

Summary

Following a request received from the Minister of Health of Peru on September 2023, an imPACT Review was conducted from 8 April 2024 to 13 April 2023 by the [Programme of Action for Cancer Therapy \(PACT\)](#) of the International Atomic Energy Agency (IAEA), the World Health Organization (WHO), and International Agency for Research on Cancer (IARC). The imPACT Review was organized within the framework of the [WHO-IAEA Joint Programme on Cancer Control](#). A team of international experts, nominated by the IAEA, WHO and IARC, held technical discussions with key stakeholders, and visited the principal cancer facilities in the country.

Main findings

1. Cancer burden

According to GLOBOCAN 2022, Peru ranks fourth in cancer incidence in Latin America and the Caribbean, with an estimated 72 827 new cases and 35 934 deaths in 2022. The cancer burden is projected to rise by 15% by 2030, reaching 83 922 new cases and 41 502 deaths. The most common cancers among women are breast, cervical, and stomach cancer, while in men, prostate, stomach, and colorectal cancers are most prevalent. Stomach cancer remains the leading cause of cancer mortality for both sexes.

Childhood and adolescent cancer also represent a significant public health concern, with an estimated 1931 new cases and 797 deaths annually among those aged 0–19. Leukemia is the most common and deadliest cancer in this age group. Efforts are underway to decentralize paediatric oncology services beyond Lima to regions such as Arequipa, La Libertad and Junín, aiming to improve early detection and access to specialized care across the country.

2. Health system overview

Peru's health system is highly segmented and fragmented, comprising of public and private sectors with overlapping responsibilities and varying levels of coverage. The public sector includes the Ministry of Health (MINSa), EsSalud (social security), and subsystems for the Armed Forces and National Police, while the private sector includes insurers and non-profit organizations. Despite the Framework Law on Universal Health Insurance (Law No. 29344), which mandates universal coverage through the Essential Health Insurance Plan (PEAS), disparities in access, financing, and service provision persist, particularly for high-cost diseases like cancer. The system is governed by



MINSa, with oversight from SuSalud and the Superintendence of Banking and Insurance, but governance is impacted by institutional fragmentation and regional inequalities.

Challenges include under-resourced health infrastructure, unequal distribution of the health workforce, limited access to essential medicines, especially in rural areas, and a lack of interoperability in health information systems. Although initiatives like the Integrated Health Care Model and regional decentralization aim to improve service delivery, only a third of those with health needs sought care in 2021. The country is also exploring regional procurement collaborations to improve access to cancer treatments. Education and training of health professionals faced regional disparities and infrastructure limitations, despite a structured pathway from medical school to specialization and continuing education.

3. Cancer control planning and governance

The governance and financing system for cancer control in Peru has a framework that clearly defines the roles of the Ministry of Health (MINSa) and the National Institute of Neoplastic Diseases (INEN). MINSa is responsible for formulating, implementing, and evaluating the national cancer control policies, strategies, and programmes, coordinating its execution throughout the country. INEN, as a technical-scientific body, leads the implementation of oncological policies, guaranteeing the quality of interventions through the National Oncological Network. The creation of the Directorate for Cancer Prevention and Control (DPCAN) at MINSa has been a key development, consolidating planning and implementation at the national level. Likewise, the MINSa 'Budget Programme 0024 (PP-0024)' has allowed for efficient resource allocation for the implementation of the ongoing National Comprehensive Cancer Care Plan (2020–2024), ensuring continued funding for cancer prevention and treatment, which has significantly increased the coverage of cancer services.

Peru would benefit from strengthened coordination between MINSa and INEN, especially in the alignment of functions and integration with other health subsystems, such as EsSalud and the Armed Forces, to ensure a uniform and effective implementation of oncology policies across the country.

4. Cancer registration and surveillance

The cancer registration and surveillance system in Peru is essential to understanding the burden of disease and guiding public health policies. Coverage includes population-based registries in Lima, Arequipa, and Trujillo. This system represents approximately 38% of the population, providing essential data for the development of national and sub-national estimates. Strengths include strong institutional commitment, demonstrated by the regulatory framework (Law No. 31336 and Supreme Decree No. 004-2022-SA) supporting the creation and maintenance of hospital cancer registries and the establishment of three Population-Based Cancer Registries, as well as improvements in data quality, particularly in mortality statistics. However, the system faces challenges,



such as the lack of dedicated funding, the need for updated procedure manuals and limitations in the use of adequate software for data management. In addition, interoperability between INEN, EsSalud and MINSA databases is restricted by legal barriers, which prevent a smooth and efficient exchange of information. Overcoming these challenges is crucial to strengthen cancer surveillance and improve public health decision-making in Peru.

5. Prevention

The National Comprehensive Cancer Care Plan includes primary prevention activities, although the budget allocation for these has progressively decreased between 2012 and 2018. Among the strengths, INEN's commitment to promoting prevention from childhood stands out, as demonstrated by the 'Seeds of Cancer Prevention' programme, which includes educational campaigns, HPV vaccination, and early detection initiatives. Additionally, the country has implemented effective actions to control smoking, such as the enforcement of strict anti-tobacco laws, the establishment of smoke-free public spaces, the implementation of graphic health warnings on cigarette packaging, and nationwide awareness campaigns-achieving one of the lowest prevalences in the region. There are also laws and policies to regulate alcohol consumption, although challenges remain in implementing cessation programmes and educating about the risks. HPV vaccination coverage is progressing, with 87% of the target population protected in 2024.

The health system faces some challenges in improving inter-sectoral coordination between the health, education, transportation, and urban planning sectors, particularly in efforts to promote physical activity.

Regarding alcohol consumption, current plans and policies primarily focus on addressing hazardous or excessive drinking. Expanding these efforts to include the promotion of moderate or non-risky consumption practices, along with the development of organized counseling strategies, could enhance the effectiveness of interventions in this area.

6. Early detection

With significant efforts driven by the National Cancer Act and the National Comprehensive Cancer Care Plan 2020–2024, early cancer detection focuses on the most prevalent cancers, such as cervical, breast, colorectal and prostate. One of the prominent initiatives is the establishment of the National Consultative Centre for Tele-imaging, which supports the hospital reading of mammograms in 12 regions, improving early detection of breast cancer. In addition, there are clear policies and resources allocated for cervical and colorectal cancer screening.

However, the system faces significant challenges, such as a lack of uniformity in protocol for screening and diagnosis of cervical, breast and colorectal cancer across different institutions, leading to inequities in care. This limits the quality of data collected and decision-making. In addition, the centralization of specialized human resources, technology and equipment in Lima's referral hospitals further restricts access across regions. The fragmentation of the information system hinders effective



case tracking, thus compromising the quality of the detection and treatment process and limiting the evidence available for strategic decisions. It is essential to develop a more integrated and equitable strategy to ensure uniform access to screening across the country, while strengthening data collection and reporting systems.

7. Diagnosis

Since the 2014 imPACT Review, cancer capacities have been improved in terms of equipment and training for diagnostic imaging and nuclear medicine. However, growing demand has outstripped capacity, resulting in long waiting times for diagnostic procedures. In addition, the centralization of equipment and technology in certain specialized centers limits access for patients in remote regions, resulting in advanced stage presentation of the disease. The differences between public and private services are noticeable; while private centers offer timely diagnoses with advanced technology, public centers suffer from insufficient equipment, delays in reporting and fragmented availability of clinical information. The lack of integration between the information systems between public and private facilities exacerbates this situation, limiting continuity of care.

Availability of diagnostic services is uneven across regions, with a concentration in Lima forcing many to travel and further burden facilities in the capital. While some local solutions have been implemented to foster cancer service capacities—such as creating ad hoc agreements between hospitals and services within different sub-systems in the same city or region—the absence of a regulatory framework to coordinate health sub-systems remains a significant challenge.

It is advisable to improve coordination within the hospital networks, increase diagnostic capacity in the regions, and develop integrated information systems that facilitate efficient and equitable patient record management.

8. Treatment

Since the last imPACT Review in 2014, Peru has established a robust regulatory framework that ensures the availability of essential cancer medicines and has created special programmes to include high-cost drugs in the commissioning list. In surgical oncology, advanced technologies such as laparoscopic surgery and microvascular procedures have been integrated, which has improved surgical outcomes and reduced complications. In addition, the implementation of multidisciplinary teams and tumor committees in urban hospitals improved the quality of treatment. The expansion of oncology infrastructure, with 17 specialized centers in the country's 25 regions and the decentralization of services from Lima to outpatient chemotherapy rooms in regional hospitals, represents a step forward in improving access to quality services. This progress reflects the consolidation of strategic initiatives such as Plan Esperanza, developed in 2012, and recommendations from the 2014 imPACT Review, both of which have been integrated into the current National Comprehensive Cancer Care Plan (2020–2024).



Despite these achievements, challenges remain. The disparity in access to specialized services between urban and rural areas remains significant, with a concentration of resources in Lima. In addition, the shortage of specialized oncologists, radiation oncologists and surgeons outside the capital, coupled with insufficient infrastructure in remote areas, result in long wait times for surgery and treatment both at the regional and national levels. Addressing these inequalities, improving supply management and expanding training and allocation of specialists across the country are critical to ensure equitable and timely access to cancer services.

9. Palliative care

The National Comprehensive Cancer Care Plan (2020–2024) and the National Palliative Care Plan (2021–2023) have established a regulatory framework that support the planned availability of palliative care in hospitals and at home. Initiatives such as the ‘Closer to those who need it’ strategy have enabled the creation of palliative care teams, initially in Lima and expanding to other regions. However, most resources are still concentrated in Lima. Despite this, 65% of the 150 000 patients who need palliative care annually have access. The limited availability of opioids and the lack of adequate training limit effective pain management. In addition, the integration of palliative care into primary care is insufficient, especially in rural areas.

It is advisable to further decentralize services, ensure access to opioids at all levels of care and expand specialized training in palliative care, involving the scientific community and civil society organizations in the development of policies aligned with international standards.

10. Paediatric cancer

Since the implementation of the WHO Global Initiative on Childhood Cancer in 2019, the country has made significant improvements in the management of childhood cancer, especially in early detection, the creation of pediatric cancer registries and access to specialized services. Comprehensive childhood cancer care has been prioritized under the Plan Esperanza and Law No. 31041 of 2020, which support the timely detection and continuity of treatment for children and adolescents.

The establishment of pediatric oncology units and services in 13 hospitals is supported by key policies and national strategies aimed at enhancing childhood cancer care, including the Childhood Cancer Law of 2020 and the implementation of the PAHO/WHO Global Initiative for Childhood Cancer, which began in 2019. These centers, which have a greater capacity to manage cases, still face challenges such as a shortage of specialized professionals (pediatrician, hematologists, and oncologists) and insufficient infrastructure, especially outside Lima. While care for most cases is handled in MINSA and EsSalud centers, interviews conducted during the impACT Review suggest that families with the financial means often turn to private healthcare providers for timely and specialized assistance. Access to essential drugs, with an estimated annual cost of \$17 million, is overseen by government entities that guarantee their quality.



A 2020 study by Vasquez revealed that the average time for diagnosis in Peru was 107 days, with significant delays caused by insufficient training, limited access to consultations, and slow referral processes¹. Since publication of the study, the average diagnosis time in Peru has been reduced from 107 to 57 days; yet early diagnosis remains a challenge. Initiatives such as the ONCOPeds® mobile app, the implementation of early diagnosis guidelines, training of healthcare personnel, advocacy before local authorities, and the participation of non-governmental organizations have made it possible to develop a strategy to address this problem. It is necessary to include this strategy in the cancer plan to ensure sustainability.

Treatment abandonment is a significant problem in Peru with multifactorial causes, including socioeconomic, cultural, and geographic factors. The Ministry of Health developed a strategy that successfully reduced the abandonment rate from 18.6% to 8.5%. However, this rate remains high due to families' socioeconomic limitations. Therefore, it is necessary to consider the social determinants of health in the next cancer plan, using health navigators and a multisectoral approach, to achieve the goal of reducing the abandonment rate to less than 6%.

Radiotherapy is provided at INEN and at the Rebagliati Hospital, with expansion plans to decentralize these services. Palliative care has advanced with the creation of a Paediatric Palliative Care Committee and training programmes that have trained more than 3 000 professionals since 2019.

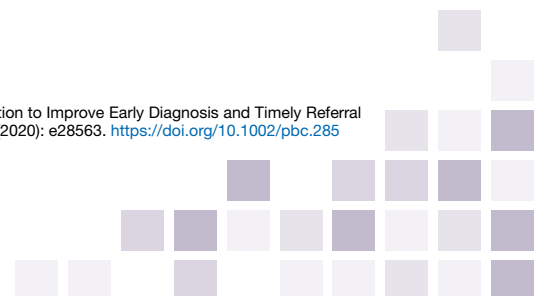
Pediatric oncology education and training in Peru are offered by Universidad Nacional Mayor de San Marcos, Universidad de San Martín de Porres, and Universidad Peruana Cayetano Heredia, alongside specialized programmes at INEN. These opportunities are further supported by international collaborations and platforms such as TELEO and St. Jude initiatives, enhancing local and regional capacity. The subspecialty of pediatric oncological surgery is a milestone, with curricular plans under development to train the first pediatric oncological surgeons in the country

11. Radiation safety considerations

A solid legal framework exists under Law 28028 of 2003, which needs to be updated to meet IAEA standards to incorporate protection in the use of ionizing radiation. The Technical Office of the National Authority (OTAN-IPEN) can increase its effectiveness with more staff, resources, and a modernized management system.

Reviewing and updating radiotherapy regulations, establishing a consolidated register of occupational doses, encouraging training and certification of medical physicists are key steps. In addition, promoting the proper use of dosimeters among exposed professionals will reinforce the safety culture. With these actions, Peru will move towards a safer and more protected environment for the use of radiation in medicine.

¹ Vásquez, Liliana, Luis Antonio Oscanoa, María Teresa Peña, and Carlos Cáceres. "ONCOPEDS: A Mobile Application to Improve Early Diagnosis and Timely Referral in Childhood Cancer in a Low- and Middle-Income Country—A Pilot Study." *Pediatric Blood & Cancer* 67, no. 11 (2020): e28563. <https://doi.org/10.1002/pbc.285>



■ Key priority recommendations

Cancer control system planning, governance and financing

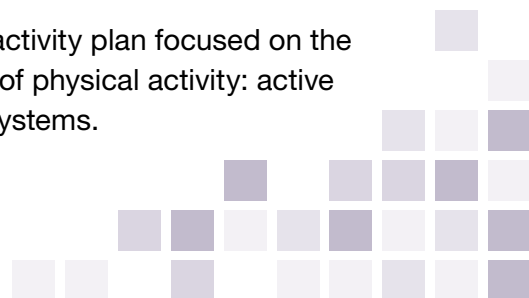
- Ensure a participatory and inclusive approach in the National Cancer Control Plan development by actively involving key public and private actors with influence and impact on health-related sectors.
- Establish a robust legal and financial framework to facilitate the coordination of cancer care across health sub-systems in both public and private sector. This framework should include the development of regulatory provisions to enable service exchange agreements between institutions, ensuring equitable access to diagnostics and treatment.
- Strengthen the relationship between funding and procurement of high-cost drugs to prevent stock-outs and ensure continuous access to essential cancer treatments. Actions include analyzing current financing and procurement processes, promoting regional pooled purchasing for better prices, exploring joint procurement platforms, and integrating cancer treatment centers and regional health directorates into procurement planning in coordination with DPCAN and CENARES.

Cancer registration and surveillance

- Adopt legislation to ensure budgetary allocations (e.g. via the Budget Programme 0024) for the development and operation of population registers in Arequipa and Trujillo.
- Establish a National Cancer Surveillance Committee with MINSA and EsSalud actors at both central (DPCAN, INEN, CDC) and regional (DIRESA, GERESA) levels, to plan improvements in cancer surveillance (population and hospital), evaluate achievements, compare information, and adjust procedures to ensure data sharing between INEN, EsSalud and CDC ensuring respect of data protection laws.
- Develop a new population registry plan with goals and activities, disaggregating the resources needed and the budgetary source to support the PBCRs. This plan should include fixed and recurrent costs for each PBCR, costs and responsible parties for technical assistance, capacity building, as well as processes for modernization and dissemination of results, as well as for providing access to information for reporting purposes.

Primary prevention

- Implement a catch-up strategy to vaccinate boys and girls aged 9–18 years against HPV, focusing on children up to age 14 at school, regardless of grade level, and girls by the age of 15.
- Carry out a campaign to raise awareness among the Peruvian population about the Latin American and Caribbean Code against Cancer, with special focus on the harmful effects of alcohol and tobacco consumption.
- Generate a centralized and widely disseminated physical activity plan focused on the objectives of the WHO's global strategy for the promotion of physical activity: active societies, active environments, active people, and active systems.



Early detection

- Develop a standardized protocol for the screening and diagnosis of cervical, breast and colorectal cancers, including treatment of cervical and colorectal cancer precursor lesions, with access to timely treatment.
- Map existing patient pathways and enhance their implementation to ensure timely access to care while clearly defining the roles and responsibilities of health professionals and community workers.
- Establish provider agreements for the collection and reporting of data from cervical, breast and colorectal cancer screening programmes and the outcomes of the diagnostic and therapeutic process by the cancer services, if cancer is confirmed, to ensure performance can be measured and priority interventions can be identified.

Diagnostic

- Identify opportunities for cooperation and strong coordination of services across public and private networks to improve access to diagnostic tests in limited supply, reduce waiting times, and minimize the need for patient referrals to other cities, particularly Lima.
- Establish multi-sectoral working groups to define national guidelines and regulations that include the performance of different imaging professionals to carry out tests with standardized protocols by pathology and establish deadlines for completing the respective report.
- Periodically assess the availability of trained professionals, the condition and functionality of equipment (including failures and age), and access to necessary supplies, while identifying gaps in relation to current and projected demand and enhancing planning capacities to address these gaps effectively.

Treatment

- Establish and implement clinical pathways to coordinate patient referrals based on case complexity, available resources, and expertise, facilitate inter-regional referrals for equitable access, and conduct a comprehensive analysis of institutional capacities to guide their design and implementation.
- Establish decentralized cancer treatment units closer to patients' residences—especially in remote areas such as Iquitos (Loreto) and Ucayali (Pucallpa)—and explore the purchase of cancer drugs for paediatric and adult patients at reduced costs through the PAHO Strategic Fund mechanism.
- Create a working group, including universities and scientific societies, to harmonize specialized training plans by defining training programmes, establishing minimum competencies, coordinating the evaluation and recertification of specialists, and standardizing the training curriculum for oncology residents across all universities.
- Ensure the availability of necessary funds in the short term to:
 - Procure new LINACs in the Northern and Southern macro-regions.
 - Enhance diagnostic and treatment capacities (MRI, CT, PET) at the Instituto Nacional de Salud del Niño – San Borja for the management of brain tumours.



- Implement the radiotherapy service in Iquitos with the use of external radiotherapy with cobalt source at the Goyeneche Hospital as an option.
- Train radiation oncologists, technologists, and medical physicists in radiation therapy.

Palliative care

- Disseminate the palliative care implementation and technical guidelines developed by the Ministry of Health to palliative care teams and others at health care facilities and institutions.
- Ensure essential resources are available for home-based care teams to carry out safe and quality work (mobilization, medical and nursing supplies).
- Establish as a basic requirement for palliative care teams the enrolment in initial course in palliative care, either the one from PAHO (adult/paediatric) or from the Peruvian School of Public Health.
- Incorporate a palliative care physician of the same hospital into the Multidisciplinary Tumor Board, with the aim of encouraging early referral for palliative care and making their role in the clinical team more visible.

Paediatric cancer

- Integrate the childhood cancer strategy within the National Cancer Control Plan to ensure adequate funding and management of paediatric oncology services, especially for early diagnosis and treatment.
- Strengthen the available capacities in paediatric oncology care to ensure adequate and quality coverage in regional hospitals, offering specialization courses, and providing financial incentives and attractive working conditions with training opportunities in high-demand areas, along with the use of telemedicine and regional hospital rotations to facilitate mentorship and hands-on experience. Establish accelerated training and recertification programmes for medical oncologists and nurses providing paediatric cancer care.
- Evaluate and improve infrastructure in key regions, such as Cuzco, Arequipa, Iquitos and Trujillo, and in other hospitals in Lima, such as Instituto Nacional de Salud del Niño San Borja and Instituto de Salud del Niño de Breña.

Radiation safety considerations

- The Technical Office of the National Authority (OTAN-IPEN) should ensure the completion of the ongoing process of updating regulatory documents (currently in draft or under development) to align with current IAEA safety standards.
- OTAN-IPEN should finalize the implementation of the centralized national occupational dose register to effectively monitor the occupational doses of workers engaged in more than one service.
- The Government should ensure the provision of extremities and internal dosimetry for the control of doses received by workers.



■ The WHO–IAEA–IARC joint activities on cancer control

In March 2009, WHO and IAEA signed arrangements at the Director-General level to implement a Joint Programme on Cancer Control. The main purpose of this arrangement is to coordinate activities and resources to provide evidence-based and sustainable support to comprehensive cancer control programmes, particularly in low- and middle-income countries. The imPACT Review is carried out as a comprehensive assessment of national cancer control capacities and needs. It is a partnership effort between the International Atomic Energy Agency (IAEA), the International Agency for Research on Cancer (IARC) and the World Health Organization (WHO). Where relevant, other partners are involved, such as the Union for International Cancer Control (UICC) and the United Nations Office on Drugs and Crime (UNODC). The IAEA Division of Programme of Action for Cancer Therapy (PACT) is responsible for coordinating the imPACT Reviews and for mobilizing the resources for their implementation.

Click here to read more about the imPACT mission to Peru [Peru Takes Steps Towards its Goal of Universal Health Care for Cancer Patients | IAEA](#)



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