on-one education	• Alternative screening centres • Mobile units • Self-sampling • Patient navigation • Scheduling out-of-hours appointments	• Provider reminders • Assessment and feedback to providers • Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

EL SALVADOR

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	40–69 years	12 months
Cervical	Cytology HPV	≥ 20 years 30–59 years	24 months 60 months
Colorectal	–	–	–

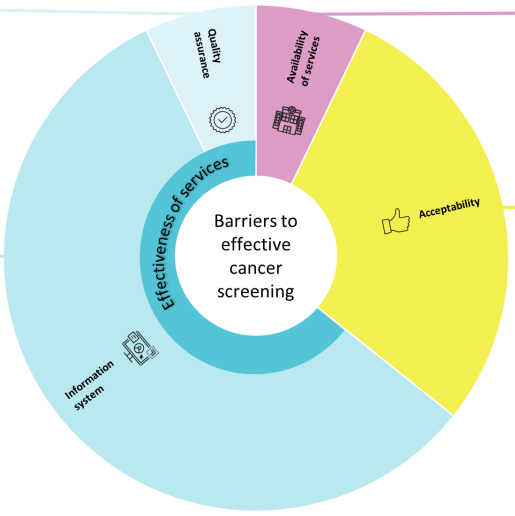
For more information click here or scan

There is no policy or screening protocol for colorectal cancer as of 2020.
Screening, diagnostic, and treatment services for breast and cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Insufficient monitoring of the quality of screening experiences

- No contact information for the eligible population (not related to data protection regulations)
- Population register not accurate or complete and not updated in a timely manner with changes of contact information
- Insufficient information technology (IT) resources
- Inadequate system for monitoring screening participation
- Poor interoperability between information systems, resulting in difficulties in sharing data regionally and nationally



- Insufficient trained human resources for screening

- Beliefs and values that lead to not undergoing further assessment and treatment
- Distrust in the health-care system for undergoing further assessment and treatment

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Printed and audiovisual materials • Group education • One-on-one education	• Mobile units • Provision of transportation	• Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

GRENADA

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	Cytology VIA	21–55 years 21–55 years	36 months 36 months
Colorectal	–	–	–

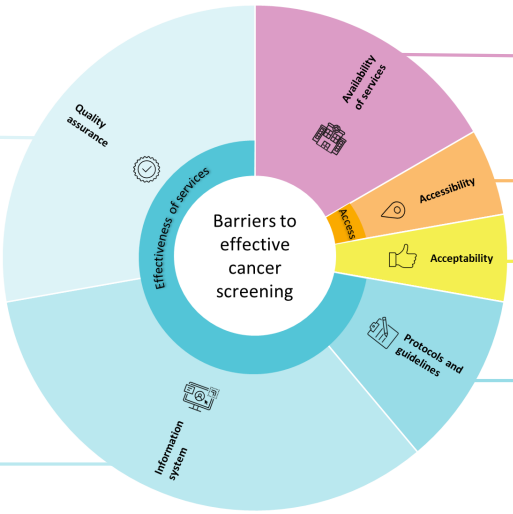
For more information click here or scan

There is no policy or screening protocol for breast and colorectal cancer as of 2021.
Screening services for cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Compliance with screening guidelines not regularly monitored and evaluated, and poor adherence to guidelines on follow-up management
- No follow-up of non-responders after the initial screening invitation
- Insufficient monitoring of the quality of screening experiences
- No systematic monitoring and evaluation of treatment outcomes

- Population register not accurate or complete and not updated in a timely manner with changes of contact information
- Inadequate system for monitoring screening participation
- Information system not collecting follow-up data
- Poor interoperability between information systems, resulting in difficulties in sharing data between screening organizations, primary care, and patients



- Insufficient infrastructure and/or financial resources and trained human resources for screening
- Effective treatment not available to all who require it

- Delays for initiation of treatment

- Limited health literacy, or beliefs and values that lead to non-participation in screening

- Guidelines not regularly developed or adopted and updated

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials and social media	• None reported	• Training	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

GUATEMALA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	Cytology VIA HPV	25–54 years 25–40 years 30–49 years	36 months 36 months 60 months
Colorectal	–	–	–

There is no policy or screening protocol for breast and colorectal cancer as of 2021.
Screening, diagnostic, and treatment services for cervical cancer are free of charge.

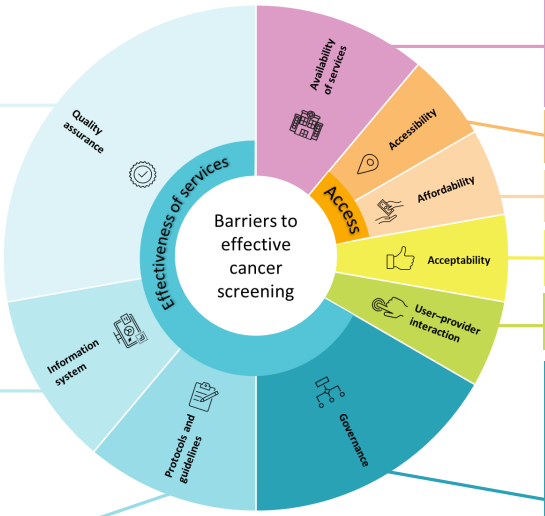
For more information click here or scan

BARRIERS TO CERVICAL CANCER SCREENING

- Screening providers not following protocols and procedures
- No follow-up of non-responders after the initial screening invitation
- Inadequate and insufficient monitoring and evaluation, including of non-responders to follow-up and of individuals diagnosed with precancer or cancer

- No contact information for the eligible population (not related to data protection regulations)
- Population register not accurate or complete

- Providers not always working to agreed protocols and guidelines
- Insufficient number of professionals trained on the screening protocols and guidelines



- Insufficient infrastructure and/or financial resources for screening
- Effective treatment not available to all who require it

- Appointments making it difficult to attend screening

- Unaffordable indirect costs of treatment

- Beliefs and values that lead to not undergoing further assessment

- Health professionals not promoting screening

- Inadequate responsiveness by management to problems found in monitoring participation and giving feedback to health professionals
- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Complex administrative procedures delaying amendment of the screening protocol

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Printed materials and social media • Group education • One-on-one education	• Alternative screening centres • Mobile units • Self-sampling	• Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

GUYANA

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

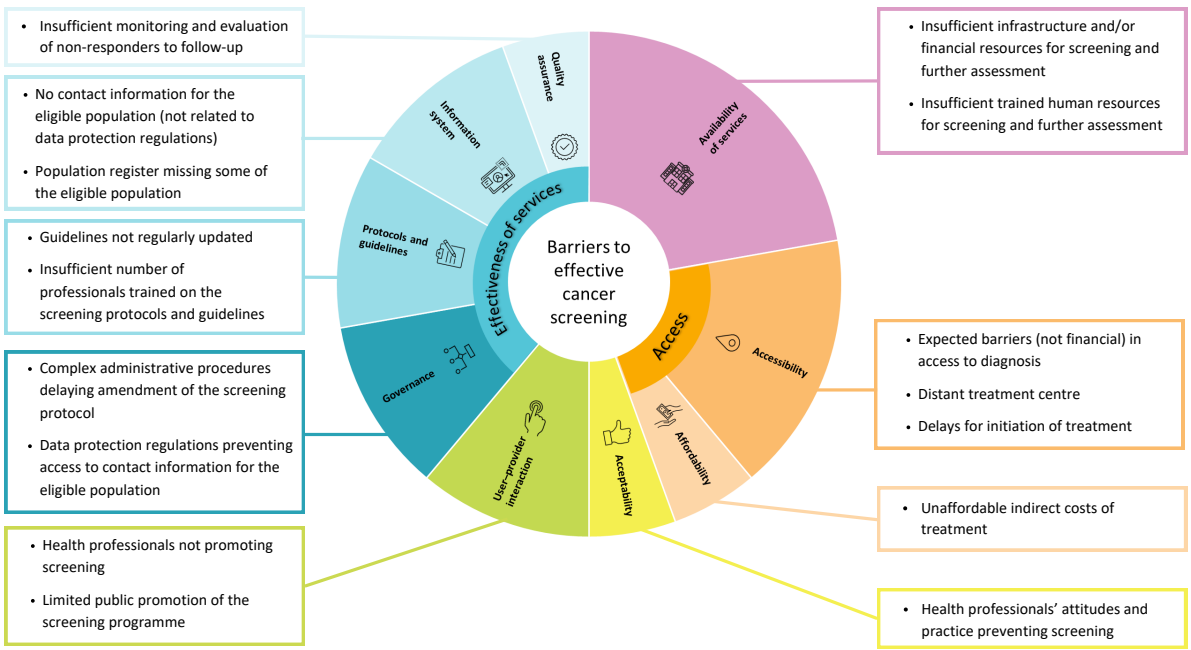
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	VIA	25–49 years	36 months
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for breast and colorectal cancer as of 2021.
Screening, diagnostic, and treatment services for cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials and social media • Group education • One-on-one education	• Alternative screening centres • Mobile units • Scheduling out-of-hours appointments	• Assessment and feedback to providers • Provider incentives • Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

HONDURAS

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	VIA Cytology	*–49 years ≥ 50 years	36 months 12 months
Colorectal	–	–	–

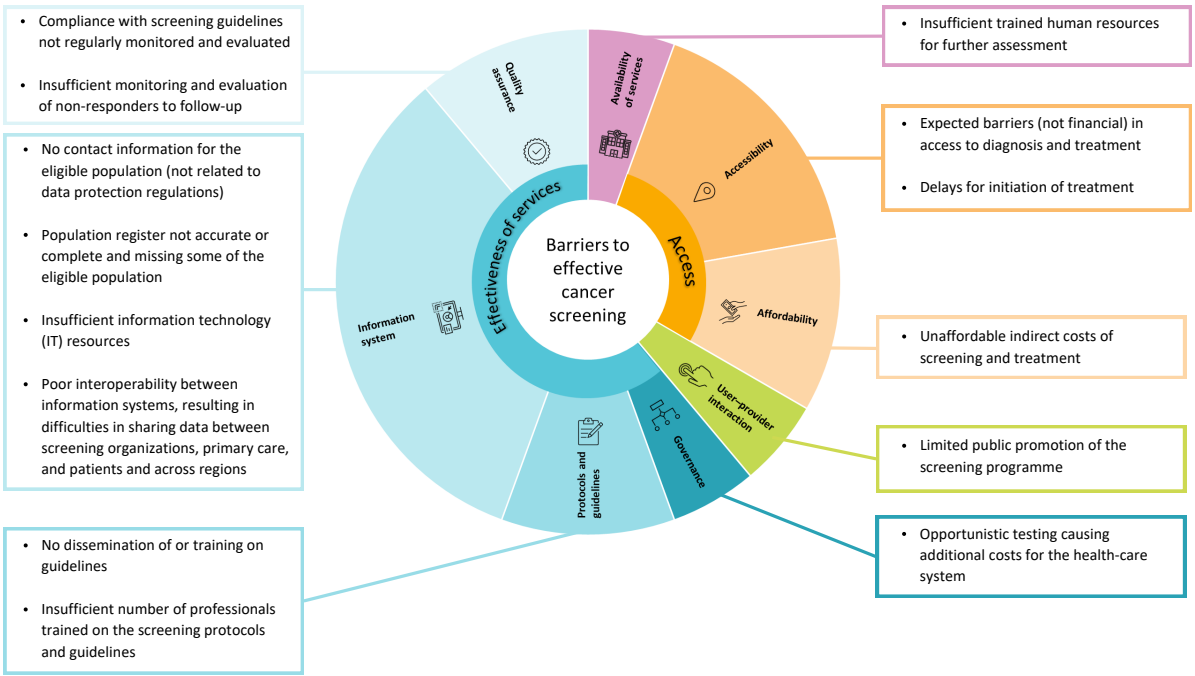
*Sexual debut.

There is no policy or screening protocol for breast and colorectal cancer as of 2021.

Screening and treatment services for cervical cancer are free of charge.

For more information click here or scan

BARRIERS TO CERVICAL CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Group education • One-on-one education	• None reported	• Assessment and feedback to providers • Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

JAMAICA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

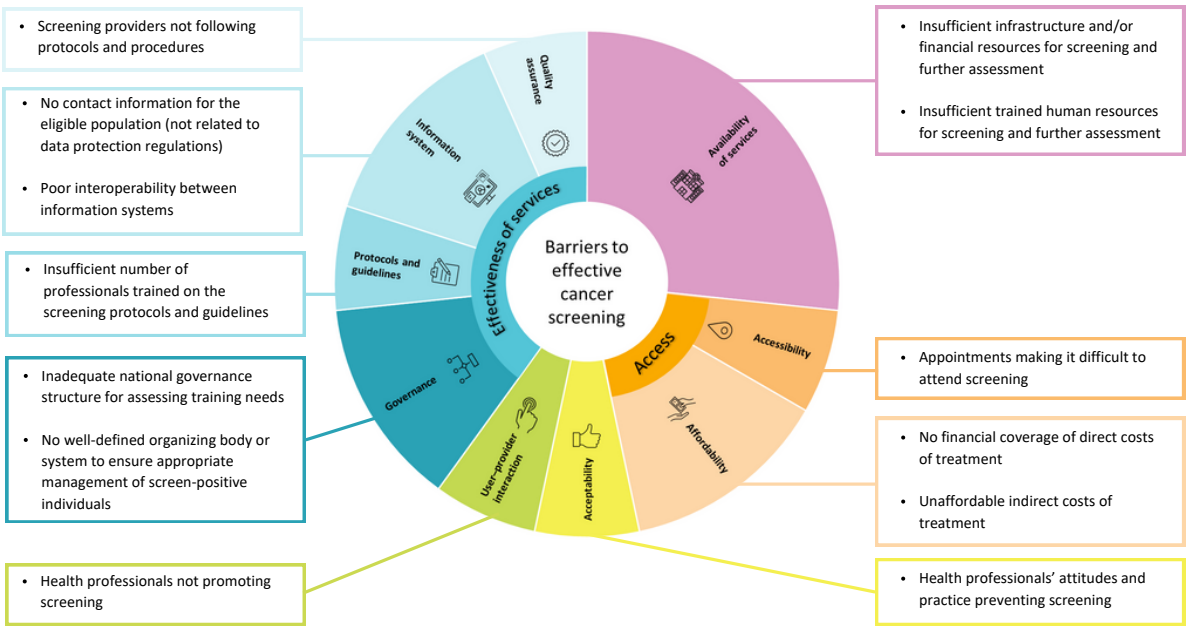
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	40–69 years	12 months
Cervical	Cytology	21–64 years	36 months
Colorectal	gFOBT FIT	45–74 years 45–74 years	12 months 12 months

For more information click here or scan

Screening services for cervical and colorectal cancer, diagnostic services for cervical cancer, and treatment services for breast, cervical, and colorectal cancer are free of charge.

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials and social media • Group education • One-on-one education	• Patient navigation	• Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

MEXICO

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

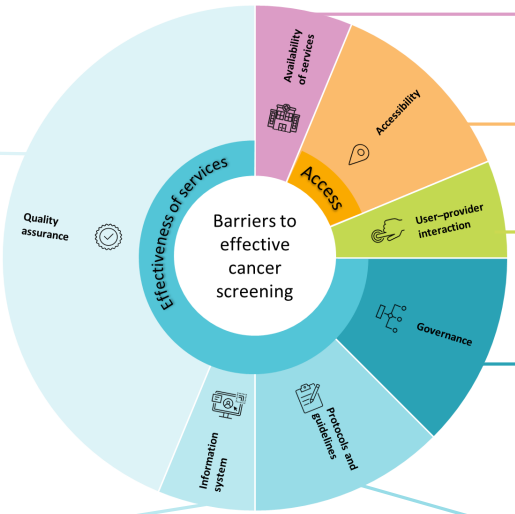
Cancer type	Screening test	Target age range	Screening interval
Breast	CBE Mammography	25–39 years 40–69 years	12 months 24 months
Cervical	Cytology HPV	25–34 years 35–64 years	36 months 60 months
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for colorectal cancer as of 2021.
Screening, diagnostic, and treatment services for breast and cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Screening providers not following protocols and procedures
- Compliance with screening guidelines not regularly monitored and evaluated, and poor adherence to guidelines on follow-up management
- Inadequate and insufficient monitoring and evaluation, including of the quality of screening experiences, of the objective obstacles faced by patient requiring follow-up, and of individuals diagnosed with precancer or cancer



- Effective treatment not available to all who require it
- Expected barriers (not financial) in access to treatment
- Distant treatment centre
- Health professionals not promoting screening
- Inadequate planning and/or logistics for screening
- Data protection regulations preventing access to contact information for the eligible population
- Providers not always working to agreed protocols and guidelines
- Insufficient number of professionals trained on the screening protocols and guidelines
- Poor interoperability between information systems, resulting in difficulties in sharing data between screening organizations, primary care, and patients

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Social media • Group education • One-on-one education	• Alternative screening centres • Mobile units • Provision of transportation	• Assessment and feedback to providers • Training	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

NICARAGUA

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	40–49 years ≥ 50 years	24 months 12 months
Cervical	Cytology	≥ 15 years	12 months
Colorectal	–	–	–

There is no policy or screening protocol for colorectal cancer as of 2021.
Screening, diagnostic, and treatment services for breast and cervical cancer are free of charge.

For more information click here or scan

BARRIERS TO CANCER SCREENING

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials • Group education • One-on-one education	• Alternative screening centres • Mobile units • Scheduling out-of-hours appointments	• Assessment and feedback to providers • Provider incentives	• Universal health coverage • Day off work to attend screening

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

PANAMA

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography + US	40–74 years	24 months
Cervical	Cytology HPV HPV + Cytology	21–64 years 25–64 years 30–64 years	24 months 36 months 36 months
Colorectal	gFOBT	≥55 years	12 months

For more information click here or scan

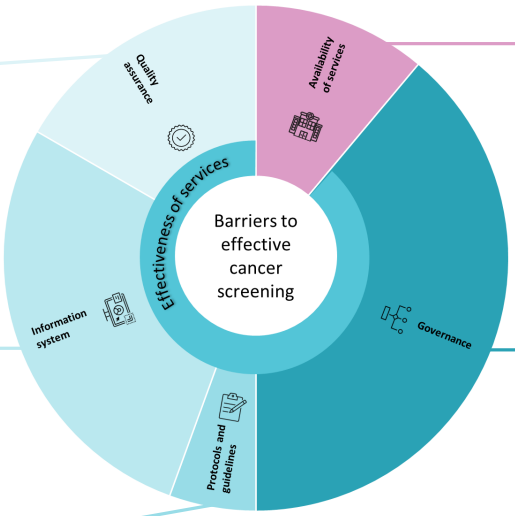
Screening services for breast and cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- No follow-up of non-responders after the initial screening invitation
- Insufficient monitoring and evaluation of the quality of screening experiences and of treatment outcomes

- Population register not updated in a timely manner with changes of contact information and missing some of the eligible population
- Inadequate information technology (IT) solution for running screening (software/application), including for monitoring screening participation
- No systematic tracking of information about the management chain (case management)

- Insufficient number of professionals trained on the screening protocols and guidelines



- Insufficient trained human resources for screening
- Effective treatment not available to all who require it

- Inadequate national governance structure for assessing training needs
- Inadequate planning and/or logistics for screening
- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Complex administrative procedures delaying amendment of the screening protocol
- Difficulties sharing data due to data protection regulations between screening organizations, primary care, and patients, and between clinics regionally and nationally
- Significant amount of opportunistic testing

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials and social media • Group education • One-on-one education • Individual reminders • Individual incentives	• Alternative screening centres • Mobile units	• Assessment and feedback to providers	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

PARAGUAY

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	40–65 years	12 months
Cervical	Cytology HPV	*–65 years 30–65 years	12 months 60 months
Colorectal	FIT	50–75 years	24 months

*1 year after sexual debut.

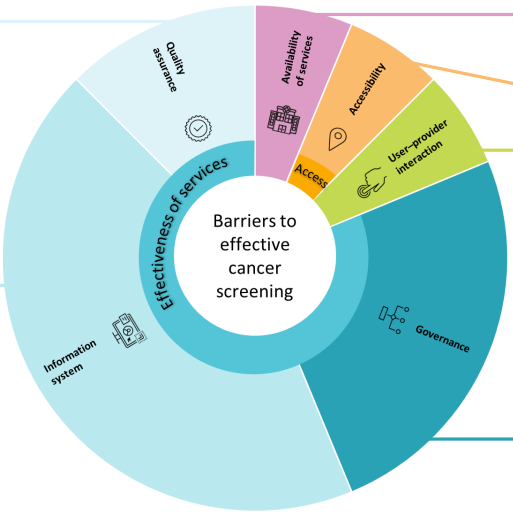
Screening, diagnostic, and treatment services for breast, cervical, and colorectal cancer are free of charge.

For more information click here or scan

BARRIERS TO CANCER SCREENING

- Insufficient monitoring and evaluation of non-responders to follow-up and of treatment outcomes

- No contact information for the eligible population (not related to data protection regulations)
- Population register not accurate or complete and not updated in a timely manner with changes of contact information
- Inadequate system for monitoring screening participation
- Information system not collecting follow-up data
- No systematic tracking of information about the management chain (case management)
- Poor interoperability between information systems, resulting in difficulties in sharing data between screening organizations, primary care, and patients



- Insufficient infrastructure and/or financial resources for screening
- Delays for initiation of treatment
- Limited public promotion of the screening programme

- Inadequate national governance structure for assessing training needs
- Inadequate planning and/or logistics for screening
- Complex administrative procedures delaying amendment of the screening protocol
- Significant amount of opportunistic testing

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials and social media • Group education • One-on-one education	• Mobile units • Self-sampling • Patient navigation • Scheduling out-of-hours appointments	• Assessment and feedback to providers • Training	• Universal health coverage • Day off work to attend screening

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

PERU

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	*	*	*
Cervical	Cytology VIA HPV	25–64 years 30–49 years 30–49 years	24 months 24 months 60 months
Colorectal	gFOBT	≥55 years	12 months

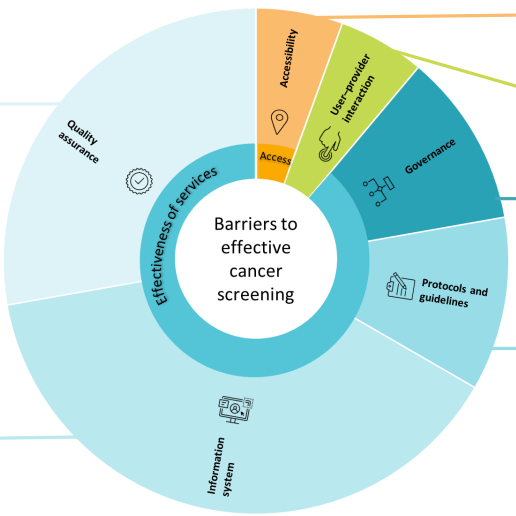
For more information click here or scan

* Unknown.
Screening, diagnostic, and treatment services for cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Compliance with screening guidelines not regularly monitored and evaluated
- Poor adherence to guidelines on follow-up management
- Inadequate and insufficient monitoring and evaluation, including of the quality of screening experiences, of non-responders to follow-up, and of individuals diagnosed with precancer or cancer

- Population register not accurate or complete, not updated in a timely manner with changes of contact information, and missing some of the eligible population
- Inadequate system for monitoring screening participation
- No systematic tracking of information about the management chain (case management)
- Inadequate and/or disjointed information technology (IT) systems
- Difficulties sharing data across regions



- Appointments making it difficult to attend screening
- Limited public promotion of the screening programme
- Inadequate planning and/or logistics for screening
- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Guidelines not regularly developed or adopted and updated

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Group education • One-on-one education • Individual reminders	• Alternative screening centres • Provision of transportation	• Provider incentives • Training	• Universal health coverage

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SAINT KITTS AND NEVIS

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	Cytology	*–65 years	12 months
Colorectal	–	–	–

For more information click here or scan

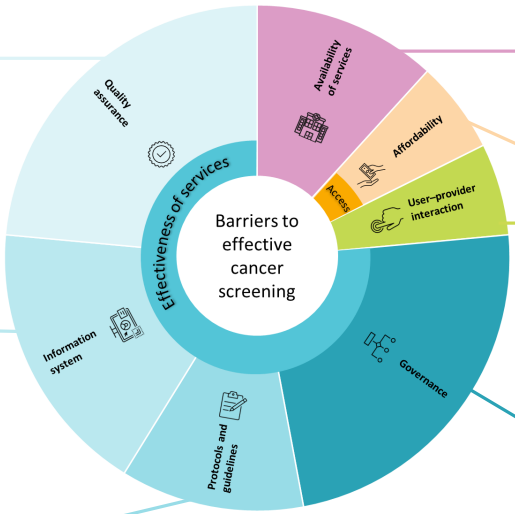
* Sexual debut.
There is no policy or screening protocol for breast and colorectal cancer as of 2021.
Screening services for cervical cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Inadequate and insufficient monitoring and evaluation, including quality of screening experiences, non-responders to follow-up, and individuals diagnosed with precancer or cancer

- No contact information for the eligible population (not related to data protection regulations)
- Population register not accurate or complete
- Inadequate system for monitoring screening participation

- Guidelines not regularly updated
- No dissemination of or training on guidelines



- Insufficient infrastructure and/or financial resources for further assessment
- Effective treatment not available to all who require it

- No financial coverage of direct costs of treatment

- Health professionals not promoting screening

- Inadequate national governance structure for assessing training needs
- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Issues with establishing protocols, processes, and legal frameworks
- Private ownership of facilities hindering optimal screening practices

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • One-on-one education	• Alternative screening centres • Mobile units	• Training	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SAINT LUCIA

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

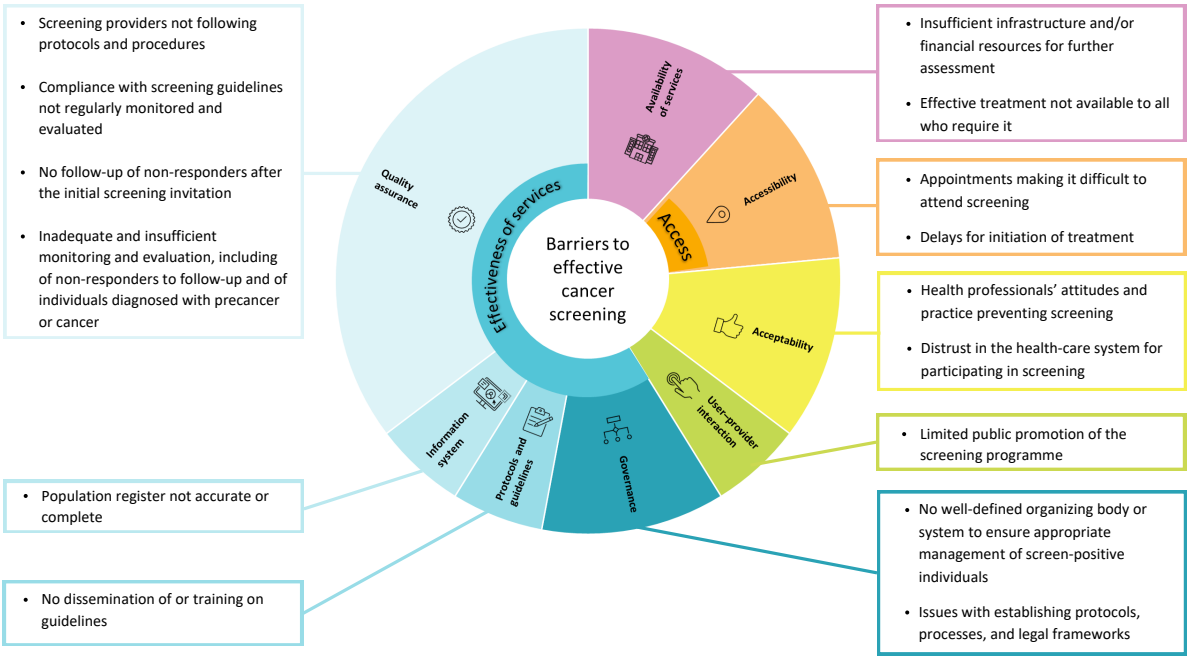
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	–	–	–
Cervical	–	–	–
Colorectal	–	–	–

For more information click here or scan

There is no policy or screening protocol for breast, cervical, and colorectal cancer as of 2021.

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials and social media • Group education	• None reported	• None reported	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SAINT VINCENT AND THE GRENADINES

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	45–54 years ≥ 55 years	12 months 24 months
Cervical	Cytology	21–65 years	36 months
Colorectal (men)	Stool DNA Fl. sigmoidoscopy* Colonoscopy	50–75 years	12 months 60 months 120 months

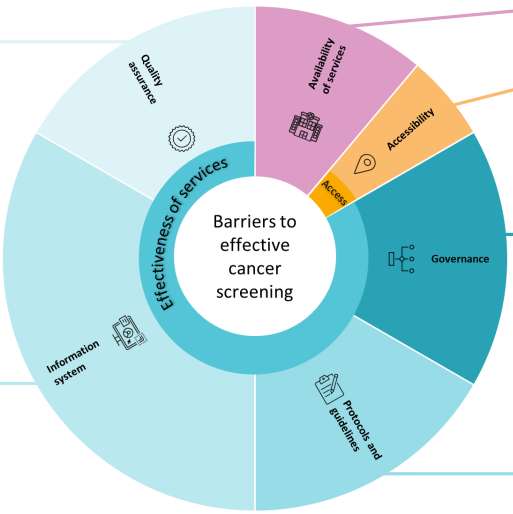
*Combined with faecal occult blood test (FOBT) every 3 years.
Screening services for breast cancer are free of charge.

For more information click here or scan

BARRIERS TO CERVICAL CANCER SCREENING

- No follow-up of non-responders after the initial screening invitation
- Insufficient monitoring and evaluation of non-responders to follow-up and of individuals diagnosed with precancer or cancer

- Population register not updated in a timely manner with changes of contact information and missing some of the eligible population
- Inadequate information technology (IT) solution for running screening (software/application), including for monitoring screening participation
- No systematic tracking of information about the management chain (case management)
- Difficulties sharing data due to inadequate linkage between clinics regionally and nationally



- Insufficient infrastructure and/or financial resources for screening and further assessment
- Delays for initiation of treatment

- Inadequate responsiveness by management to problems found in monitoring participation and giving feedback to health professionals
- Issues with establishing protocols, processes, and legal frameworks
- Significant amount of opportunistic testing

- Guidelines not covering further management
- No dissemination of or training on guidelines
- Insufficient number of professionals trained on the screening protocols and guidelines

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed materials • Group education • One-on-one education	• Scheduling out-of-hours appointments	• Training	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SURINAME

CANCER SCREENING – BARRIERS AND INTERVENTIONS
COUNTRY REPORT 2023

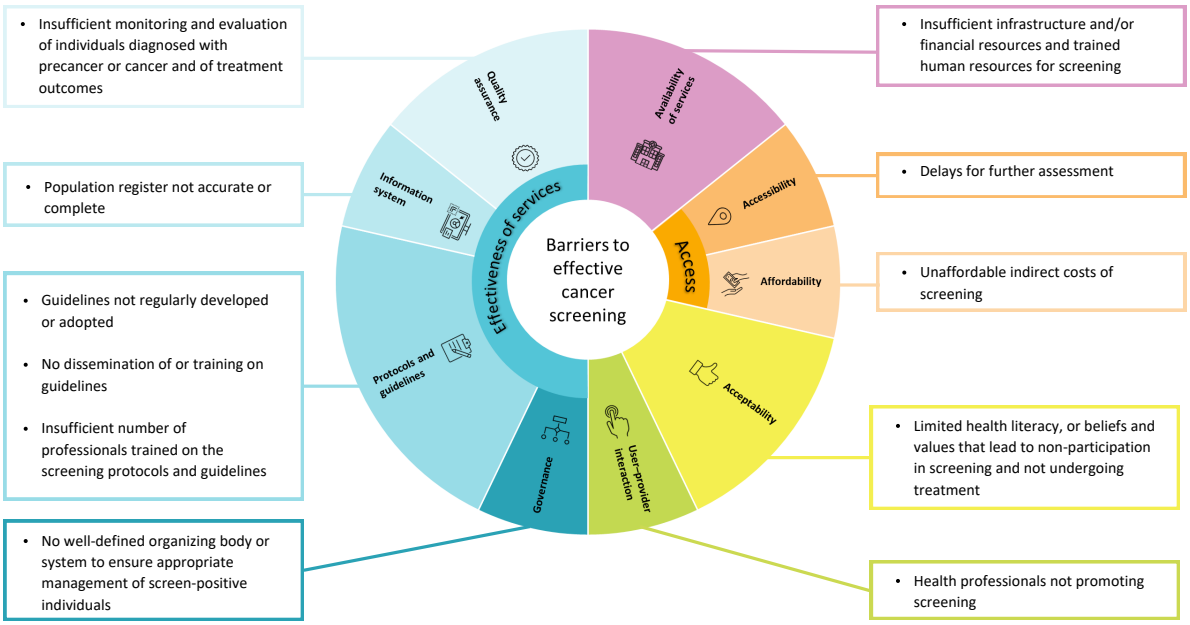
CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	50–75 years	24 months
Cervical	VIA Cytology	≥ 23 years ≥ 50 years	12 months 36 months
Colorectal	–	–	–

There is no policy or screening protocol for colorectal cancer as of 2021.

For more information click here or scan

BARRIERS TO CANCER SCREENING



EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Printed and audiovisual materials and social media • Group education • One-on-one education • Individual incentives	• Alternative screening centres • Mobile units	• Assessment and feedback to providers • Training	• None reported

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

URUGUAY

CANCER SCREENING – BARRIERS AND INTERVENTIONS COUNTRY REPORT 2023

CANCER SCREENING PROGRAMMES

Cancer type	Screening test	Target age range	Screening interval
Breast	Mammography	50–69 years	24 months
Cervical	Cytology	21–69 years	36 months
Colorectal	FIT	50–74 years	24 months

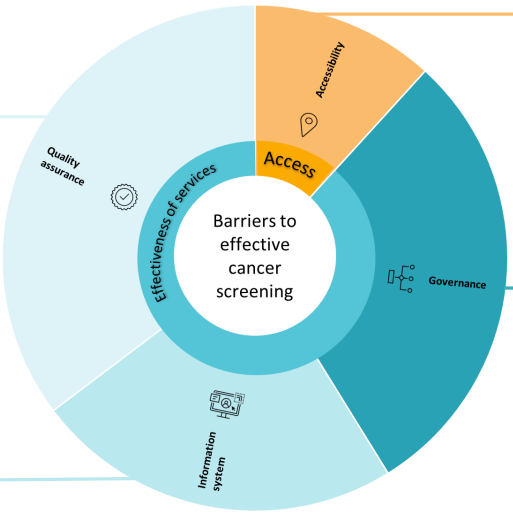
For more information click here or scan

Screening services for breast, cervical, and colorectal cancer are free of charge.

BARRIERS TO CANCER SCREENING

- Screening providers not following protocols and procedures
- Compliance with screening guidelines not regularly monitored and evaluated
- Inadequate and insufficient monitoring and evaluation, including of the quality of screening experiences, of individuals diagnosed with precancer or cancer, and of treatment outcomes

- Population register not accurate or complete, not updated in a timely manner with changes of contact information, and missing some of the eligible population
- Difficulties sharing data due to inadequate linkage between clinics regionally and nationally



- Delays for diagnosis and initiation of treatment

- Inadequate planning and/or logistics for screening
- Inadequate organizational support for clinical professionals
- Inadequate responsiveness by management to problems found in monitoring participation and giving feedback to health professionals
- No well-defined organizing body or system to ensure appropriate management of screen-positive individuals
- Significant amount of opportunistic testing

EXISTING INTERVENTIONS TO IMPROVE CANCER SCREENING PROGRAMMES

Directed to population to increase awareness/demand	Directed to population to improve access	Directed to service providers	At policy and system level
• Mass media • Printed and audiovisual materials and social media • Group education	• Mobile units • Patient navigation	• Assessment and feedback to providers • Provider incentives	• Universal health coverage • Day off work to attend screening

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

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ANNEX 1.

Questions about prioritization of barriers to the cancer screening pathway

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1. What are the barriers to the development and implementation of protocols and guidelines, and capacity-building? Please select up to five barriers that are the most relevant.

a. Screening guidelines are not regularly developed or adopted.
b. Screening guidelines do not cover further management.
c. Screening protocols and guidelines are not regularly updated.
d. Screening guidelines are not disseminated, or no training on them is provided.
e. Compliance with screening guidelines is not regularly monitored and evaluated.
f. Complex and/or unclear administrative procedures delay amendment of the screening protocol.
g. Inadequate national governance structure responsible for assessing training needs.
h. Insufficient number of professionals trained on the screening protocols and guidelines.
i. Screening providers do not follow protocols and procedures.
j. Lack of consensus among key stakeholders on the screening guidelines.
k. Other; please specify.

2. What are the barriers to identifying and inviting the eligible population to screening? Please select up to five barriers that are the most relevant.

a. There is no contact information for the eligible population (not related to data protection regulations).
b. Data protection regulations prevent access to contact information for the eligible population.
c. Population register is not accurate or complete (including, but not limited to, migration, even within the country).
d. Population register is not updated in a timely manner with changes of contact information (address, phone number, etc.).
e. Some eligible patients are not included in the population register (immigrants, individuals who are homeless, etc.).
f. Eligibility criteria vary from a defined protocol according to location.
g. No follow-up of non-responders after the initial screening invitation.
h. Other; please specify.

3. What are the barriers to maximizing informed participation in screening? Please select up to five barriers that are the most relevant.

a. Appointments for screening make it difficult for people to attend (getting an appointment, day/time of appointment, long waiting time for an appointment [not related to insufficient availability of services]).
b. Primary care physicians and other health professionals are not disseminating information about or promoting screening.
c. Health professionals' attitudes and established patterns of practice prevent screening.
d. Inadequate system for monitoring screening participation.
e. Insufficient monitoring of the quality of screening experiences.
f. Inadequate responsiveness by management to problems found in monitoring participation and giving feedback to health professionals.
g. Significant amount of opportunistic testing occurs outside of the routine screening programme.
h. Some people lack knowledge (limited health literacy) or have beliefs and values that lead to non-participation.
i. Some people distrust the health-care system for participating in screening.
j. The screening centre is far.
k. Some people have competing priorities (e.g. care of dependents) and/or physical/social barriers (e.g. disability, language).
l. There is no financial coverage (total or partial) of the direct costs of screening (cost of appointment, cost of collection of test, cost of test analysis, etc.).
m. Indirect costs of screening are not affordable (cost of travel, loss of a day's wages, cost related to care of dependents, etc.).
n. Expected barriers (not financial) in access to cancer diagnosis in case of a positive screening result.
o. Expected barriers (not financial) in access to cancer treatment in case of a cancer diagnosis.
p. Consent prevents screening.
q. Other; please specify.

4. What are the barriers to successful operation of the programme? Please select up to five barriers that are the most relevant.

a. Private ownership of screening facilities hinders optimal screening practices.
b. Limited capacity of screening programme (e.g. insufficient infrastructure and/or financial resources).
c. Limited capacity of screening programme not related to finances (e.g. insufficient trained human resources).
d. Inadequate planning and/or logistics to deliver screening services.
e. Monitoring and evaluation are inadequate and insufficient.
f. Issues with establishing protocols, processes, and legal frameworks.
g. Insufficient information technology (IT) systems resources (computer, Internet).
h. Inadequate information technology (IT) solution for running screening (software/application).
i. Poor interoperability between information technology (IT) systems.
j. Inadequate organizational/administrative support for clinical professionals.
k. Providers do not always work to agreed protocols and guidelines.
l. Outcome data from opportunistic testing (screening without an invitation and based on self-referral or the advice of health providers) is not collected.
m. Outcome data from opportunistic testing (screening without an invitation and based on self-referral or the advice of health providers) is not shared.
n. Opportunistic testing does not follow the same evidence-based screening policy.
o. Out-of-protocol opportunistic testing causes additional costs for the overall health-care system or limits the availability of resources for an organized programme.
p. Limited public promotion of the screening programme.
q. Other; please specify.

5. What are the barriers to follow-up (further assessment)? Please select up to five barriers that are the most relevant.

a. Poor laboratory quality resulting in a high rate of false-negatives/false-positives or mistrust in test results affecting the efficacy of further assessment.
b. No well-defined organizing body or system in place to ensure that the screen-positive individuals are appropriately managed (fail-safe mechanism).
c. Insufficient monitoring and evaluation of non-responders to follow-up.
d. Insufficient infrastructure and/or financial resources for further assessment.
e. Insufficient human resources for further assessment (shortage of trained personnel not related to finances).
f. System-level delays for diagnosis after screening (getting an appointment, day/time of appointment, long waiting time for further assessment [not related to insufficient availability of services], long waiting time for test results).
g. Poor adherence by providers to guidelines on follow-up management (further assessment, change in follow-up, or access to next level of care).
h. Providers are not sharing information about or promoting further assessment.
i. Clinicians' attitudes and established patterns of practice prevent follow-up.
j. Current system does not address personal beliefs about follow-up (e.g. fatalism).
k. Some people have beliefs and values that lead to not undergoing further assessment.
l. Some people distrust the health-care system for undergoing further assessment.
m. Difficulties sharing data due to inadequate linkage between clinics regionally and nationally.
n. Difficulties sharing data due to data protection regulations between clinics regionally and nationally.
o. Poor communication/difficulties sharing data due to inadequate linkage (flow of information) between the screening registry, primary care, and patients for the screening organization.
p. Poor communication/difficulties sharing data due to data protection regulations between screening organizations, primary care, and patients.
q. Insufficient evaluation of the objective obstacles faced by patients requiring follow-up.
r. There is no financial coverage of direct costs of the diagnostic workup (cost of appointment, cost of procedure, cost of test analysis, etc.).
s. Indirect costs of diagnosis are not affordable (cost of travel, loss of a day's wages, cost related to care of dependents, etc.).
t. There is partial financial coverage (either co-payment or full coverage only for certain populations) for the diagnostic workup (cost of appointment, cost of procedure, cost of test analysis, etc.).
u. The information system does not collect follow-up data on the screened population.
v. Other; please specify.

6. What are the barriers to effective treatment? Please select up to five barriers that are the most relevant.

a. Insufficient monitoring is done of individuals diagnosed with precancer or cancer.
b. The treatment centre is far.
c. Delays in initiation of treatment not related to availability of health services (e.g. getting an appointment, day/time of appointment, long waiting time for initiation of treatment, long waiting time for test results).
d. Effective treatment is not available to all who require it.
e. No systematic monitoring or evaluation of treatment outcomes.
f. Information about the management chain (case management) is not tracked systematically.
g. There are difficulties sharing and accessing data across different regions.
h. Patients do not undergo treatment because of a variety of personal beliefs.
i. Some people distrust the health-care system for undergoing treatment.
j. There is no financial coverage (total or partial) of the direct costs of treatment (medical bill including cost of surgery/chemotherapy/radiotherapy, hospital costs, etc.).
k. Indirect costs of treatment are not affordable (cost of travel, loss of a day's wages, cost related to care of dependents, etc.).
l. Other; please specify.

ANNEX 2.

Questions about interventions in place to improve cancer screening programmes

Adapted from supporting information in Mosquera I et al., Assessment of barriers to cancer screening and interventions implemented to overcome these barriers in 27 Latin American and Caribbean countries. © 2024 World Health Organization; licensed by UICC. International Journal of Cancer published by John Wiley & Sons Ltd on behalf of UICC.

1. Do you have universal health coverage?

2. Do you carry out the following user-directed interventions aiming to increase demand for screening? Please check all that apply, indicating for which cancer screening, and add other interventions if applicable.

a. Education through mass media.
b. Education through small media.
c. Other interventions:
   Other possible interventions are:
   - Group education: informational or motivational messages delivered to an assembled group in lecture or interactive format by trained lay people or health professionals.
   - One-on-one education: informational or motivational messages delivered by one individual to another, either in person or by telephone. May be supported by small media or client reminders.
   - Client reminders and recall: printed (letter or postcard) or telephone messages advising people that they are due (reminder) or overdue (recall) for cancer screening. Messages may include a scheduled appointment or an offer to assist in scheduling.
   - Client incentives: small, non-coercive gifts or financial rewards to motivate people to seek cancer screening for themselves or others.
   - Giving a day off work to go to screening.

User-directed interventions to increase demand	Breast cancer	Cervical cancer	Colorectal cancer
c.1 Group education			
c.2 One-on-one education			
c.3 Client reminders and recall			
c.4 Client incentives			
c.5 Giving a day off work to go to screening			
c.6 Others			
c.7 None of the above			

c.6 If others, please specify: _____

3. Do you carry out the following user-directed interventions aiming to increase community access to screening? Please check all that apply, indicating for which cancer screening, and add other interventions if applicable.

User-directed interventions to increase access	Breast cancer	Cervical cancer	Colorectal cancer
a. Reduction of out-of-pocket costs through reimbursement, voucher distribution, or increased third-party payment for cancer screening			
b. Provision of alternative screening centres (distance problem)			
c. Access to screening in mobile units			
d. Provision to transportation to the screening centre			
e. Provision of self-sampling tests (for cervical cancer and colorectal cancer)			
f. Patient navigation (individualized assistance to overcome health system, individual, educational, and/or psychosocial barriers to screening or to follow-up after a positive screening result)			
g. Scheduling out-of-hours appointments for screening			
h. Other			
i. None of the above			

h. If other, please specify: _____

4. Do you carry out the following provider-directed interventions (that is, aiming to increase provider delivery or promote screening)? Please check all that apply, indicating for which cancer screening, and add other interventions if applicable.

Provider-directed interventions	Breast cancer	Cervical cancer	Colorectal cancer
a. Provider reminders and recall (electronic or manual chart notations or checklists to inform or remind health-care providers when clients are due [reminder] or overdue [recall] for screening)			
b. Provider assessment and feedback (evaluates provider performance in delivering a screening service [assessment] and gives the information back to providers, individually or as a group [feedback])			
c. Provider incentives (direct or indirect rewards [monetary or non-monetary] to motivate providers to deliver screening services or to make appropriate referrals)			
d. Training (individual or collective) on cancer screening service delivery			
e. Training (individual or collective) in radiology			
f. Training (individual or collective) in laboratories			
g. Training (individual or collective) in pathology			
h. Other			
i. None of the above			

h. If other, please specify: _____

ANNEX 3.

Information about the cancer burden, the health system, and the response for each country

This Annex presents a fact sheet for each country, which provides contextual information about the cancer burden (including projected incidence trends and comparisons of incidence and mortality rates with the Latin America and the Caribbean region for breast cancer, cervical cancer, and colorectal cancer), the health system (expenditure, the universal health coverage [UHC] Service Coverage Index, the existence of a national cancer control plan, and linkage of cancer registry to screening data), and the response. This information was obtained from assignments submitted by countries during the Train the Trainers programme and other sources [1, 25].

ANTIGUA AND BARBUDA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 94 298

Human Development Index: 0.826 (very high)

CANCER BURDEN

Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	–	–	–	–	–
Cervical	–	–	–	–	–
Colorectal	–	–	–	–	–

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS

No data

COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)

No data

HEALTH SYSTEM

Health expenditure per capita (US$):	**923.41**
Out-of-pocket (% of health expenditure):	**19.16**
UHC Service Coverage Index:	**76**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

ARGENTINA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 46 519 252

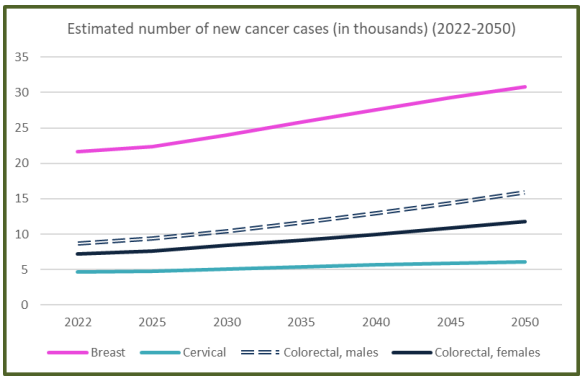
Human Development Index: 0.849 (very high)

CANCER BURDEN

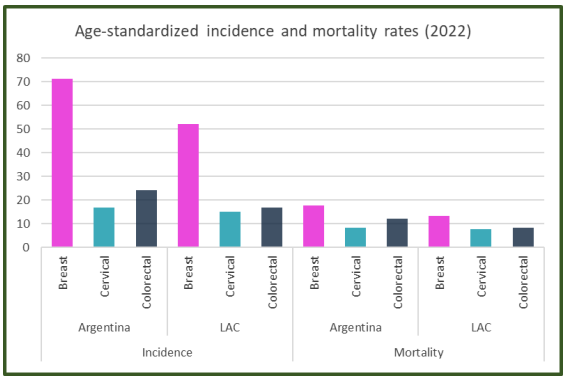
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	21 631	6 436	87 392	71.3	17.6
Cervical	4 696	2 559	16 945	16.8	8.4
Colorectal	15 863	8 800	48 538	women 19.4 men 30.5	women 9.6 men 15.7

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**1 044.77**
Out-of-pocket (% of health expenditure):	**22.37**
UHC Service Coverage Index:	**79**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

BAHAMAS

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 412 623

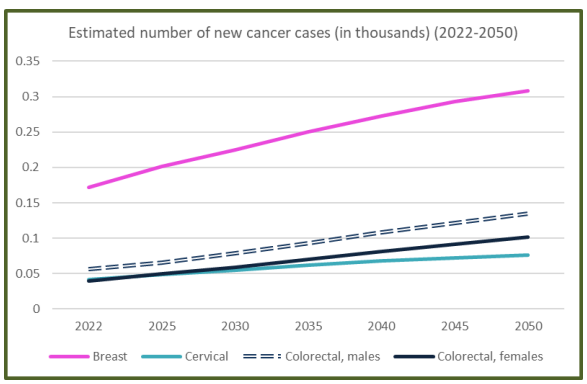
Human Development Index: 0.820 (very high)

CANCER BURDEN

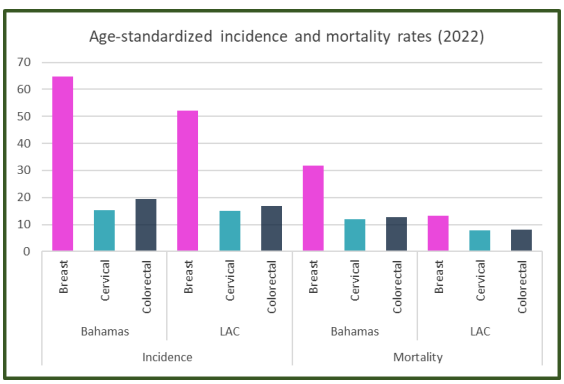
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	172	87	674	64.6	31.7
Cervical	42	33	136	15.2	12.0
Colorectal	96	64	285	women 14.6 men 25.4	women 9.7 men 16.4

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**1 961.68**
Out-of-pocket (% of health expenditure):	**24.46**
UHC Service Coverage Index:	**77**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

BRAZIL

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 216 422 446

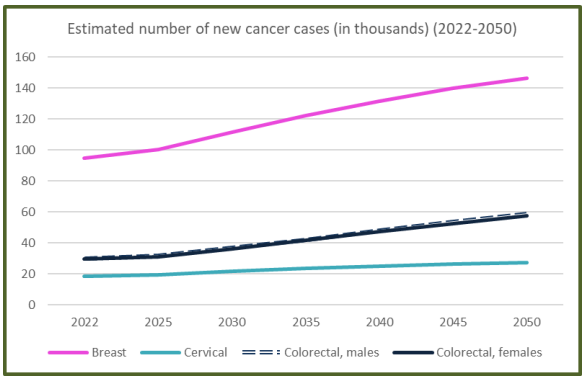
Human Development Index: 0.760 (high)

CANCER BURDEN

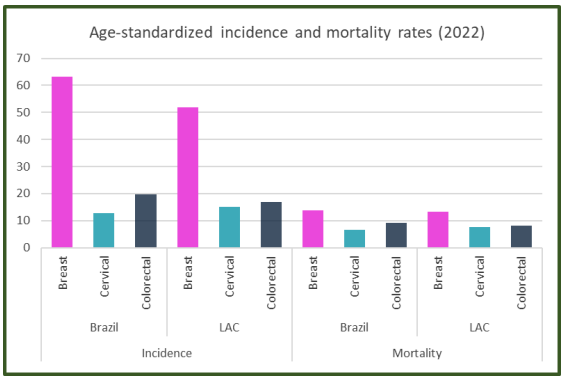
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	94 728	22 189	300 817	63.1	13.9
Cervical	18 715	9 905	58 081	12.7	6.5
Colorectal	60 118	28 884	169 725	women 17.8 men 22.4	women 8.1 men 10.6

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**761.27**
Out-of-pocket (% of health expenditure):	**22.65**
UHC Service Coverage Index:	**80**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

CHILE

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 19 629 590

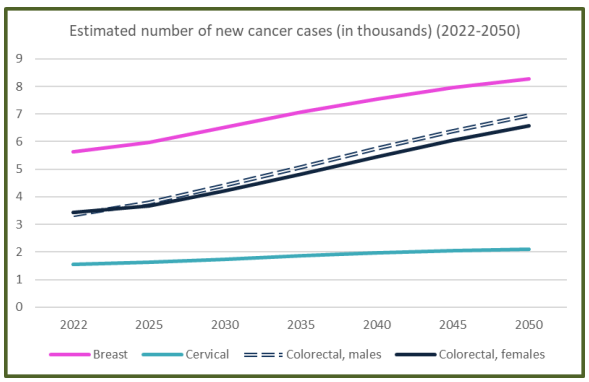
Human Development Index: 0.860 (very high)

CANCER BURDEN

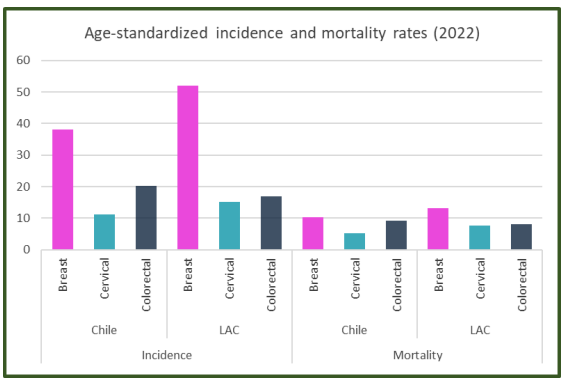
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	5 640	1 775	22 677	38.2	10.3
Cervical	1 559	825	5 376	11.3	5.2
Colorectal	6 778	3 330	20 588	women 18.3 men 22.6	women 7.9 men 10.9

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**1 518.04**
Out-of-pocket (% of health expenditure):	**30.27**
UHC Service Coverage Index:	**82**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

COLOMBIA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 52 085 168

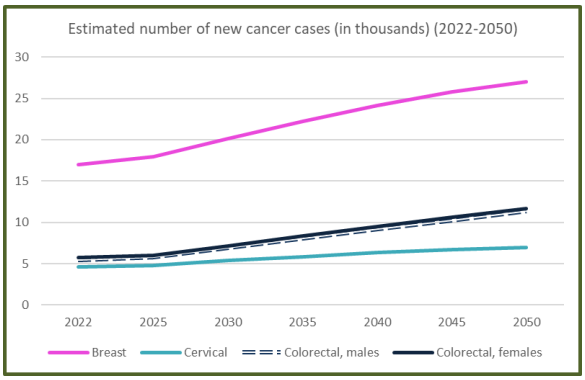
Human Development Index: 0.758 (high)

CANCER BURDEN

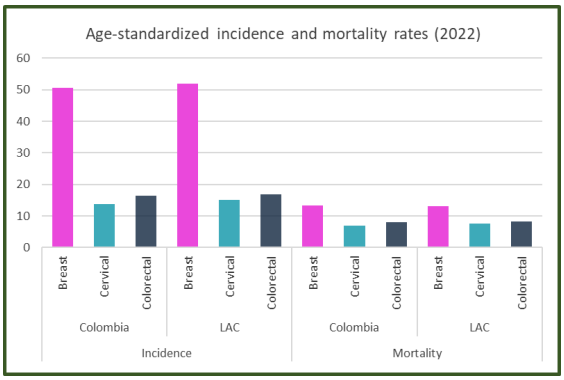
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	17 018	4 752	54 604	50.7	13.3
Cervical	4 570	2 435	14 376	13.7	6.9
Colorectal	11 163	5 640	31 549	women 15.3 men 17.8	women 7.3 men 8.7

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**557.54**
Out-of-pocket (% of health expenditure):	**13.67**
UHC Service Coverage Index:	**80**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

COSTA RICA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE
COUNTRY REPORT 2023

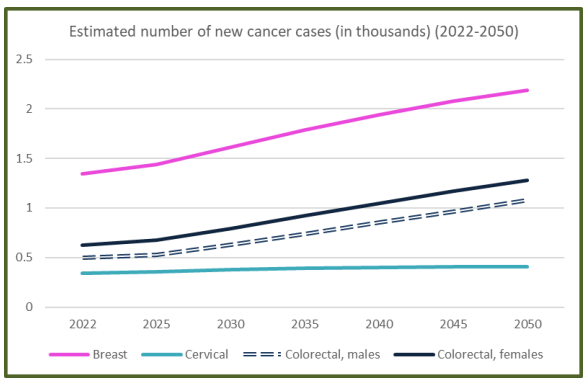
Population: 5 212 173
Human Development Index: 0.806 (very high)

CANCER BURDEN

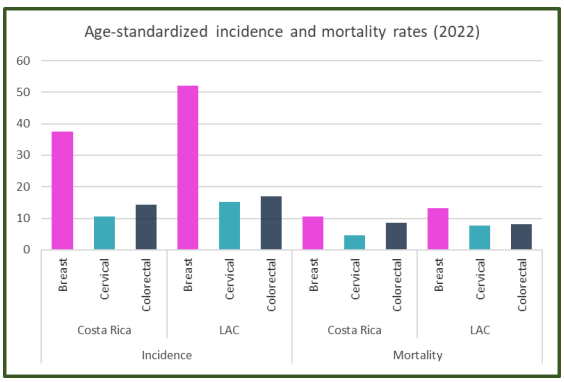
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	1 344	423	5 221	37.5	10.6
Cervical	341	167	1 232	10.6	4.6
Colorectal	1 121	709	3 288	women 15.4 men 13.2	women 8.0 men 9.3

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**948.92**
Out-of-pocket (% of health expenditure):	**20.74**
UHC Service Coverage Index:	**81**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

CUBA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 11 194 449

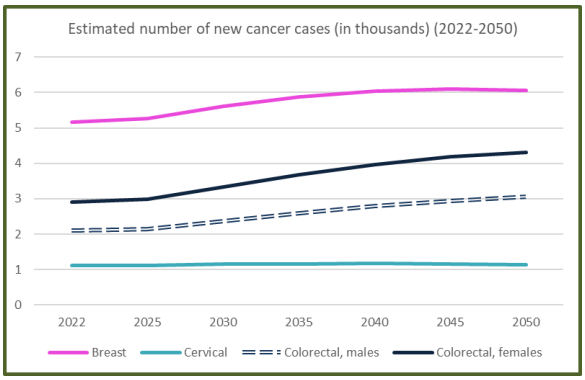
Human Development Index: 0.764 (high)

CANCER BURDEN

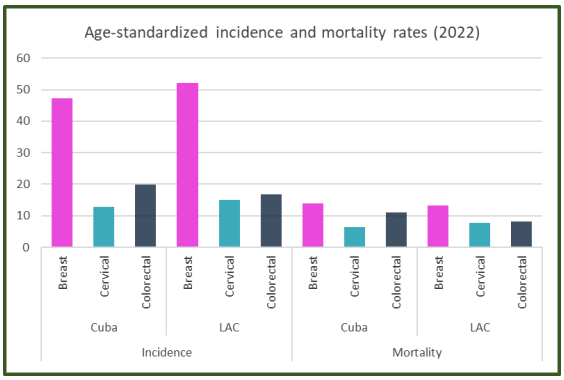
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	5 157	1 779	16 254	47.2	13.9
Cervical	1 122	695	3 543	12.8	6.4
Colorectal	5 013	3 061	13 866	women 21.5 men 18.1	women 11.8 men 10.2

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**1 186.16**
Out-of-pocket (% of health expenditure):	**8.39**
UHC Service Coverage Index:	**83**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

DOMINICA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE
COUNTRY REPORT 2023

Population: 73 040
Human Development Index: 0.740 (high)

CANCER BURDEN

Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	–	–	–	–	–
Cervical	–	–	–	–	–
Colorectal	–	–	–	–	–

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS

No data

COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)

No data

HEALTH SYSTEM

Health expenditure per capita (US$):	**482.43**
Out-of-pocket (% of health expenditure):	**23.77**
UHC Service Coverage Index:	**49**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE

DOMINICAN REPUBLIC

COUNTRY REPORT 2023

Population: 11 332 972

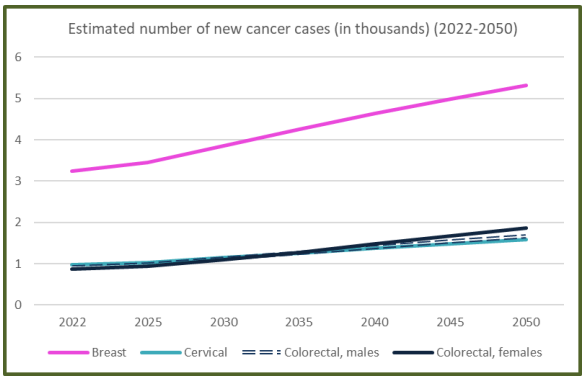
Human Development Index: 0.766 (high)

CANCER BURDEN

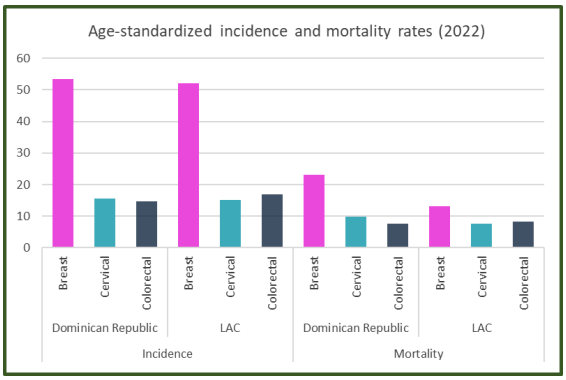
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	3 244	1 457	10 352	53.4	23.0
Cervical	967	622	3 010	15.6	9.9
Colorectal	1 782	934	5 002	women 13.2 men 16.2	women 6.6 men 8.6

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**416.90**
Out-of-pocket (% of health expenditure):	**23.59**
UHC Service Coverage Index:	**77**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

ECUADOR

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 18 190 484

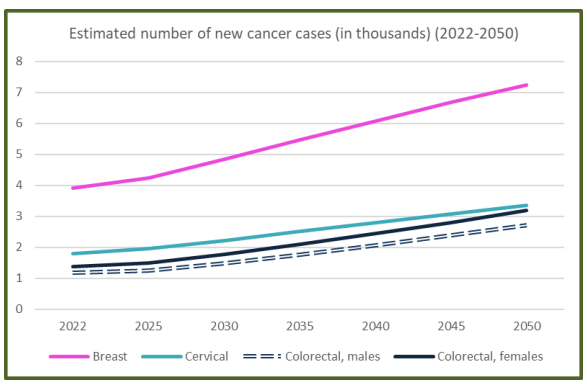
Human Development Index: 0.765 (high)

CANCER BURDEN

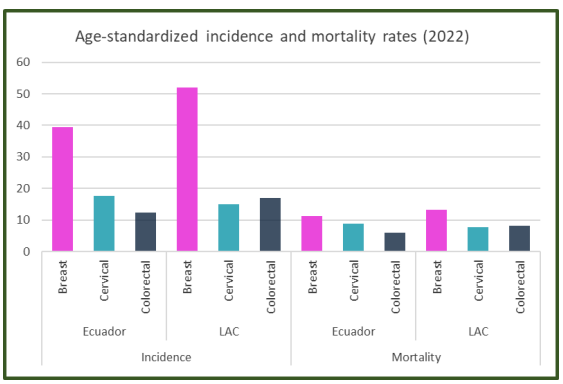
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	3 903	1 154	12 401	39.5	11.2
Cervical	1 792	939	5 456	17.7	8.9
Colorectal	2 531	1 283	6 944	women 12.6 men 12.1	women 6.0 men 6.0

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**494.31**
Out-of-pocket (% of health expenditure):	**30.62**
UHC Service Coverage Index:	**77**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

EL SALVADOR

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE
COUNTRY REPORT 2023

Population: 6 364 943

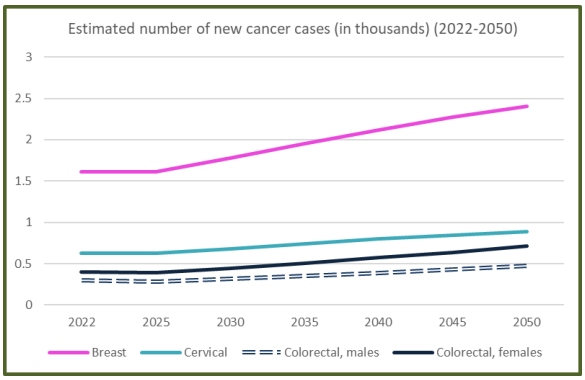
Human Development Index: 0.674 (medium)

CANCER BURDEN

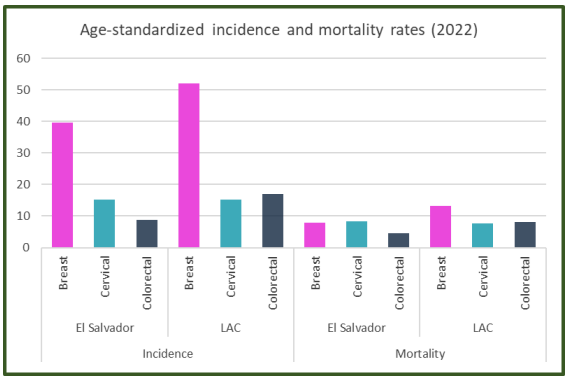
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	1 612	332	4 495	39.7	7.8
Cervical	627	367	1 703	15.2	8.4
Colorectal	692	373	1 671	women 8.2 men 9.3	women 4.3 men 4.9

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**442.21**
Out-of-pocket (% of health expenditure):	**26.74**
UHC Service Coverage Index:	**78**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

GRENADA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 126 183
Human Development Index: 0.793 (high)

CANCER BURDEN

Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	–	–	–	–	–
Cervical	–	–	–	–	–
Colorectal	–	–	–	–	–

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS

No data

COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)

No data

HEALTH SYSTEM

Health expenditure per capita (US$):	**505.40**
Out-of-pocket (% of health expenditure):	**53.68**
UHC Service Coverage Index:	**70**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

GUATEMALA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 17 601 416

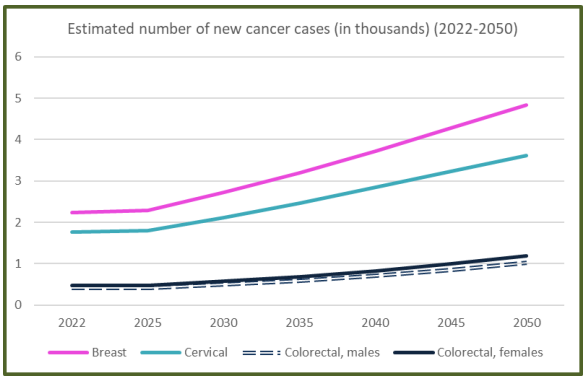
Human Development Index: 0.629 (medium)

CANCER BURDEN

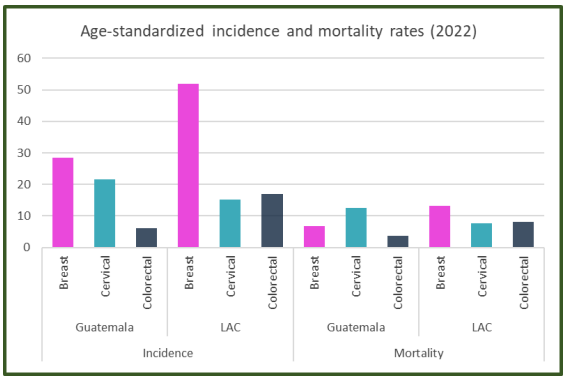
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	2 244	532	6 238	28.4	6.8
Cervical	1 761	973	4 880	21.5	12.5
Colorectal	894	544	2 111	women 5.9 men 6.5	women 3.6 men 4.0

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**340.96**
Out-of-pocket (% of health expenditure):	**60.98**
UHC Service Coverage Index:	**59**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

GUYANA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 813 834

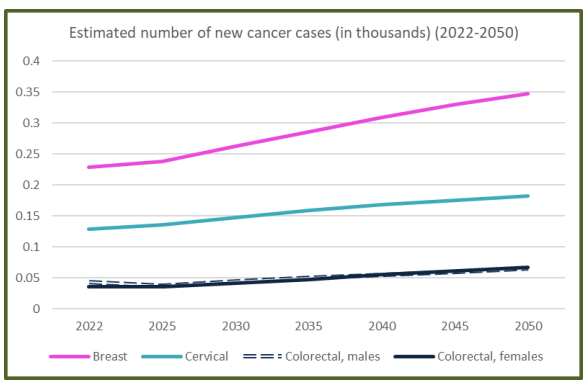
Human Development Index: 0.742 (high)

CANCER BURDEN

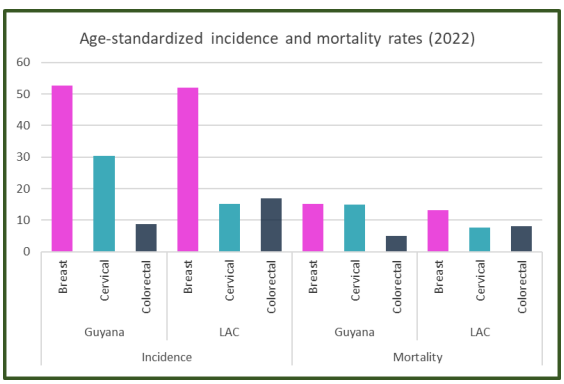
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	229	67	648	52.6	15.2
Cervical	129	65	366	30.3	14.9
Colorectal	79	46	197	women 7.4 men 10.3	women 4.2 men 5.9

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**470.57**
Out-of-pocket (% of health expenditure):	**28.72**
UHC Service Coverage Index:	**76**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✗

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

HONDURAS

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 10 593 798

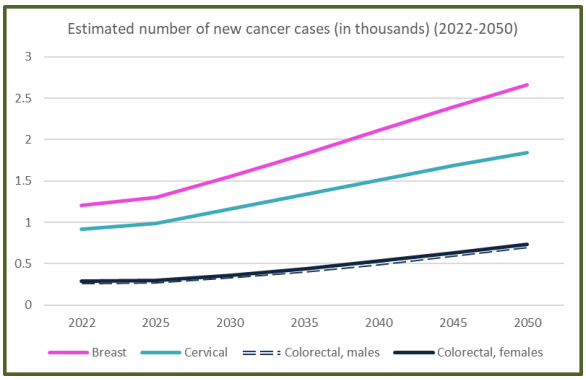
Human Development Index: 0.624 (medium)

CANCER BURDEN

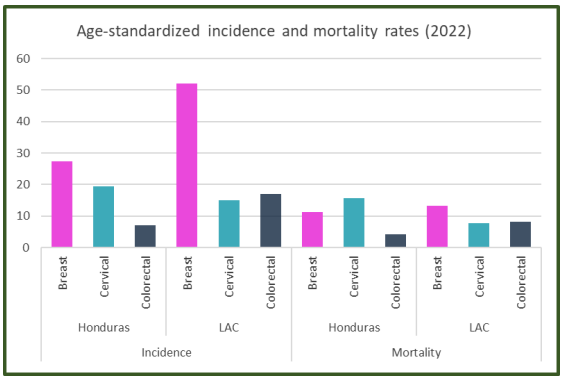
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	1 209	504	3 272	27.3	11.2
Cervical	916	669	2 514	19.5	15.6
Colorectal	570	372	1 366	women 6.8 men 7.5	women 4.3 men 4.2

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**253.92**
Out-of-pocket (% of health expenditure):	**51.71**
UHC Service Coverage Index:	**64**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✗

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

JAMAICA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 2 825 544

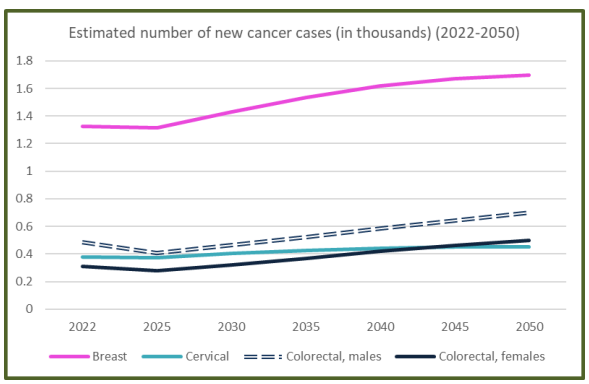
Human Development Index: 0.706 (high)

CANCER BURDEN

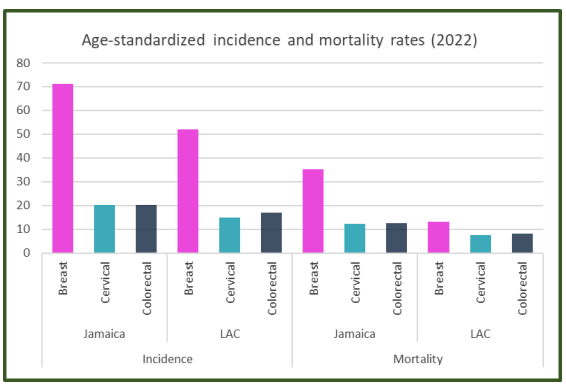
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	1 327	684	4 072	71.1	35.2
Cervical	376	236	1 149	20.4	12.4
Colorectal	793	509	2 106	women 14.9 men 25.8	women 9.3 men 16.3

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**372.45**
Out-of-pocket (% of health expenditure):	**13.08**
UHC Service Coverage Index:	**74**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

MEXICO

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 128 455 567

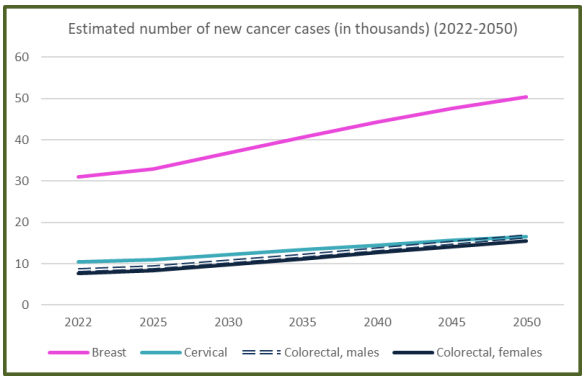
Human Development Index: 0.781 (high)

CANCER BURDEN

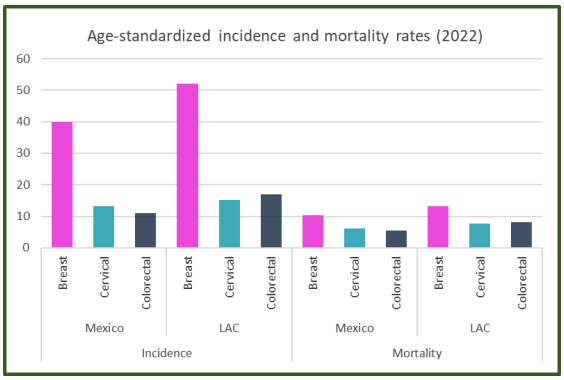
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	31 043	8 195	102 223	39.9	10.3
Cervical	10 348	4 909	33 441	13.2	6.2
Colorectal	16 082	8 283	47 216	women 9.6 men 12.3	women 4.8 men 6.3

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**610.65**
Out-of-pocket (% of health expenditure):	**41.37**
UHC Service Coverage Index:	**75**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

NICARAGUA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 7 046 310

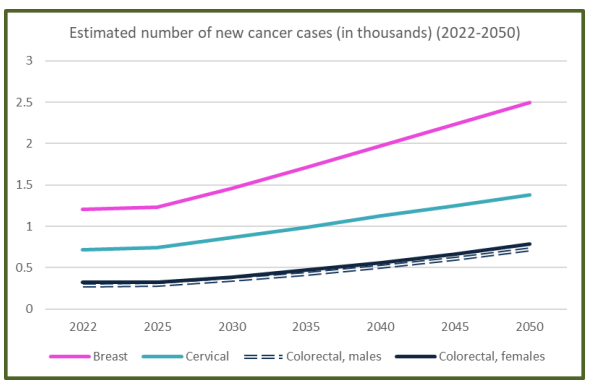
Human Development Index: 0.669 (medium)

CANCER BURDEN

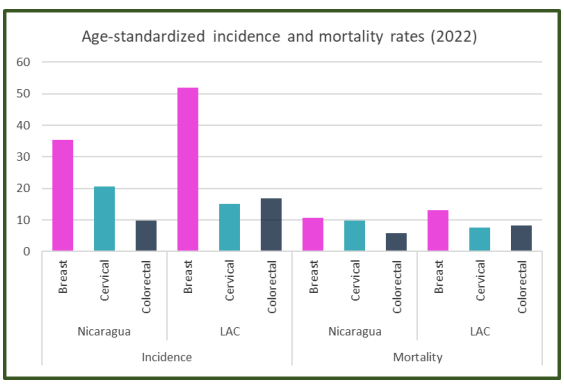
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	1 209	366	3 329	35.3	10.6
Cervical	721	345	1 982	20.6	9.9
Colorectal	610	365	1 465	women 9.1 men 10.7	women 5.4 men 6.4

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**198.08**
Out-of-pocket (% of health expenditure):	**30.82**
UHC Service Coverage Index:	**70**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

PANAMA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 4 468 087

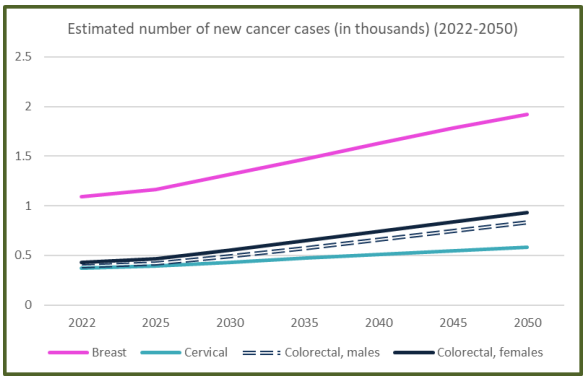
Human Development Index: 0.820 (very high)

CANCER BURDEN

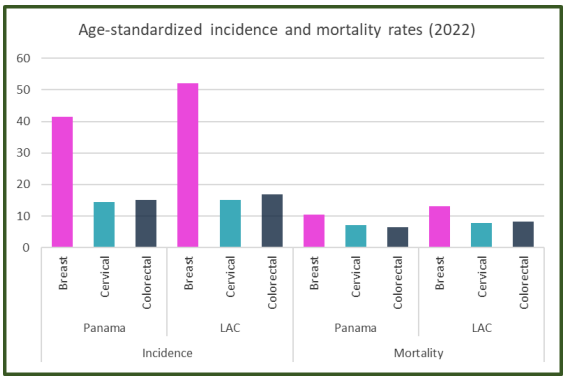
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	1 089	297	4 213	41.4	10.5
Cervical	371	192	1 292	14.5	7.1
Colorectal	820	374	2 461	women 15.1 men 15.1	women 5.7 men 7.5

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**1 415.24**
Out-of-pocket (% of health expenditure):	**37.33**
UHC Service Coverage Index:	**78**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

PARAGUAY

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE
COUNTRY REPORT 2023

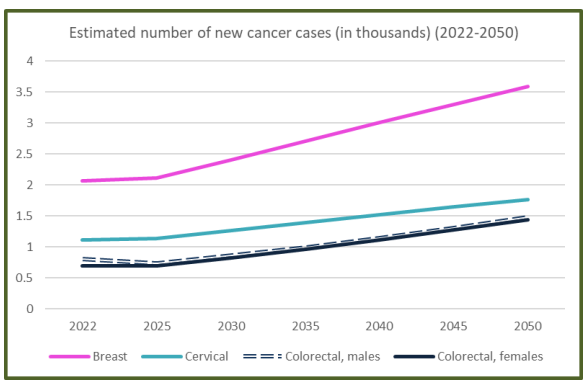
Population: 6 861 524
Human Development Index: 0.731 (high)

CANCER BURDEN

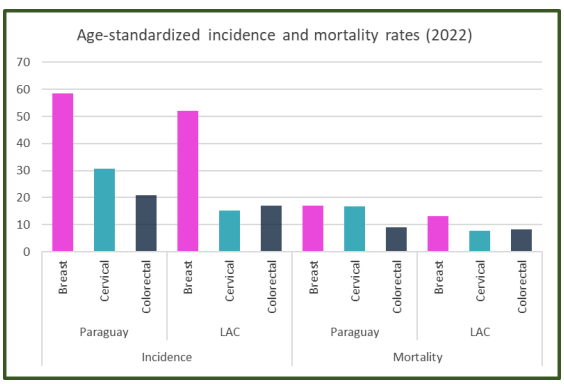
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	2 072	608	6 328	58.4	16.9
Cervical	1 115	601	3 488	30.6	16.7
Colorectal	1 494	659	3 987	women 18.9 men 23.3	women 7.9 men 10.0

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**478.71**
Out-of-pocket (% of health expenditure):	**35.94**
UHC Service Coverage Index:	**72**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/);
WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

PERU

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 34 352 719

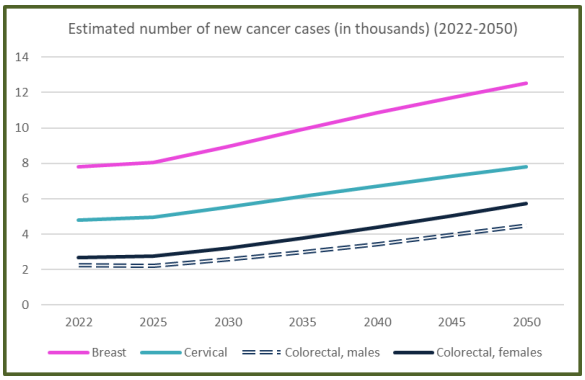
Human Development Index: 0.762 (high)

CANCER BURDEN

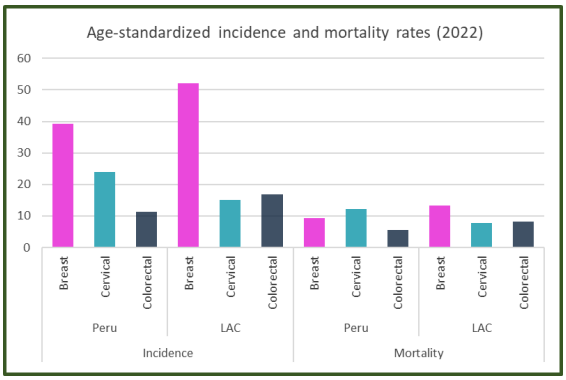
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	7 797	1 951	25 646	39.3	9.4
Cervical	4 809	2 545	15 370	23.9	12.1
Colorectal	4 943	2 527	13 714	women 11.8 men 10.9	women 5.7 men 5.3

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**412.21**
Out-of-pocket (% of health expenditure):	**27.22**
UHC Service Coverage Index:	**71**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE

SAINT KITTS AND NEVIS

COUNTRY REPORT 2023

Population: 47 755

Human Development Index: 0.838 (very high)

CANCER BURDEN

Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	–	–	–	–	–
Cervical	–	–	–	–	–
Colorectal	–	–	–	–	–

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS

No data

COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)

No data

HEALTH SYSTEM

Health expenditure per capita (US$):	**1 114.37**
Out-of-pocket (% of health expenditure):	**38.85**
UHC Service Coverage Index:	**79**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SAINT LUCIA

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 180 251

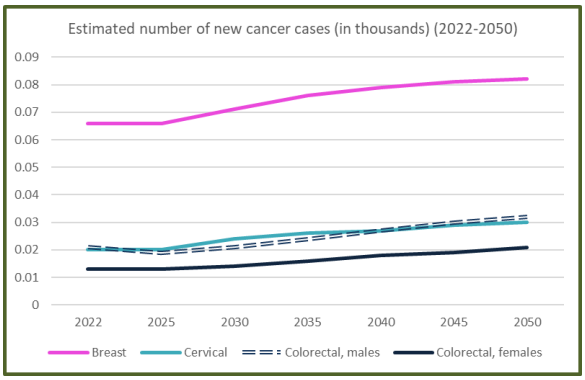
Human Development Index: 0.725 (high)

CANCER BURDEN

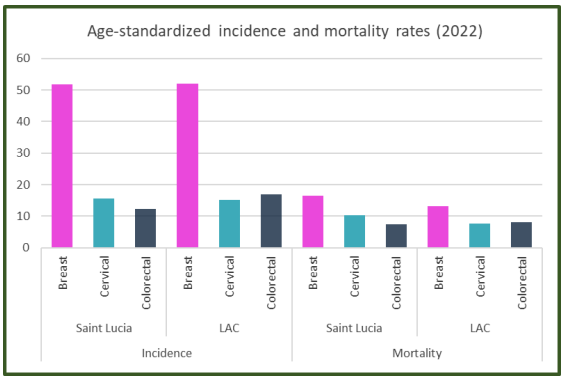
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	66	23	213	51.7	16.4
Cervical	20	13	58	15.7	10.4
Colorectal	34	22	95	women 9.4 men 15.4	women 6.1 men 8.9

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**584.67**
Out-of-pocket (% of health expenditure):	**37.22**
UHC Service Coverage Index:	**77**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SAINT VINCENT AND THE GRENADINES

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 103 698

Human Development Index: 0.772 (high)

CANCER BURDEN

Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	–	–	–	–	–
Cervical	–	–	–	–	–
Colorectal	–	–	–	–	–

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS

No data

COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)

No data

HEALTH SYSTEM

Health expenditure per capita (US$):	**448.31**
Out-of-pocket (% of health expenditure):	**26.19**
UHC Service Coverage Index:	**69**
National cancer control plan	✗
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✗
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

SURINAME

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 623 236

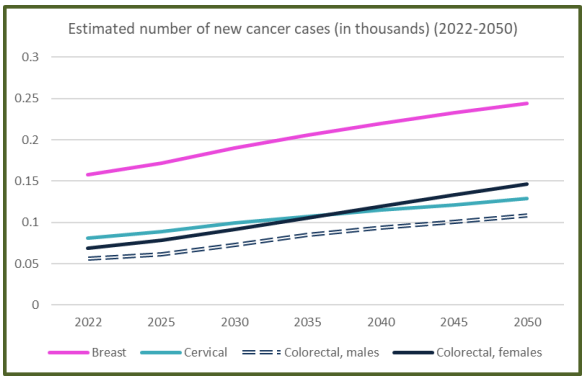
Human Development Index: 0.690 (medium)

CANCER BURDEN

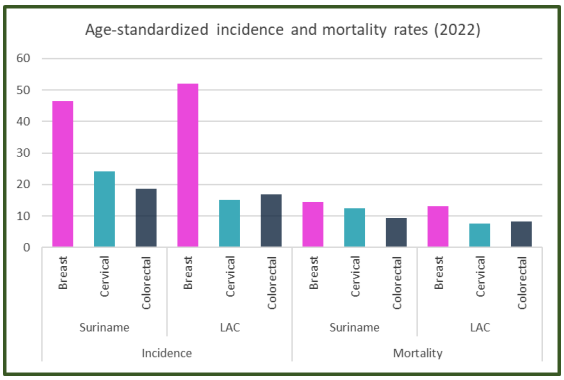
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	158	53	497	46.4	14.4
Cervical	81	43	248	24.2	12.4
Colorectal	125	64	340	women 18.2 men 19.2	women 7.8 men 11.1

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**298.93**
Out-of-pocket (% of health expenditure):	**24.83**
UHC Service Coverage Index:	**63**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✗
Palliative care availability as community/home-based care	✗
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)

URUGUAY

CANCERS AMENABLE TO SCREENING – CAPACITY AND RESPONSE COUNTRY REPORT 2023

Population: 3 423 108

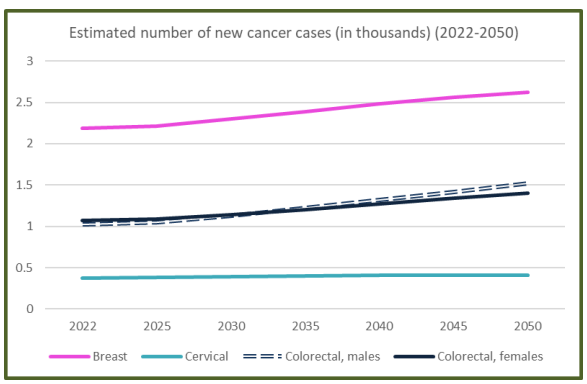
Human Development Index: 0.830 (very high)

CANCER BURDEN

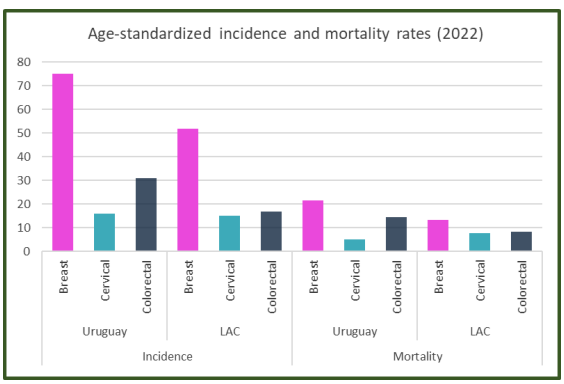
Cancer type	New cases	Deaths	Prevalent cases (5 years)	Incidence rate	Mortality rate
Breast	2 185	777	8 233	75.1	21.6
Cervical	377	160	1 269	15.9	5.2
Colorectal	2 092	1 140	5 957	women 26.6 men 36.9	women 11.5 men 19.2

(Age-standardized rates per 100 000)

PROJECTED INCIDENCE TRENDS



COMPARISON WITH LATIN AMERICA AND THE CARIBBEAN REGION (LAC)



HEALTH SYSTEM

Health expenditure per capita (US$):	**1 620.33**
Out-of-pocket (% of health expenditure):	**15.44**
UHC Service Coverage Index:	**82**
National cancer control plan	✓
Cancer registry linked to screening data	✗

FORMULATING RESPONSE

Cancer management guidelines	✓
Palliative care included in the operational integrated plan	✓
Palliative care availability as community/home-based care	✓
Pathology services available	✓

Sources: CanScreen5 (https://canscreen5.iarc.fr/); Global Cancer Observatory (https://gco.iarc.who.int/today/); WHO Cancer country profiles 2020 (https://www.who.int/teams/noncommunicable-diseases/surveillance/data/cancer-profiles)