WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management 2024–2030

World Health Organization
REGIONAL OFFICE FOR South-East Asia

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Abbreviations and acronyms

CCS	country capacity survey
childGICR	expansion of GICR in 2020 to include childhood cancers
FCTC	Framework Convention on Tobacco Control
GICC	Global Initiative for Childhood Cancer
GICR	Global Initiative for Cancer Registry Development
HIV	human immunodeficiency virus
HPV	human papillomavirus
IAEA	International Atomic Energy Agency
IARC	International Agency for Research on Cancer
LMIC	low- and middle-income country
NCCP	National Cancer Control Plan
NCD	noncommunicable disease
OPMD	oral potentially malignant disorder
PHC	primary health care
SDG	Sustainable Development Goal
SEACanGrid	South-East Asia Cancer Grid
STI	sexually transmitted infection(s)
UHC	Universal health coverage
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
WHA	World Health Assembly
WHO	World Health Organization

Foreword

Cancer is a significant challenge to public health, and to the overall development of countries. Comprehensive cancer prevention and management are essential to achieve the Sustainable Development Goal target 3.4, which aims to reduce premature mortality from noncommunicable diseases by one-third by 2030.

In 2022, the WHO South-East Asia Region had an estimated 2.4 million new cases of cancer. This included 56,000 children. 1.5 million people died of cancer in the same year, an increase of almost 33% in the last ten years. The cancer mortality-to-incidence ratio for the Region stands at 64.5%, against 36.5% for high-income countries, indicating vast potential for improving cancer management capacity in the Region. Alarmingly, estimates of International Agency for Cancer Research shows that the number of new cases in our region will increase by over 70% by 2045.

Cancer control must be addressed through a variety of strategies. These include reducing risk factors, preventing cancers attributable to infections, screening, early diagnosis, prompt treatment, provision of timely psychological support to cancer patients and families throughout the different stages of the disease and providing palliative care without excessive financial burden. In the last few years, the Member States in the Region have made notable progress in these areas. The region has seen the fastest decline in tobacco use, which is the risk factor responsible for a quarter of all cancers. Six countries have introduced nationwide vaccination against human papilloma virus for the prevention of cervical cancer. However, in spite of these efforts, cancer control in the Region is beset with challenges related to suboptimal national response on policy and programmes for comprehensive cancer prevention and control. National cancer control programmes and plans are often not fully aligned with evidence or best practices, leading to ineffective implementation. Consequently, policies and programs are not fully executed, resulting in millions of avoidable cancer cases. Late diagnosis, when treatment is generally less effective and more costly, is common. Not all countries in the Region have functioning population-based cancer registries or national surveillance systems to monitor the cancer burden and trends. Additionally, the availability of palliative and survivorship care is limited.

The WHO South-East Asia Regional Strategy for Comprehensive Cancer Prevention and Management (2024–2030) is designed to guide Member States to reaffirm their commitments to accelerate comprehensive cancer prevention and control activities. The Strategy recognizes public health approaches of stakeholder and community engagement, multi-sectoral actions, and social participation as enablers to support the implementation of the proposed activities. The plan is designed to leverage support from the global initiatives on childhood, cervical and breast cancers, and the focus on tobacco-related cancers. Recognizing the need for coordinated multi-pronged actions from government and partners, the regional strategy delineates actions to be taken by all stakeholders. The Strategy proposes seven strategic priorities as a framework for actions to facilitate its implementation, aligned with WHO guidance on the prevention and management of cancers. For each of the strategic priorities, a set of evidence, and/or practice-based interventions is proposed as broad guidance for countries to adapt and implement according to their respective national contexts.

I urge Member States to make full use of this strategy to design or revise their national cancer control plans. I look forward to supporting them in their implementation and monitoring efforts, to collectively reach comprehensive cancer prevention and management in the region. Together we can drive rapid and sustained progress towards the 2030 targets, for a healthier, more equitable and sustainable future.

Ms Saima Wazed
Regional Director
WHO South-East Asia

Executive summary

Cancer has emerged as a significant challenge to health, and to the overall development of countries. Comprehensive cancer prevention and management is essential to achieve the Sustainable Development Goal (SDG) target 3.4 of reducing by one-third premature mortality from noncommunicable diseases (NCDs) by 2030. In the WHO South-East Asia Region, 2.37 million new cases and 1.53 million deaths were estimated due to cancer in 2022. Moreover, the cancer burden is projected to rise rapidly, with an increase of new cases by 85.7% by 2050.

Reducing the burden of cancer requires coordinated efforts from many sectors to reduce risk factors, prevent cancers attributable to infections, conduct screening and early diagnosis, ensure prompt treatment and the provision of timely psychological support to cancer patients and families and palliative care without financial hardship. Member States of the Region have made notable progress in these areas. However, there are hindrances due to challenges related to suboptimal national response on policies and programmes for comprehensive cancer prevention and control.

The Secretariat developed the WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management 2024–2030 with contributions from the Member States and key partners to serve as a guide to promote a contextualized, evidence-based approach to cancer control. The strategy recognizes public health approaches such as stakeholder and community engagement, multisectoral actions, and social participation as key enablers to support the implementation of the proposed activities.

The strategy proposes the following seven strategic priorities as a framework for actions to facilitate its implementation, aligned with the guidance of WHO on the prevention and management of cancers. For each of the strategic priorities, a set of evidence and/or practice-based interventions are proposed as broad guidance for countries to adapt and implement according to their respective national contexts.

- **Strategic priority 1:** Formulate national cancer control plans with strong governance and accountability
- **Strategic priority 2:** Strengthen effective cancer prevention policies and programmes
- **Strategic priority 3:** Prioritize and implement early diagnosis and screening with appropriate resources
- **Strategic priority 4:** Scale-up capacity to implement cancer management with quality improvement
- **Strategic priority 5:** Improve access to supportive care, survivorship care and palliative care
- **Strategic priority 6:** Assess the burden, monitor trends and outcomes of cancer
- **Strategic priority 7:** Partner with communities, civil society, private sector, and other stakeholders

The strategy is designed to leverage support from the global initiatives on childhood, cervical and breast cancers, with a focus on tobacco-related cancers. Recognizing the need for coordinated multi-pronged actions from governments and partners, the regional strategy delineates for actions by all stakeholders.

The WHO Regional Office for South-East Asia and country offices will provide leadership and coordination to promote and monitor the national cancer control plans. WHO will also provide technical support, in partnership with other partners, to strengthen the national responses.

The WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management 2024–2030 will steer the Region towards contributing to the SDG target of a one-third reduction in premature mortality from NCDs by 2030 by helping to reduce cancer mortality.

01
Introduction

The cancer burden is on the rise worldwide, with an estimated 20 million reported new cancer cases and 9.7 million deaths in 2022 *(1)*. Multiple factors – ageing populations, unhealthy behaviours, infections, and environmental exposure among others – are contributing to the growing burden of cancer. Disparities in access to cancer prevention, diagnosis, treatment, and survival persist across regions and populations.

Recognizing that noncommunicable diseases (NCDs) including cancer constitute a major barrier to development in the twenty-first century, the global community, in the past two decades, has made strong commitments to address the NCD burden. The United Nations (UN) Sustainable Development Goals (SDGs) framework set the agenda for global action with target 3.4, which aims to reduce premature mortality from NCDs including cancer through prevention, treatment and well-being *(2)*.

A. Global scenario of cancer control

In 2013, the Sixty-sixth World Health Assembly (WHA) adopted the WHO Global NCD action plan 2013–2020 *(3)* (Resolution WHA 66.10) as the roadmap and a menu of policy options for all Member States and other stakeholders, to take coordinated and coherent actions to attain the nine voluntary global NCD targets, including that of a 25% relative reduction in premature mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 2025. In 2019, WHA72 decided to extend the period of the action plan to 2030 to ensure its alignment with the 2030 Agenda for Sustainable Development.

Global initiatives for cancer control

The global commitments propelled WHO to formulate specific strategies and programmes for cancer control in collaboration with other United Nations (UN) agencies and global partners. These initiatives are:

- Global Initiative for Childhood Cancer (GICC) launched in September 2018 *(6)*
- Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem rolled out in November 2020 *(7)*
- Global Breast Cancer Initiative launched in 2021 *(8)*
- Global Initiative for Cancer Registry Development (GICR) in 2011 *(9)*
- Expansion of GICR in 2020 to include childhood cancers (childGICR)
- Rays of Hope initiative launched in 2022 by the International Atomic Energy Agency (IAEA) to boost radiation medicine services *(10)*.

In 2017, the WHA, adopted Resolution WHA70.12 on cancer prevention and control, urging governments to commit to accelerating action against cancer. It urged governments to introduce national cancer control plans (NCCPs) and programmes that prioritize cost-effective interventions and promote universal access to comprehensive and cost-effective care for the integrated management of cancers *(4)*. In 2020, WHA adopted the Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem with a specific focus on national policy, and access to quality care for the three pillars (vaccination, screening and treatment) of the strategy *(5)*.

B. Cancer burden and status of cancer control in the WHO South-East Asia Region

The South-East Asia Region, comprising 11 countries and home to over two billion people, is experiencing an increasing cancer burden. Cancer is estimated to account for over 20% of the 4.4 million premature deaths from NCDs in 2019 *(11)*. In 2022, the estimated number of new cases in the Region was 2.37 million, while the number of deaths due to cancers was 1.53 million. The top three cancers, ranked by the number of cases among men were oral, lung and colorectum. Among women, the top three cancer types were breast, cervix uteri and lung *(12)*.

Based on the trends of cancer projected by the International Agency for Research on Cancer (IARC) *(12)*, the cancer burden in the Region is predicted to rise rapidly – from 2.37 million new cases in 2022 to 4.04 million by 2045 (refer to the WHO South-East Asia Region Cancer profile in Annex I). In the same period, mortality due to all cancers is likely to rise from 1.53 million to 2.74 million. The number of oral cancers in the Region is expected to rise from 177 000 in 2022 to 296 000 in 2045, while that of cancer of cervix uteri is expected to climb from 196 000 to 307 000 *(1)*.

Concerned with the high and increasing disease burden of cancer and its negative health and socioeconomic impact, the WHO South-East Asia Region accords highest priority to the prevention and management of cancers. In September 2015, the WHO Regional Committee for South-East Asia adopted the Resolution on Cancer Prevention and Control – The Way Forward (RC68/R5), urging Member States to develop/strengthen comprehensive national cancer prevention and control programmes. It urged Member States to strengthen all levels of the health delivery system to provide prevention, early detection, screening, diagnostic services and the range of cancer treatment, effective pain management and palliative care including opioids as appropriate *(13)*.

In 2022, the WHO Regional Committee for South-East Asia adopted the Resolution (RC75/R2), which endorsed the implementation Roadmap for the Prevention and Control of NCDs in South-East Asia (2022–2030)*(14)*. The roadmap calls for international cooperation for resource mobilization and capacity-building, scaling up early detection and coverage, and prioritizing cost-effective and high-impact interventions.

It provides strategic directions and tools to prioritize high-impact interventions that are feasible within the national context to accelerate the progress in NCD prevention and control and to advance primary health care (PHC), universal health coverage (UHC), human resources, accountability and quality of national health information systems. The South-East Asia Regional Strategy for primary health care 2022–2030 provides guidance to the Region on accelerating progress towards UHC and the health-related SDGs through a PHC oriented health system *(15)*.

In addition, several global strategies guide the control of avoidable risk factors of cancer in the Region. Among such strategies are – the WHO Framework Convention on Tobacco Control (FCTC) *(16)*, the Global Strategy to Reduce the Harmful Use of Alcohol *(17)*, Global Strategy on Diet, Physical Activity, and Health *(18)*, WHO Global Strategy for Occupational Health for All *(19)*, WHO Global Strategy on Health, Environment and Climate Change *(20)*, and the Global Health Sector

Strategies on, respectively, human immunodeficiency virus (HIV), viral hepatitis and sexually transmitted infections (STI) for 2022–2030 *(21)*.

In spite of these efforts, cancer control in the Region is beset with challenges related to suboptimal national response on policies and programmes for comprehensive cancer prevention and control. Countries of the Region are at different stages of designing and implementing NCCPs. Cancer services are included in health benefit packages in only six countries. Based on the administrative and official human papillomavirus (HPV) vaccination coverage reported annually through the WHO/UNICEF Joint Reporting Form on Immunization *(22)*, as of 2023, only six countries have introduced nationwide vaccination against HPV to prevent cervical cancers and seven countries have population-based screening programme for cervical cancer.

Cancer diagnostic capacity is not uniform. The number of computed tomography scanners available range from 3.8 to 73.4 per 10 000 cancer patients; cancer treatment centres are mostly overburdened with patients. Late-stage diagnoses, absence of standardized treatment protocols, and disparities in treatment quality across institutions are common *(23)*. The cancer mortality-to-incidence ratio for the Region stands at 64.5% compared to 36.5% for high-income countries *(1)*, indicating vast potential for improving cancer management capacity in the Region.

A profile of cancer burden and control status in the WHO South-East Asia Region and the countries are given in Annex 1.

C. Scaling up comprehensive cancer prevention and management in the WHO South-East Asia Region

Comprehensive cancer control is essential to achieve the SDG target 3.4 of reducing by one third premature mortality from NCDs by 2030. Cancer prevention and management needs a multisectoral, multidisciplinary, whole-of-society and whole-of-government approach.

The response to cancer control is not uniform among countries of the WHO South-East Asia Region. National cancer control programmes and plans are not fully aligned with evidence or best practices resulting in their ineffective implementation. Cancer prevention policies and programmes are not fully implemented, leading to millions of avoidable cancer cases. Late diagnosis, when treatment is generally less effective and costlier, is common. National capacities remain inadequate to manage the increasing cancers needs and scaling up services in a phased manner. Not all countries of the Region have functioning population-based cancer registries or national surveillance systems that include cancer indicators for routine reporting. The availability of palliative and survivorship care is limited.

Against this background, WHO established the “South-East Asia Cancer Grid” or, “SEACanGrid” in 2023 to facilitate collaboration among the countries of the Region for providing good quality cancer care. The SEACanGrid is constituted by key cancer service provider institutions nominated by the ministries of health as members of the grid. The objectives of the SEACanGrid include creating a platform for sharing of experiences on best practices, establishing standards of care, professional development, and technical collaboration among institutions in the grid. Contextual treatment regimens, technical dialogues, workforce development, virtual tumour boards, cancer information system strengthening, identification of areas for policy change, etc., are some examples of activities that the SEACanGrid would implement.

The WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management (2024–2030) has been developed to serve as a guide to promote a contextualized, evidence-based approach to cancer control and steer the Region to contribute towards achieving the SDG target of a relative reduction of premature mortality from NCDs by one third by 2030.

02

WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management 2024–2030

A. Purpose

The WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management (2024–2030) is designed to guide Member States to reaffirm their commitments to accelerate comprehensive cancer prevention and control activities. The strategy recognizes public health approaches of stakeholder and community engagement, multisectoral actions, and social participation as enablers to support the implementation of the proposed activities. The plan is designed to leverage support from the global initiatives on childhood, cervical and breast cancers, with a focus on tobacco-related cancers.

B. Goal

The goal of the strategy is to support Member States in reaching the SDG target of a one-third relative reduction of premature mortality from cancer by 2030, with 2015 as the baseline.

C. Strategic priorities

The strategy proposes the following seven strategic priorities as a framework for actions to facilitate its implementation, aligned with the guidance of WHO on the prevention and management of cancers.

Strategic priority 1: Formulate national cancer control plans with strong governance and accountability

Strategic priority 2: Strengthen effective cancer prevention policies and programmes

Strategic priority 3: Prioritize and implement early diagnosis and screening with appropriate resources

Strategic priority 4: Scale-up capacity to implement cancer management with quality improvement

Strategic priority 5: Improve access to supportive care, survivorship care and palliative care

Strategic priority 6: Assess the burden, monitor trends and outcomes of cancer

Strategic priority 7: Partner with communities, civil society, private sector, and other stakeholders

For each of the strategic priorities, a set of evidence and/or practice-based interventions and actions are proposed to address issues and deficiencies common to countries of the Region. As countries of the Region are at different stages of designing and implementing NCCPs, with varying levels of progress in cancer prevention and management, the proposed actions should be seen as broad guidance for countries to adapt and implement according to their respective national contexts.

Countries in the process of formulating NCCPs should consider all the priorities outlined in the strategy and adapt them as relevant. For countries with active NCCPs, the strategy offers a framework to review and revise current cancer control interventions as per evidence-based best practices. This will allow them to focus on priorities that are feasible and of high value within their allocated resources.

Strategic priority 1: Formulate national cancer control plans with strong governance and accountability

National programmes and plans on cancer that are inconsistent with evidence or best practices are common and result in ineffective implementation and potential harm *(24)*. In many low- and middle-income countries (LMICs), domestic and external investments in cancer management have been insufficient, resulting in avoidable deaths. Every dollar invested in cancer control in a LMIC is estimated to return 2.3 dollars in direct productivity gains, and 9.5 dollars in full social return on investment *(25)*.

Both the resolution of the WHA on cancer prevention and control (A70/R12) *(11)* and the resolution of the Regional Committee for South-East Asia on cancer prevention and control (RC68/R5) *(13)* call to activate political will and formulate, as appropriate, and implement an evidence-based NCCP with realistic priorities, costed with sustainable budgeting. The objective of funding cancer control should be to promote equitable access to high-quality services, focusing on both financial and geographical access. This involves making capital investments and funding services that offer the best value for the greatest good *(1)*. The tools developed by WHO and IARC for setting priorities and costing cancer control plans provide support for planning and costing, as well as the generation of investment cases and financial mechanisms to guarantee sustainability and financial protection.

WHO recommends that NCCPs should be governed by a designated and responsible government directorate, with the mandate to officially engage with all stakeholders including knowledgeable members of the public and professionals. Achieving sustainable success will require consistent monitoring of progress and revising the plans whenever needed *(24)*.

Proposed actions for countries

- **S1.1:** Activate political will and formulate and/or update context-appropriate NCCPs with realistic priorities and evidence-based strategies for greatest impact and best use of resources.
- **S1.2:** Undertake costing of the NCCP, which can be used to model financial projections with both domestic and external funding and allocate domestic budget to implement the cancer plan in a phased manner.
- **S1.3:** Establish mechanisms for reviewing, monitoring and evaluation of NCCP that align with national targets.
- **S1.4:** Strengthen or establish an effective national coordinating entity to govern the implementation of the NCCP by including senior government policy-makers and programme managers of national and subnational levels, experts in epidemiology, pathology, clinical specialties, palliative care, cancer registration and other relevant areas as well as representatives of cancer survivor groups and the general public.
- **S1.5:** Build capacity of programme managers in planning and managing cancer control programmes.

Strategic priority 2: Strengthen effective cancer prevention policies and programmes

About one third to one half of cancer cases could be prevented by reducing exposure to identifiable risk factors. As most countries of the Region do not fully implement cancer prevention policies and programmes, exposure to such risk factors results in millions of avoidable cancer cases *(24)*.

Tobacco, alcohol and obesity are the behavioural risk factors for cancers as well as for other major NCDs. Therefore, cancer risk factor control policies and programmes should be aligned to broader national health policies and programmes for greater efficiency and impact.

Tobacco smoking is responsible for about one fourth of cancer-related deaths globally *(25)*. Implementing WHO's "Best Buy" interventions to control tobacco, based on the MPOWER package *(26)* developed in alignment with the FCTC, has been shown to effectively reduce tobacco consumption. To reduce the risks posed by alcohol – which contributes to about 4% of all cancer deaths *(27)* – WHO's SAFER initiative on the control of alcohol should be implemented. Obesity – shown to increase the risk of certain cancers including oesophagus, gastric, breast, colon, and uterus *(28)* – can be addressed by promoting physical activity and healthy diets based on the WHO technical packages.

Infections leading to cancers remain important risk factors. About three quarters of the cervical cancers are attributable to high-risk HPV infection. HIV infection increases the risk of cervical cancer by six times compared to the general population due to the persistence of HPV infection *(29)*. The Regional Implementation Framework for Elimination of Cervical Cancer as a Public Health Problem (2021–2030) *(30)* emphasizes the need to strengthen primary prevention through HPV vaccination in national immunization programmes, including addressing the needs of subgroups that have higher risks including women living with HIV.

Approximately half of the liver cancers are attributable to hepatitis B and C infection *(31)*. Increasing the coverage of the birth dose and completion of the hepatitis B vaccine schedule through the national immunization programmes is a priority intervention in the Region to reduce the incidence of primary liver cancer *(32)*. At the same time, expansion of access to hepatitis B and C testing, treatment and cure to individuals who are already infected, would reduce progression of liver disease and reduce risk of development of liver cirrhosis and hepatocellular carcinoma *(33)*.

Physical, chemical and biological environments affect health and cancer risks. They include air pollution, exposure to radiation such as radon, unhealthy urban and working environments and occupational carcinogens. Ambient (outdoor) and indoor air pollution and, specifically, diesel engine exhaust are known carcinogens. WHO Global Strategy for Occupational Health for All *(18)*, and the WHO Global Strategy on Health, Environment and Climate Change *(19)* provide guidance on addressing these occupational and environmental risk factors for cancer.

Proposed actions for countries

- **S2.1:** Introduce and/or expand coverage of HPV vaccination to at least 90% by 2030 by increasing availability and effectiveness of vaccine delivery, addressing vaccine short supply, securing adequate availability of affordable vaccines, improving communication for vaccination, and securing adequate resources as outlined in the regional implementation framework for the elimination of cervical cancer as a public health problem *(29).*
- **S2.2:** Increase the coverage of hepatitis B vaccination to 90% for the birth dose as well as the third dose as per the strategies outlined in the Regional Vaccine Implementation Plan (2022–2026) *(34)* and the Integrated Action Plan for Viral Hepatitis, HIV and STIs in South-East Asia (2022–2026) *(32)*.

- **S2.3:** Reduce tobacco use by adopting the menu of actions for national responses as outlined in the South-East Asia Regional NCD Roadmap *(14)*.
    a. Recommended actions for Member States that are Parties to WHO FCTC *(16)*:
        i. Strengthen effective implementation of WHO FCTC and its protocols.
        ii. Establish and operationalize national mechanisms for coordination of FCTC implementation as part of a national strategy with specific mandates, responsibilities and resources.
    b. Recommended actions for Member States not Parties to WHO FCTC *(16)*:
        i. Implement demand reduction measures as advocated in the WHO MPOWER package.
        ii. Scale up the implementation of 'Best Buys' and other recommended interventions as per the national context.
- **S2.4:** Reduce the harmful use of alcohol by adopting the menu of actions for national response as outlined in the South-East Asia Regional NCD Roadmap *(14)*.
    a. Implement the WHO Global Strategy to Reduce Harmful Use of Alcohol *(15)* through multisectoral actions in the recommended target areas.
    b. Strengthen leadership and increase commitment and capacity to address the harmful use of alcohol.
    c. Increase awareness and strengthen the knowledge base on the magnitude and nature of problems caused by the harmful use of alcohol through awareness programmes, operational research, improved monitoring, and surveillance systems.
    d. Adapt the Global Action Plan (2022–2030) to effectively implement the global strategy to reduce the harmful use of alcohol as a public health priority.
- **S2.5:** Address obesity and reduce unhealthy diets by adopting policy actions recommended in the Strategic Action Plan to reduce the double burden of malnutrition in the South-East Asia Region (2016–2025) *(36)* and the menu of actions for national responses as outlined in the South-East Asia Regional NCD Roadmap *(14)*. These include the following:
    a. Promote, protect and support breastfeeding, and optimize complementary feeding *(37)*
    b. Implement WHO recommendations on the marketing of foods and non-alcoholic beverages to children *(38)*
    c. Adapt and implement WHO technical packages on salt reduction *(39)* and elimination of trans-fats *(40)*
    d. Establish standards for meals provided in schools, or foods and beverages sold in schools and other child-care settings, and ensure they meet healthy nutrition guidelines *(41)*
    e. Fiscal policies to reduce unhealthy diets and incentivize healthy dietary intake *(42)*
- S2.6: Reduce physical inactivity by adopting the menu of actions for national response to implement WHO's physical activity recommendations across the lifecycle *(43)* as outlined in the South-East Asia Regional NCD Roadmap *(14)*.
- **S2.7:** Adapt and implement the guidance provided in the WHO Global Strategy for Occupational Health for All *(19),* and the WHO Global Strategy on Health, Environment and Climate Change *(20)* to mitigate the occupational and environmental risks of cancers.

Strategic priority 3: Prioritize and implement early diagnosis and screening with appropriate resources

Early diagnosis is the best option for many cancers that cannot yet be prevented and those that occur despite prevention. Currently, in most LMICs, cancer is diagnosed at an advanced stage, when treatment is generally less effective, more expensive and more disabling *(35).*

WHO recommends two distinct approaches to identifying cancer early – early diagnosis based on symptoms and screening of asymptomatic individuals in a targeted population group[44]. The early diagnosis approach should be prioritized for investment. It involves raising awareness about cancer symptoms, building capacity for rapid clinical and pathological diagnosis and timely referral to a site where effective treatment can be provided. The WHO Guide to cancer early diagnosis offers necessary guidance to policy-makers and programme managers about establishing or strengthening services for early diagnosis *(44).* The WHO Guide for establishing a pathology laboratory in the context of cancer control prescribes minimum requirements for establishing histopathology and cytopathology services needed for early diagnosis *(45).*

For investments in screening programmes, cervical cancer should be prioritized based on the guidance given in the Regional Implementation Framework for the elimination of cervical cancer as a public health problem (2021–2030) *(30).* Population-based screening programmes for breast[46] and colorectal cancer *(47)* are recommended for well-resourced countries. Monitoring and surveillance of people chronically infected with hepatitis B and C for earlier detection of hepatocellular carcinoma would also be required *(48).*

The IARC Handbooks of Cancer Prevention (Volume 19) underlines that screening of individuals at high risk by clinical oral examination for oral cancer or oral potentially malignant disorders (OPMDs) may reduce mortality from cancer of the oral cavity. Individuals at high risk are defined as those with tobacco use, areca nut use, alcohol consumption, or a combination of these in any form *(49).* While countries can prioritize screening for other cancers based on the burden, this exercise should be guided by the availability of resources to address existing inequities in access to high-quality pathology and diagnostic imaging services *(24).*

Proposed actions for countries

- **S3.1:** For cervical cancer, strengthen screening and precancer treatment services as outlined in the regional implementation framework for the elimination of cervical cancer as a public health problem (2021–2030) *(30).*
- **S3.2:** Introduce appropriate screening approaches for other cancers based on the national burden and the availability of high-quality pathology and diagnostic imaging. Consider the use of digital technologies to supplement the screening process and pilot the screening progress with implementation research to generate evidence to scale up the programme in a stepwise manner.
- **S3.3:** Prioritize and invest in early diagnosis of high-burden cancers and those that respond well to treatment, through primary and secondary levels of care while ensuring necessary linkages for timely referral to a comprehensive cancer centre for diagnosis and treatment.
- **S3.4:** Enhance the health literacy level of the public regarding early symptoms and signs of cancer to help them seek early care while dispelling myths and misconceptions to reduce the stigma attached to cancer in the national context. Key messages should focus on educating the people about “alarm” or “red flag” symptoms indicative of cancer and ways to seek evaluation for such symptoms. The WHO Guide to cancer early diagnosis specifies the early symptoms and signs to be used as key messages *(44).*

- **S3.5:** Build capacity of primary health care staff for identification of early signs of cancer and the use of established referral linkages to refer suspected persons for early diagnostic services.
- **S3.6:** Ensure provision of minimum requirements for histopathology, cytopathology, and radiology diagnostic services at the tertiary level of health care and comprehensive cancer centres, as relevant, to support early diagnosis programmes. Use appropriate digital technologies to improve access to these services and explore the SEACanGrid for collaboration to complement these services.
- **S3.7:** Include cancer screening and early diagnosis services in the health benefit packages to financially protect patients and to encourage utilization.

Strategic priority 4: Scale-up capacity to implement cancer management with quality improvement

Cancer management is generally more complex than managing other NCDs due to the involvement of surgery, systemic therapies such as chemotherapy, immunotherapy and endocrine therapy as well as radiotherapy. A multidisciplinary team is essential for providing integrated, patient-centred care, forming the foundation of effective treatment *(24)*.

To ensure optimal outcomes and avoid unnecessary procedures with limited population benefits, treatments should align with nationally agreed evidence-based protocols. WHO has defined priority interventions to help guide decisions on the choice of medicines *(50)* and health products *(51).* A multidisciplinary framework-driven consensus process has shown to result in identification of low-value or potentially harmful cancer practices in India *(39).*

Cancer centres may be initially established as centralized comprehensive cancer facilities within tertiary care services to serve as hubs with referral networks to facilitate access in a defined geographical area*(24).* The WHO–IAEA (International Atomic Energy Agency) framework for setting up a cancer centre can serve as a useful guide*(53).*

The most pressing need in LMICs, in scaling up cancer management interventions is ensuring a competent workforce *(24).* About 60% of the total investment for scaling up capacity for cancer management in LMICs may be required for development of human resources *(54).* The challenge for development of skilled workforce for training capacities for cancer management is often due to insufficient in-country availability, which can be addressed through bilateral and multilateral cooperation among the countries of the Region. The SEACanGrid promotes collaboration that facilitates the development of expertise within the Region.

Ensuring continuous access to essential medicines, products and diagnostic equipment poses another hurdle in scaling up cancer control efforts. Global and regional cooperation mechanisms for strategic purchasing are in place to assist countries in addressing this challenge *(55,56)*.

National-level health technology assessments should be conducted before technology acquisition decisions are made, rather than relying on published cost-effectiveness studies from other countries *(57).*

Cancer treatment often leads to high out-of-pocket expenses, potentially causing catastrophic health expenditures and poverty. Therefore, plans and policies for scaling up cancer management interventions should incorporate measures to ensure financial protection.

It is important to ensure the cancer services are of high quality to avoid poor survival and other adverse consequences, including loss of function and persistent symptoms. Thus, it is prudent to measure quality of cancer care at the hospital level, to drive improvements in clinical practice by identifying gaps in care delivery *(58).*

Proposed actions for countries

- **S4.1:**Establish evidence-based protocols to optimize tests and treatments that have good population benefits and implement them across cancer centres in the country. The SEACanGrid can provide technical support to formulate evidence-based protocols.
- **S4.2:** When choosing the services to be scaled up, prioritize services to manage childhood, breast and cervical cancers as these cancers have good outcomes with less invasive treatments and relatively low health-care costs.
- **S4.3:** Establish comprehensive cancer care services initially as a centralized facility within tertiary care services to serve as the hub. Specialized services such as radiation therapy and nuclear medicine, which demand sophisticated maintenance and can be costly but offer significant value for money, should be centralized in hubs. These hubs can be supported by referral networks, shared care networks and teleconsultation facilities to ensure that these services are accessible across a defined geographical area.
- **S4.4:** Conduct national-level health technology assessments before technology acquisition decisions are made.
- **S4.5:** Introduce a system to evaluate quality of cancer services offered by cancer care centres, using a nationally relevant set of outcomes defined according to the levels of resources of the cancer care centres.
- **S4.6:** Invest in developing multidisciplinary teams essential for cancer diagnosis and treatment. Member States should explore establishing local training programmes to ensure a sustainable workforce. They can enhance workforce efficiency by harmonizing the linkage of institutions to boost capacity through participation in the SEACanGrid and other initiatives. As an interim solution, hiring experts from abroad can be considered to address critical expertise gaps until a reliable local workforce is established.
- **S4.7:** Promote access to cancer medicines, products and equipment by establishing lists of essential cancer medicine and strengthening strategic purchasing to choose wisely. Include cancer medicines and related health products in the pooled procurement initiatives that are effective in addressing other health-care priorities in the national context.
- **S4.8:** Integrate cancer services in emergencies and humanitarian settings as relevant to the national context.
- **S4.9:** Include cancer diagnostic and treatment services in health benefit packages, implement measures such as strategic purchase of services from the private health sector, introduce innovative financing models suitable to the country context like pooled pre-financing schemes to financially protect patients and prevent catastrophic out-of-pocket expenditure.

Strategic priority 5: Improve access to supportive care, survivorship care and palliative care

Psychological distress is known to occur in 20–50% of cancer patients *(59)*, and the unmet psychological needs of cancer patients and their families is well documented *(60)*. Supportive care plans for cancer patients should thus include timely psychological support to them and their families throughout the different stages of the disease.

Palliative care aims to alleviate pain and suffering during all phases of illness including treatment – in both patients receiving curative intent treatment and those on end-of-life care. Palliative care and symptom relief should be integrated into PHC at the national or subnational levels *(61),* using the guidance provided in the WHO manual on the subject *(62).*

Only four countries of the Region have reported palliative care as "generally available" in PHC as of May 2024. Palliative care services are generally isolated and patchy and not integrated into mainstream health services *(63).* The NCD PEN-HEARTS online course on palliative care, developed by the WHO Regional Office for South-East Asia, focuses on models of service delivery and symptom management. It is available on the OpenWHO platform as a self-paced online course designed to enhance the capacity of health professionals and others in palliative care *(64).*

As the number of cancer survivors in the Region rises, it is crucial to address their long-term rehabilitative needs and their reintegration into society and the workplace *(63).* Currently, survivorship care is available in only a few comprehensive cancer centres in the Region.

Proposed actions for countries

- **S5.1:** Include timely psychological support to cancer patients and families throughout the different stages of the disease in supportive care plans for cancer patients.
- **S5.2:** Formulate or strengthen policies to integrate palliative care in existing health-care service packages with a defined allocation of required resources.
- **S5.3:** Expand access to palliative care by integrating it into PHC and promote community-based palliative care. Promote use of telemedicine options to support palliative care at home/community.
- **S5.4:** Build palliative care capacity of PHC workers to facilitate the integration of select palliative care components into primary care settings. Include palliative care in the curriculum of medical, nursing and paramedical courses, and impart in-service training to health personnel at all levels. The SEACanGrid can provide technical support to build palliative care capacity.
- **S5.5:** Strengthen survivorship care as an integral part of comprehensive cancer care and introduce elements of survivorship care into primary and secondary levels of care.
- **S5.6:** Integrate rehabilitation services for cancer survivors into mainstream programmes on rehabilitation.
- **S5.7:** Adapt models of supportive and palliative care to bridge the care gap, leveraging local culture and practices and through the participation of local communities.

Strategic priority 6: Assess the burden, monitor trends and outcomes of cancer

Population-based cancer registration is considered the gold standard for the provision of information on cancer incidence in a defined population. It helps track trends and evaluate the impact of cancer control activities. The WHO–IARC publication on planning and developing population-based cancer registration in LMICs *(66)* provides technical advice to develop and implement population-based cancer registries. In the WHO South-East Asia Region, only eight countries reported having functional population-based cancer registries.

National surveillance systems, collection of vital statistics and national surveys are other important sources of cancer-related data. These data collection mechanisms also need to be strengthened. Research studies can provide insights into context-specific cancer risk factors, cancer care pathways survival patterns to identify-specific barriers, and specific factors enabling or inhibiting successful implementation of cancer control. Contextual solutions to identified problems can then be experimentally tested in a small geographical area and the learnings could be incorporated into the programme during scale-up *(67).*

Proposed actions for countries

- **S6.1:** Establish and expand population-based cancer registries; improve mechanisms to analyse data from hospital- and population-based registries; feed the data related to cancer burden, trends and outcomes into the decision-making process to enable evidence-based policy-making.
- **S6.2:** Consider making cancer a notifiable disease to improve the coverage of cancer registration.
- **S6.3:** Include cancer indicators in national health surveillance systems for routine reporting, national health surveys and vital statistics. Institute a national system to collate and report cancer-related data through these systems.
- **S6.4:** Encourage locally relevant cancer research in the national research agenda and provide for such research in funds earmarked for cancer research. Research should cover topics like context-specific risk factors, screening, referral and clinical pathways, survival, social and economic impact as well as the use of digital technologies for screening, diagnosis and treatment.
- **S6.5:** Encourage implementation research as a basis for evidence-informed decision-making, particularly to address hurdles in expansion of cancer management services.

Strategic priority 7: Partner with communities, civil society, private sector, and other stakeholders

Sustained improvement in a country's capability and capacity to provide effective cancer care requires the participation of communities, civil society, the private sector, and other stakeholders. Participatory governance should include the voices of health service users and the general public[68]. The role of civil society and other stakeholders is pivotal in advocacy efforts, fostering political will, ensuring client-oriented services and accountability of NCCPs. They also play a vital role in building support systems and significant resource mobilization. Community engagement is essential, especially in delivering palliative care at home and in community settings. Cancer survivors and caregivers can contribute significantly to shaping plans and programmes, acting as powerful advocates for enhancing awareness and removing stigma associated with cancer.

Proposed actions for countries

- **S7.1:** Strengthen or create a platform for people living with cancers, civil society, and other stakeholders to enable them to contribute to national cancer planning, including participatory approaches and voices of patients and survivors in cancer policy dialogues.
- **S7.2:** Engagement with the private sector (both not-for-profit and for-profit) may be considered when the public health sector has inadequate resources to meet the demand for cancer care. Such agreements should be transparent and avoid or manage conflicts of interest and unintended consequences.
- **S7.3:** Encourage civil society and other stakeholders to play a key role in advocacy and generating political will, to ensure client-oriented services, building support systems and mobilization of resources.
- **S7.4:** Engage the communities, civil society and other stakeholders for enhanced accountability on the implementation of national policies and plans to ensure comprehensive prevention and management of cancers.
- **S7.5:** Facilitate the creation of patient support groups to prevent abandonment of treatment, to support palliative and survivorship care.
- **S7.6:** Engage cancer survivors in promoting cancer literacy among the public and elimination of stigma associated with cancers.

03

Proposed actions by the World Health Organization Secretariat

WHO will support Member States to

- **3.1:** Develop and implement comprehensive cancer prevention and control programmes.
- **3.2:** Foster technical collaboration among institutions through the SEACanGrid to share experiences on best practices, establish standards of care and conduct professional development activities and encourage south–south collaboration.
- **3.3:** Establish, strengthen and expand partnerships with multisectoral stakeholders for cancer prevention and control.
- **3.4:** Establish cancer indicators in national health surveillance and reporting systems and national health surveys, establish hospital- and population-based cancer registries, and promote epidemiological, applied, and operational research and training through close collaboration with national research agencies and IARC.
- **3.5:** Strengthen health information systems at the facility level, particularly for childhood cancer in collaboration with IARC and St Jude Children's Research Hospital.
- **3.6:** Provide capacity-building and technical support for implementation, monitoring and evaluation of NCCPs.

04

Proposed actions by relevant stakeholders

A. Development agencies and specialized UN agencies

- **A1:** Recognize cancer as a public health priority and support cancer control in the programmes on promotion of the well-being of people.
- **A2:** Provide catalytic support and help countries build capacity in cancer prevention and management through infrastructure development and fulfilment of required specialized trained human resources for cancer management.
- **A3:** Assist countries in improving access to cancer medicines, vaccines and equipment requirements based on nationally agreed evidence-based treatment protocols for priority cancers.
- **A4:** Ensure linkages and promote convergence towards cancer prevention and control in the work of development agencies and specialized UN agencies, particularly through WHO's cancer initiatives as an entry point.
- **A5:** The International Atomic Energy Agency (IAEA) should conduct imPACT reviews wherever necessary and follow up to implement the recommendations; and prioritize expanding the reach of the Rays of Hope initiative in collaboration with WHO and other partners.
- **A6:** IARC should strengthen the regional hubs to support countries build their capacity to expand cancer registries.
- **A7:** The Joint United Nations Programme on HIV/AIDS (UNAIDS) and the United Nations Population Fund (UNFPA) should align programmes on cervical cancer with the South-East Asia Regional implementation framework for the elimination of cervical cancer as a public health problem.
- **A8:** Development banks and philanthropies should prioritize investment in cancer management.

B. Civil society

- **B1:** Generate awareness and demand, help build resilience and social support, advocate for action and act as a monitor for guiding implementation.
- **B2:** Advocate for political will to formulate and implement evidence-based NCCPs with realistic priorities with sustainable budgets.
- **B3:** Monitor cancer control services to ensure that they are patient-centred and in alignment with national policies and plans.
- **B4:** Facilitate awareness among the public to promote early diagnosis of cancers.
- **B5:** Supplement community-based palliative and survivorship care.

C. Professional associations and academia

- **C1:** Design and conduct activities enabling continuous professional development of health professionals concerning comprehensive cancer prevention and management.
- **C2:** Facilitate maintenance of professional and ethical standards.
- **C3:** Conduct and disseminate research on cancer prevention and management to inform policy implementation.

D. Media

- **D1:** Improve health literacy and reduce cancer stigma and discrimination. Interventions used to promote public awareness about cancer should be culturally appropriate and consistent.

05

Guidance to Member States for adapting the strategy

The WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management (2024–2030) serves as a guide to the Member States to translate their commitment to cancer-related international goals and targets into actions, suited to the political and legal systems, epidemiology of cancer, risk factors and availability of resources and technical expertise.

Cancer control can be a highly beneficial investment. Given the high burden of cancers, a plethora of risk factors and high costs associated with interventions, it may not be feasible for any country of the Region to implement all the proposed actions. Countries must set priorities and address them in a phased manner. The strategy provides broad directions to help Member States prioritize and invest in cancer prevention and management in a manner that ensures high returns, saves lives, reduces suffering, promotes equity, and increases productivity.

The countries that are planning or are in the process of formulating NCCPs should consider all the strategic priorities proposed in the strategy. They should adapt the proposed actions that are relevant and feasible for their health systems, and suitable for their epidemiological burden, and make them available to people of all ages and disadvantaged groups. The selection of actions should be guided by accurate data and after studying feasibility through the engagement of appropriate stakeholders.

For countries with operational NCCPs, the strategy provides a framework to review and revise ongoing interventions. If they do not adhere to global best practices and are not adapted to the capacity of national health systems, they may result in inappropriate resource allocation or diversion of resources and potential harm to patients and communities.

Given the limitations in infrastructure, expertise, equipment and other resources required for good-quality care in many countries of the Region, sharing of known knowledge, skills and experiences among service providers becomes an important approach in scaling up cancer management services.

In this context, the WHO Regional Office established the South-East Asia Cancer Grid (SEACanGrid) in 2023 as a platform to foster collaboration. Member States are encouraged to join the network as part of the NCCPs to reduce gaps in the services for early detection, diagnosis, treatment and palliative care of cancer. The National Cancer Grid of India *(69)* has shown that in countries with many institutions, a national network or grid will also be useful to scale up cancer care.

Effective implementation of policies and programmes relies on coordination and collaboration, with a focus on monitoring high-quality care. Through ongoing monitoring and evaluation of implementation, resources can be used efficiently, and continuous learning can help improve planning and delivery of care.

06

Monitoring and evaluating the implementation of the strategy

The WHO South-East Asia Regional Strategy for comprehensive cancer prevention and management (2024–2030) provides guidance to the Member States to adapt the proposed actions that are relevant and feasible for their health systems, and suitable for their epidemiological burden. Member States are encouraged to design frameworks to monitor as they review and update the NCCPs relative to their national priorities and to monitor their progress.

Annex 2 has the set of selected indicators that will be tracked by the WHO Secretariat to monitor the progress of the national responses related to policy, programmes and capacity for prevention, early detection, and treatment of cancer, within the national health systems. The data will be sourced from the NCD country capacity surveys (CCS) conducted biennially by WHO *(70)* and the HPV and hepatitis B vaccination coverage data reported by the countries through the WHO/UNICEF Joint Reporting Form on Immunization. The status of the progress of each Member State will be monitored biennially commencing from 2024 using NCD CCS carried out in 2023, which will serve as a baseline.

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ANNEX 1

Profile of cancer burden and control status in the WHO South-East Asia Region

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	1,055,249,443	1,004,208,333	2,059,447,776
Number of new cases*[2]	1,156,550	1,212,556	2,369,106
Age-standardized incidence rate (per 100,000)[2]	110.0	110.4	109.6
Number of deaths*[2]	799,837	728,122	1,527,959
Age-standardized mortality rate (per 100,000)[2]	76.4	66.2	71.0
5 year prevalent cases*[2]	2,412,029	3,060,842	5,472,871
Leading cancers ranked by number of new cases[2]	Lip/oral cavity, Lung, Colorectum	Breast, Cervix uteri, Ovary	Breast, Cervix uteri, Lung
Leading cancers ranked by number of deaths[2]	Lung, Liver, Lip/oral cavity	Breast, Cervix uteri, Ovary	Lung, Breast, Cervix uteri
Survival outcome: cancer mortality to incidence ratio[3]	0.69	0.60	0.65
Estimated new cases by 2050 (% rise from 2022)[4]	2,218,415 (91.8%)	2,180,478 (79.8%)	4,398,893 (85.7%)

* Including non-melanoma skin cancer

Cancer screening programmes (2023)[5]	Number of Countries	Coverage <10%	Coverage 10-50%	Coverage 50-70%	Coverage >70%
Existence of national screening program for cervical cancer					
Population based	7	2	2	2	1
Opportunistic	4	2	1	1	-
Existence of national screening program for breast cancer					
Population based	5	1	1	1	2
Opportunistic	4	1	2	1	-
Existence of national screening program for colon cancer					
Population based	2	-	-	1	-
Opportunistic	2	1	1	-	-
Existence of national screening program for oral cancer					
Population based	1	-	1	-	-
Opportunistic	1	-	-	-	-

Availability of diagnostic and treatment services in the public sector reported as 'Generally available (reaching to 50% or more patients in need)(2023)[5]	Number of countries
Cancer centres or departments at tertiary level	10
Caner centres or departments for children at tertiary level	6
Pathology services	9
Radiation therapy services	7
Cancer surgery	9
Chemotherapy	8

Plans and programs (2023)	Number of countries
Existence of national cancer control plans within the period of validity[5]	4
Existence of national plan for specific cancer types within the period of validity[5]	4
Cancer and palliative care included in country's largest public sector health benefit package[6]	6

Vaccination against Hepatitis B and Human papillomavirus (HPV)[7]	
Number of countries with introduction of nationwide HPV vaccination (2023)	6
Coverage of last dose HPV vaccination in girls by age 15 years (2022)	6% - 74%
Coverage of Hepatitis B vaccination third dose (2022)	71% - 98%

Guidelines/ systems for early detection, referral and management (2023)[5]	Number of countries
Existence of program/guidelines to strengthen early detection of first symptoms of any cancer at primary health care level	10
Existence of clearly defined referral system for cancer from primary care to secondary and tertiary care for suspected cases of any cancer	10
Existence of approved national guidelines for management (diagnosis and treatment) for cancers through primary health care approach	8

Cancer registration (2023)[5]	Number of countries
Existence of population-based cancer registries	7
Existence of hospital-based cancer registries	9

Notes and references:

1 Population (2022); (Data source: World Population Porspects 2022: United Nations Dept of Economic and Social Affairs, Population Division. https://population.un.org/wpp/)

2 Burden of cancer (2022); (Data source: International Agency for Research on Cancer, Cancer today, Population factsheets. https://gco.iarc.fr/today/en/fact-sheets-populations)

3 Survival outcome: Cancer mortality-to-incidence ratio (2022); Survival outcome in terms of Mortality to Incidence Ratio (MIR) is Calculated from Incidence and mortality data for the year 2022 from Global Cancer Observatory. The mortality-to-incidence ratio (MIR) is calculated by dividing the number of deaths for a selected cancer type in a given year by the number of newly diagnosed cases for that cancer in the same year. MIR can help to identify population groups with poorer survival outcomes which may warrant further investigation. MIR can also be used for international benchmarking because incidence and mortality data of adequate quality are generally available from most countries, and the MIR is straightforward to calculate.
(Data source: Cancer Australia, National cancer control indicators, mortality-to-incidence ratio. https://ncci.canceraustralia.gov.au/outcomes/mortality-incidence-ratio/mortality-incidence-ratio)

4 Estimated new cases by 2050; (Data source: International Agency for Research on Cancer, Global cancer observatory, Cancer tomorrow. https://gco.iarc.fr/tomorrow/en/dataviz/isotype)

5 Cancer Screening programmes; Early detection and referral; Diagnostic and treatment services in public sector; Cancer registration
(Data source: Extracted from NCD country capacity survey 2023 responses)

6 Health benefit package covering cancer and palliative care (2023)
(Data source: WHO global survey on inclusion of cancer care in health-benefit packages 2020 - 21. https://iris.who.int/bitstream/handle/10665/375828/9789240088504-eng.pdf?sequence=1)

7 Vaccination against Human Papilloma Virus and Hepatitis B
(Data source: https://immunizationdata.who.int/global/wiise-detail-page/human-papillomavirus-(hpv)-vaccination-coverage?ANTIGEN=&YEAR=&ADVANCED_GROUPINGS=SEARO&CODE= and https://immunizationdata.who.int/global/wiise-detail-page/hepatitis-b-vaccination-coverage?ANTIGEN=&YEAR=&ADVANCED_GROUPINGS=SEARO&CODE=

Profile of cancer burden in the countries of WHO South-East Asia Region

Bangladesh

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	84,788982	83,096,698	167,885,680
Number of new cases*[2]	94,922	72,334	167,256
Age-standardized incidence rate (per 100,000)[2]	120.8	89.5	105.6
Number of deaths*[2]	68,591	48,007	116,598
Age-standardized mortality rate (per 100,000)[2]	87.8	60.9	74.7
5 year prevalent cases*[2]	181,944	164,393	346,337
Leading cancers ranked by number of new cases[2]	Esophagus, Lip/ Oral cavity, Lungs	Breast, Cervix, Esophagus	Esophagus, lung, lip/oral cavity
Leading cancers ranked by number of deaths[2]	Esophagus, Lung, Lip/Oral cavity	Esophagus, Breast, Cervix	Esophagus, lung, Lip/Oral cavity
Survival outcome: cancer mortality to incidence ratio[3]	0.72	0.66	0.69
Estimated new cases by 2050 (% rise from 2022)[4]	191,209 (101.4%)	156,574 (116.5%)	347,783 (107.9%)

* Including Non-melanoma skin cancer

Bhutan

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	419 618	368 326	787 944
Number of new cases*[2]	356	282	638
Age-standardized incidence rate (per 100,000)[2]	90.5	84.5	87.6
Number of deaths*[2]	280	200	480
Age-standardized mortality rate (per 100,000)[2]	72.4	61.2	76.2
5 year prevalent cases*[2]	633	613	1246
Leading cancers ranked by number of new cases[2]	Stomach, Esophagus, Liver	Cervix, Stomach, Lungs	Stomach, Lungs, Cervix
Leading cancers ranked by number of deaths[2]	Stomach, Esophagus, Liver	Stomach, Cervix, Lungs	Stomach, Lungs, Esophagus
Survival outcome: cancer mortality to incidence ratio[3]	0.79	0.71	0.75
Estimated new cases by 2050 (% rise from 2022)[4]	816 (129.2%)	677 (140.1%)	1,494 (134.2%)

* Including Non-melanoma skin cancer

DPR Korea

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	12,713,285	13 277 390	25 990 675
Number of new cases*[2]	29,398	32,135	61 533
Age-standardized incidence rate (per 100,000)[2]	187.5	155.0	166.1
Number of deaths*[2]	22,385	20,404	42 789
Age-standardized mortality rate (per 100,000)[2]	143.2	93.9	113.9
5 year prevalent cases*[2]	51 095	64 499	115 594
Leading cancers ranked by number of new cases[2]	Lung, Liver, Colorectum	Lung, Breast, Colorectum	Lung, Colorectum, Liver
Leading cancers ranked by number of deaths[2]	Lung, Liver, Stomach	Lung, Colorectum, Liver	Lung, Liver, Stomach
Survival outcome: cancer mortality to incidence ratio[3]	0.76	0.63	0.69
Estimated new cases by 2050 (% rise from 2022)[4]	53,761 (82.9%)	44,468 (38.4%)	98228 (59.6%)

* Including Non-melanoma skin cancer

Notes and references:

1 Population (2022); (Data source: World Population Porspects 2022: United Nations Dept of Economic and Social Affairs, Population Division. https://population.un.org/wpp/)

2 Burden of cancer (2022); (Data source: International Agency for Research on Cancer, Cancer today, Population factsheets. https://gco.iarc.fr/today/en/fact-sheets-populations)

3 Survival outcome: Cancer mortality-to-incidence ratio (2022); Survival outcome in terms of Mortality to Incidence Ratio (MIR) is Calculated from Incidence and mortality data for the year 2022 from Global Cancer Observatory. The mortality-to-incidence ratio (MIR) is calculated by dividing the number of deaths for a selected cancer type in a given year by the number of newly diagnosed cases for that cancer in the same year. MIR can help to identify population groups with poorer survival outcomes which may warrant further investigation. MIR can also be used for international benchmarking because incidence and mortality data of adequate quality are generally available from most countries, and the MIR is straightforward to calculate.
(Data source: Cancer Australia, National cancer control indicators, mortality-to-incidence ratio. https://ncci.canceraustralia.gov.au/outcomes/mortality-incidence-ratio/mortality-incidence-ratio)

4 Estimated new cases by 2050; (Data source: International Agency for Research on Cancer, Global cancer observatory, Cancer tomorrow. https://gco.iarc.fr/tomorrow/en/dataviz/isotype)

India

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	730 746 615	675 885 166	1 406 631 781
Number of new cases*[2]	691 178	722 138	1 413 316
Age-standardized incidence rate (per 100,000)[2]	97.1	100.8	98.5
Number of deaths*[2]	470 055	446 772	916 827
Age-standardized mortality rate (per 100,000)[2]	66.5	62.6	64.4
5 year prevalent cases*[2]	1 470 047	1 788 471	3 258 518
Leading cancers ranked by number of new cases[2]	Lip/Oral cavity, Lung, Esophagus	Brest, Cervix, Ovary	Breast, Lip/Oral cavity, cervix
Leading cancers ranked by number of deaths[2]	Lip/Oral cavity, Lung, Esophagus	Brest, Cervix, Ovary	Breast, Lip/Oral cavity, cervix
Survival outcome: cancer mortality to incidence ratio[3]	0.68	0.62	0.64
Estimated new cases by 2050 (% rise from 2022)[2]	1,354,170 (95.9%)	1,336,513 (85.1%)	2,690,683 (90.4%)

* Including Non-melanoma skin cancer

Indonesia

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	730,746,615	675,885,166	1,406,631,781
Number of new cases*[2]	691,178	722,138	1,413,316
Age-standardized incidence rate (per 100,000)[2]	97.1	100.8	98.5
Number of deaths*[2]	470,055	446,772	916,827
Age-standardized mortality rate (per 100,000)[2]	66.5	62.6	64.4
5 year prevalent cases*[2]	1,470 047	1,788,471	3,258,518
Leading cancers ranked by number of new cases[2]	Lip/Oral cavity, Lung, Esophagus	Brest, Cervix, Ovary	Breast, Lip/Oral cavity, cervix
Leading cancers ranked by number of deaths[2]	Lip/Oral cavity, Lung, Esophagus	Brest, Cervix, Ovary	Breast, Lip/Oral cavity, cervix
Survival outcome: cancer mortality to incidence ratio[3]	0.68	0.62	0.64
Estimated new cases by 2050 (% rise from 2022)[2]	1,354,170 (95.9%)	1,336,513 (85.1%)	2,690,683 (90.4%)

* Including Non-melanoma skin cancer

Maldives

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	337,848	203,137	540,985
Number of new cases*[2]	248	231	479
Age-standardized incidence rate (per 100,000)[2]	107.1	111.3	105.3
Number of deaths*[2]	150	91	241
Age-standardized mortality rate (per 100,000)[2]	68.5	48.8	58.8
5 year prevalent cases*[2]	603	718	1321
Leading cancers ranked by number of new cases	Lung, Colorectum, Nasopharynx	Breast, Cervix, Ovary	Breast, Cervix, Colorectum
Leading cancers ranked by number of deaths	Lung, Liver, Colorectum	Breast, Cervix, Ovary	Lung, Liver, Breast
Survival outcome: cancer mortality to incidence ratio[3]	0.60	0.39	0.5
Estimated new cases by 2050 (% rise from 2022)[4]	950 (283.1%)	495 (114.3%)	1,445 (201.7%)

* Including Non-melanoma skin cancer

Notes and references:

1 Population (2022); (Data source: World Population Porspects 2022: United Nations Dept of Economic and Social Affairs, Population Division. https://population.un.org/wpp/)

2 Burden of cancer (2022); (Data source: International Agency for Research on Cancer, Cancer today, Population factsheets. https://gco.iarc.fr/today/en/fact-sheets-populations)

3 Survival outcome: Cancer mortality-to-incidence ratio (2022); Survival outcome in terms of Mortality to Incidence Ratio (MIR) is Calculated from Incidence and mortality data for the year 2022 from Global Cancer Observatory. The mortality-to-incidence ratio (MIR) is calculated by dividing the number of deaths for a selected cancer type in a given year by the number of newly diagnosed cases for that cancer in the same year. MIR can help to identify population groups with poorer survival outcomes which may warrant further investigation. MIR can also be used for international benchmarking because incidence and mortality data of adequate quality are generally available from most countries, and the MIR is straightforward to calculate.
(Data source: Cancer Australia, National cancer control indicators, mortality-to-incidence ratio. https://ncci.canceraustralia.gov.au/outcomes/mortality-incidence-ratio/mortality-incidence-ratio)

4 Estimated new cases by 2050; (Data source: International Agency for Research on Cancer, Global cancer observatory, Cancer tomorrow. https://gco.iarc.fr/tomorrow/en/dataviz/isotype)

Myanmar

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	26,616 518	28,610,634	55,227,152
Number of new cases*[2]	35,822	41,781	77,603
Age-standardized incidence rate (per 100,000)[2]	147.2	129.8	135.5
Number of deaths*[2]	27,518	27,323	54,841
Age-standardized mortality rate (per 100,000)[2]	114.9	85.1	97.1
5 year prevalent cases*[2]	65,709	90,968	156,677
Leading cancers ranked by number of new cases[2]	Lung, Liver, Stomach	Breast, Cervix, Lungs	Lungs, Breast, Cervix
Leading cancers ranked by number of deaths[2]	Lung, Liver, Stomach	Cervix, Lung, Breast	Lung, Liver, Stomach
Survival outcome: cancer mortality to incidence ratio[3]	0.77	0.65	0.7
Estimated new cases by 2050 (% rise from 2022)[4]	63,982 (78.6%)	62,863 (50.5%)	126,844 (63.5%)

* Including Non-melanoma skin cancer

Nepal

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	14,032,503	16,193,078	30,225,581
Number of new cases*[2]	9,792	12,216	22,008
Age-standardized incidence rate (per 100,000)[2]	81.6	80.7	81.6
Number of deaths*[2]	6,936	7,768	14,704
Age-standardized mortality rate (per 100,000)[2]	58.1	52.5	55.3
5 year prevalent cases*[2]	18,188	26,615	44,803
Leading cancers ranked by number of new cases[2]	Lung, Stomach, Lip/Oral cavity	Breast, Cervix, Lung	Lung, Breast, Cervix
Leading cancers ranked by number of deaths[2]	Lung, Stomach, Liver	Cervix, Breast, Lung	Lung, Stomach, Cervix
Survival outcome: cancer mortality to incidence ratio[3]	0.71	0.63	0.66
Estimated new cases by 2050 (% rise from 2022)[4]	18,364 (87.5%)	23,893 (95.6%)	42,258 (92.0%)

* Including Non-melanoma skin cancer

Sri Lanka

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	10,326,769	11,249,075	21,575,844
Number of new cases*[2]	15,733	17,510	33,243
Age-standardized incidence rate (per 100,000)[2]	110.6	106.0	106.9
Number of deaths*[2]	9,820	9,325	19,145
Age-standardized mortality rate (per 100,000)[2]	67.8	52.6	59.0
5 year prevalent cases*[2]	36,472	50,036	86,508
Leading cancers ranked by number of new cases[2]	Lip/Oral cavity, Lung, Colorectum	Breast, Cervix, Thyroid	Breast, Lip/ Oral cavity, Colorectum
Leading cancers ranked by number of deaths[2]	Lung, Esophagus, Lip/Oral cavity	Breast, Cervix, Ovary	Lung, Breast, Esophagus
Survival outcome: cancer mortality to incidence ratio[3]	0.62	0.53	0.57
Estimated new cases by 2050 (% rise from 2022)[4]	23,454 (49.1%)	24,802 (41.6%)	48,256 (45.2%)

* Including Non-melanoma skin cancer

Notes and references:

1 Population (2022); (Data source: World Population Porspects 2022: United Nations Dept of Economic and Social Affairs, Population Division. https://population.un.org/wpp/)

2 Burden of cancer (2022); (Data source: International Agency for Research on Cancer, Cancer today, Population factsheets. https://gco.iarc.fr/today/en/fact-sheets-populations)

3 Survival outcome: Cancer mortality-to-incidence ratio (2022); Survival outcome in terms of Mortality to Incidence Ratio (MIR) is Calculated from Incidence and mortality data for the year 2022 from Global Cancer Observatory. The mortality-to-incidence ratio (MIR) is calculated by dividing the number of deaths for a selected cancer type in a given year by the number of newly diagnosed cases for that cancer in the same year. MIR can help to identify population groups with poorer survival outcomes which may warrant further investigation. MIR can also be used for international benchmarking because incidence and mortality data of adequate quality are generally available from most countries, and the MIR is straightforward to calculate.
(Data source: Cancer Australia, National cancer control indicators, mortality-to-incidence ratio. https://ncci.canceraustralia.gov.au/outcomes/mortality-incidence-ratio/mortality-incidence-ratio)

4 Estimated new cases by 2050; (Data source: International Agency for Research on Cancer, Global cancer observatory, Cancer tomorrow. https://gco.iarc.fr/tomorrow/en/dataviz/isotype)

Thailand

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	34,057,038	36,021,160	70,078,198
Number of new cases*[2]	90,333	93,208	183,541
Age-standardized incidence rate (per 100,000)[2]	161.6	150.6	154.4
Number of deaths*[2]	65,100	53,729	118,829
Age-standardized mortality rate (per 100,000)[2]	112.4	88.2	93.4
5 year prevalent cases*[2]	188,599	253,301	441,900
Leading cancers ranked by number of new cases[2]	Liver, Lung, Colorectum	Breast, Colorectum, Liver	Liver, Lung, Breast
Leading cancers ranked by number of deaths[2]	Liver, Lung, Colorectum	Liver, Breast, Lung	Liver, Lung, Colorectum
Survival outcome: cancer mortality to incidence ratio[3]	0.72	0.58	0.64
Estimated new cases by 2050 (% rise from 2022)[4]	148,624 (64.5%)	138,371 (48.5%)	286,995 (56.4%)

* Including Non-melanoma skin cancer

Timor-Leste

Population and burden of cancer (2022)	Males	Females	Both Sexes
Population[1]	691,877	677,554	1,369,431
Number of new cases*[2]	373	455	828
Age-standardized incidence rate (per 100,000)[2]	80.8	89.6	84.5
Number of deaths*[2]	262	255	517
Age-standardized mortality rate (per 100,000)[2]	59.0	53.0	55.4
5 year prevalent cases*[2]	754	1103	1857
Leading cancers ranked by number of new cases[2]	Lung, Colorectum, Liver	Breast, Cervix, Colorectum	Breast, Lung, Colorectum
Leading cancers ranked by number of deaths[2]	Lung, Liver, Nasopharynx	Breast, Cervix, Lung	Lung, Breast, Liver
Survival outcome: cancer mortality to incidence ratio[3]	0.70	0.56	0.62
Estimated new cases by 2050 (% rise from 2022)[4]	755 (102.4%)	917 (101.5%)	1,672 (101.9%)

* Including Non-melanoma skin cancer

Notes and references:

1 Population (2022); (Data source: World Population Porspects 2022: United Nations Dept of Economic and Social Affairs, Population Division. https://population.un.org/wpp/)

2 Burden of cancer (2022); (Data source: International Agency for Research on Cancer, Cancer today, Population factsheets. https://gco.iarc.fr/today/en/fact-sheets-populations)

3 Survival outcome: Cancer mortality-to-incidence ratio (2022); Survival outcome in terms of Mortality to Incidence Ratio (MIR) is Calculated from Incidence and mortality data for the year 2022 from Global Cancer Observatory. The mortality-to-incidence ratio (MIR) is calculated by dividing the number of deaths for a selected cancer type in a given year by the number of newly diagnosed cases for that cancer in the same year. MIR can help to identify population groups with poorer survival outcomes which may warrant further investigation. MIR can also be used for international benchmarking because incidence and mortality data of adequate quality are generally available from most countries, and the MIR is straightforward to calculate.
(Data source: Cancer Australia, National cancer control indicators, mortality-to-incidence ratio. https://ncci.canceraustralia.gov.au/outcomes/mortality-incidence-ratio/mortality-incidence-ratio)

4 Estimated new cases by 2050; (Data source: International Agency for Research on Cancer, Global cancer observatory, Cancer tomorrow. https://gco.iarc.fr/tomorrow/en/dataviz/isotype)

ANNEX 2

Monitoring and evaluating the implementation of the strategy

The set of selected indicators that will be tracked by the WHO Secretariat biennially to monitor the progress of the national responses related to policy, programmes and capacity for prevention, early detection, and treatment of cancer, within the national health systems are indicated below along with the data sources.

A.	**Plans and programs[1]**
A.1	Existence of a national cancer control plans within the period of validity
B.	**Vaccination against Hepatitis B and Human papillomavirus (HPV)[2]**
B.1	Introduction of nationwide HPV vaccination
B.2	Coverage of last dose HPV vaccination in girls by age 15 years
B.3	Coverage of Hepatitis B vaccination third dose
C	**Cancer screening programmes[1]**
C.1	Existence of a national screening program for cervical cancer
C.2	Existence of a national screening program for breast cancer
C.3	Existence of a national screening program for colon cancer
C.4	Existence of a national screening program for oral cancer
D	**Guidelines/ systems for early detection, referral and management[1]**
D.1	Existence of a national program/guidelines to strengthen early detection of first symptoms of any cancer at primary health care level
D.2	Existence of clearly defined referral system for cancer from primary care to secondary and tertiary care for suspected cases of any cancer
D.3	Existence of approved national guidelines for management (diagnosis and treatment) for cancers through primary health care approach
E	**Availability of diagnostic and treatment services in the public sector with services reported as 'Generally available (reaching to 50% or more patients in need)[1]**
E.1	Cancer centres or departments at tertiary level
E.2	Caner centres or departments for children at tertiary level
E.3	Pathology services
E.4	Radiation therapy services
E.5	Cancer surgery
E.6	Chemotherapy
F	**Cancer registration[1]**
F.1	Existence of population-based cancer registries
F.2	Existence of hospital-based cancer registries

1. NCD National Country capacity survey https://www.who.int/teams/ncds/surveillance/monitoring-capacity/ncdccs

2. World health Organization. Human Papillomavirus (HPV) and Hepatitis B vaccination coverage. https://immunizationdata.who.int/global/wiise-detail-page/human-papillomavirus-(hpv)-vaccination-coverage?ANTIGEN=&YEAR=&ADVANCED_GROUPINGS=SEARO&CODE= and https://immunizationdata.who.int/global/wiise-detail-page/hepatitis-b-vaccination-coverage?ANTIGEN=&YEAR=&ADVANCED_GROUPINGS=SEARO&CODE=


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