



Summary

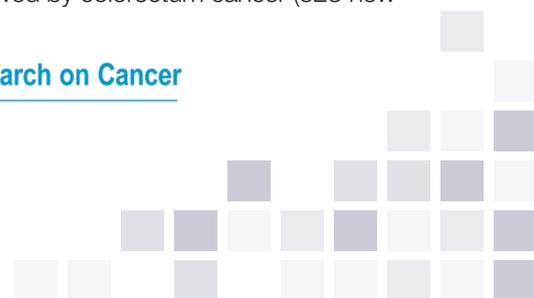
Following a request from the MoH, received by the International Atomic Energy Agency (IAEA) on 22 November 2018, the IAEA, through its [Programme of Action for Cancer Therapy \(PACT\)](#), conducted an [imPACT Review](#) on 8-12 April 2019 within the framework of the [WHO-IAEA Joint Programme on Cancer Control](#). The imPACT Review's main objective is to support Armenia's Ministry of Health in developing a comprehensive national cancer control programme and to improve access to quality cancer care across the country.

The imPACT Review expert team, nominated by the IAEA, the World Health Organization (WHO) and the International Agency for Research on Cancer (IARC), assessed Armenia's cancer control capacity and needs in the areas of cancer control planning, cancer registration, prevention, early detection, diagnosis and treatment, and palliative care, as well as radiation safety infrastructure and practices, and the security of radioactive sources used for medical purposes.

The experts visited the capital, Yerevan, Gyumri and connected with the Vanadzor Oncology Dispensary via video conference. The team visited sites ranging from the primary to tertiary care facilities (public and private), State Medical University, Armenian Nuclear Regulatory Authority (ANRA) and civil society organizations. During the visits, the team collected data and information from counterparts, the majority of whom provide cancer-related services or oversee relevant activities and programmes. On the final day of the mission, the team debriefed the Minister of Health Mr Arsen Torosyan, MoH staff and the WHO Country Office on the preliminary findings, conclusions and recommendations.

Main findings

1. In 2018 a National Working Group developed a draft National Cancer Control Strategy (NCCP) 2020-2025. The NCCP has a budget allocation and is divided into the following components: (i) prevention and early detection; (ii) comprehensive management; (iii) maximized patient involvement and quality of life; (iv) key indicators addressing incidence; and (v) survival. At present, the government covers about 20% of cancer care costs, while the patient covers the remaining 80%. There are exceptions, i.e. vulnerable groups, including children, the elderly and disabled, impoverished people and disabled military personnel, who enjoy full coverage.
2. In Armenia cancer is estimated to account for 28% of all deaths. According to IARC's GLOBOCAN, in 2018 there were approximately 8 835 new cancer cases and 6 394 cancer deaths. By 2030 the estimated incidence is 10 561 and 7 721 deaths which indicates an increase of 22% for both incidence and mortality. Women are mainly affected by breast cancer (1 050 new cases), followed by colorectum cancer (623 new



cases) and corpus uteri (242 new cases). The three most frequent cancer sites for men are lung (1 134 new cases), prostate (636 new cases) and colorectum (367 new cases).

3. Since the 2012 imPACT review Armenia has made limited progress regarding completeness of cancer registration data.
4. In Armenia 55% of all cancer-related deaths are attributable to tobacco consumption, and 90% to bronchus, trachea and lung cancers.
5. In 2013 more than half of all cancers were diagnosed advanced stages, with 35% of cervical cancer and almost two thirds of breast cancer.
6. In addition to financial barriers, access to pharmaceuticals is constrained by the lack of certain medicines, especially in rural areas with low number of pharmacies.
7. Armenia has the essential diagnostic imaging modalities, however some technologies need upgrades while some modalities are underdeveloped or absent. In addition, insufficient human resources for diagnostic radiology, nuclear medicine, and administrative barriers are reducing utilization of procedures, including radio-guided surgery and theranostics.
8. All three cancer treatment modalities are available. Organization of radiotherapy service is centralized, mainly due to limited capacity. Also, paediatric oncology is centralized due to small number of cases. On the other hand, surgical and medical oncology services are available at many facilities in Yerevan and in other cities.
9. Armenia has taken measures to strengthen palliative care, yet support for patients is limited. Starting in 2011 the Global Fund supported four palliative care pilot projects at the NCO, Yerevan State Medical University, Ararat Medical Centre, and in the Vanadzor Hospital. After the 2014 completion of the project services were not continued.



Summary of recommendations

Cancer Control Planning

- Revise and endorse the draft comprehensive National Cancer Control Programme (NCCP) 2020-2025 based on the imPACT Review recommendations. Set priorities based on national needs, and select interventions that are integrated, affordable, cost-effective, and can be implemented with the resources available.
- Establish a National Steering Committee that includes stakeholders in the areas from prevention to palliative care, including specialists in radiation oncology, medical and paediatric oncology, surgical and gynaecologic oncology, and cancer registration, as well academia, civil society and the private sector, to lead the implementation and monitoring of the national cancer control plan (NCCP).

Cancer Registration

- Institute a working group (WG) to re-establish a population-based cancer registration system and align with international IARC/ENCR recommendations.

Cancer Prevention

- Strengthen anti-tobacco law measures, e.g. increase awareness and expand school-based educational programmes.

Early Detection

- Improve awareness of the early signs and symptoms of common cancers, such as breast, lung, colorectal and cervix. Empower primary care practitioners and nurses and strengthen the referral pathways to tertiary care institutions.
- Increase the capacity of polyclinics in the early detection programmes, with appropriate staffing, infrastructure and access.

Cancer Diagnosis

- Upgrade radiography, ultrasound, and endoscopy, as well as expand infrastructure for diagnostic imaging (CT, MRI, SPET/CT, intraoperative gamma probes, PET/CT).

Cancer Treatment

- Temporarily discontinue radiotherapy services at the Department of Radiotherapy, Gyumri Oncologic Dispensary, and refer patients to the NCO Department of Radiotherapy (and introduce NCO second shift and ensure adequate workforce).
- Regularly update the list of essential oncology drugs and ensure their availability.
- Prepare evidence-based guidelines for diagnostics and treatment of most prevalent cancer types.
- Establish a working group of experts to develop an action plan for the expansion and upgrade of radiotherapy capacities.

Education and Training

- Harmonize and align cancer-related education and training curricula (medical oncology, haematology, radiation oncology, surgical oncology, pathology, laboratory medicine, radiology, nuclear medicine, nursing oncology, radiography, technology, onco-pharmacy, radiopharmacy) with international standards (IAEA, European Union of Medical Specialists, etc).

Palliative Care

- Integrate palliative care into the National Cancer Control Programme 2020 – 2025.
- Introduce oral form of morphine and methadone tablets (for pain treatment) into the list of essential medicine.
- Regularly monitor and address challenges in the implementation of pain treatment procedures and practices.



Follow-up actions taken by the Ministry of Health

Following the 2019 imPACT Review, Armenia's Ministry of Health took the following actions:

- The 2019 adoption of the MOH decree "Action Plan against Malignant Tumours"; the institution of the Monitoring of Implementation of the Malignant Tumour Programme to be coordinated by the MoH; and the establishment of the Coordinating Council for the Improvement and Management of the Treatment of Malignant Tumours.
- Patients diagnosed with I-III stages of aggressive HER2 positive breast cancer would receive targeted treatment as part of a state programme (as of March 2020), and, for patients diagnosed with breast cancer, the determination of the HER2 receptor status of the human epidermal growth factor determining cancer aggressiveness would be free of charge at the National Center of Oncology after Zanjaryan CJSC. Lastly, screening studies for early detection of breast cancer were planned in 2020 in the three regions (Tavush, Syunik and Lori marzes).
- The expansion of medical facilities providing outpatient palliative care and training courses on palliative care.
- The National Cancer Control Programme development, informed by the imPACT Review findings and recommendations, was initiated in 2020.



Dr Sergei Nazarenko (left) discusses diagnostic facilities and practices with senior staff at the St. Grigor Lusavorich Medical Center (Photo: IAEA)

IAEA-WHO-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.

In response to a Government request, an [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.

Link to imPACT Review news and related resources:



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