Summary

imPACT Review Report

Djibouti

January 2025

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Following a request received from the Minister of Health of the Republic of Djibouti in September 2023, an imPACT Review was conducted from 23 October 2023 to 27 October 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. Burden of disease

Djibouti faces an epidemiologic transition, with a double burden of disease from both communicable and non-communicable diseases (NCDs). According to GLOBOCAN 2022, there are an estimated 805 new cases of cancer in Djibouti each year, with 572 deaths. The most common cancers are breast, cervical and colorectal, and those three also contribute to the greatest number of cancer deaths each year. It is expected that by 2030, the number of cancer deaths will increase by over a third; however, strategic interventions across the cancer continuum aim to reduce the future incidence and mortality.

2. Health system overview

The health system in Djibouti is primarily centralized in Djibouti City, where the majority of the population, health workforce and health services are located. The national health system uses a primary healthcare model beginning with health posts and community health centres, with a secondary level of five medical-hospital centres serving as district/regional hospitals in most regions, and the tertiary level made up of the newly created University Hospital Centre. Most healthcare is delivered through the public sector and a variety of parapublic[1] institutions, such as Police and Military Hospitals, which are available to the public. The National Health Development Plan (PNDS 2020–2024) guides the overall health system organization. The government introduced a Universal Health Coverage (UHC) law in 2014, which includes chronic conditions.

1 Note: In the Djiboutian context, parapublic refers to hospitals which are funded by the State and are non-profit, but are not under the jurisdiction of the Ministry of Health. In the case of Djibouti, this includes the Military Hospital and the Police Hospital. See Projet de riposte à la pandemie de Covid-19 (2020)

3. Cancer control governance

At the time of the imPACT mission, there was no NCD or cancer control plans, strategies, or coordination mechanisms at the level of the Ministry of Health.[2] The PNDS 2020–2024 addresses NCDs and cancer in General Objective 1 and Specific Objective 2. Through the UHC law in 2014, the Government has advanced cancer control coverage to the population, reimbursing investigations for diagnosis and staging of cancer, free provision of chemotherapy and 90% of surgeries done in public hospitals. There is also a budget to send patients abroad for treatment, and this mechanism is used to support patients needing access to radiotherapy, which is not yet available in-country. Djibouti maintains numerous regional and international relationships promoting collaborations in the field of health. Health partners and donors include UN agencies, bilateral and multilateral cooperation, development banks, and international NGOs, to mobilize resources, share best practices, and leverage expertise.

4. Registry and surveillance

Cancer burden estimates in Djibouti carry a high degree of uncertainty because they are not derived from a population-based cancer registry. Cancer registration activities are available in key hospitals, where confirmed cases depend on a well-established anatomopathological system. A cancer registry focal point conducts basic registry operations at the national level. There are no mandatory regulations for cancer notification. The imPACT report details the suggested steps towards setting up a population-based cancer registry and for enhancing surveillance.

5. Prevention

As a cost-effective, long-term strategy, prevention is a critical tool for cancer control in Djibouti. Baseline data on cancer risk factors for prevention activities remain limited, with no STEPS survey[3] yet conducted in Djibouti. However, Djibouti has made strides towards prevention, with policies implemented towards addressing tobacco use and harmful use of alcohol (Djibouti is a Party to the WHO FCTC, has national specific objectives related to tobacco control, and has implemented health warnings on tobacco packaging and bans on advertising). Other risk factors have received less action, namely unhealthy diets and physical inactivity, and estimates show high prevalence of overweight and obesity, high salt intake and low prevalence of physical activity. With one of the highest burdens of cervical cancer incidence globally, population-wide introduction of the HPV vaccination is a key opportunity. Hepatitis B vaccination coverage is high.

6. Early detection

Outreach and advocacy campaigns for prevention and early detection are done ad hoc by a prominent civil society organization focused broadly on women's issues. They work closely with Housseina Centre, a comprehensive reproductive health facility which provides opportunistic screening for breast and cervical cancer, with support from UNFPA. Women are then referred to treatment facilities if screened positive. This is an effective model which can be strengthened and expanded.

[2] Since the time of the mission, the Government has drafted a National Cancer Control Plan and nominated a cancer control committee and focal point.

[3] STEPwise approach to NCD risk factor surveillance (STEPS). www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps

7. Diagnosis

Diagnosis of cancer is impacted by irregular services in diagnostic imaging, with downtime affecting much equipment, including the CT scanners. There is one operational mammography at Housseina Centre, and two CT scanners fully operational in public hospitals. Of the three MRI machines available, only one was functioning at the time of the visit. Human resources remain insufficient, with limited qualified radiologists, no medical physicists, and no implementation of quality assurance programmes. There are no nuclear medicine services yet in the country.

Routine biochemical and biological tests are available at all visited hospitals with biochemistry, parasitology, microbiology and immune-haematology. Equipment is available as needed. The PSA test is the primary tumour marker being done on a regular basis, with occasional beta human chorionic gonadotropin hormone, alpha foetoprotein and CA15/3 and CA19/9. There are frequent shortages of reagents, which adds to wait time. There are two functional departments of histopathology and one unit for cytology services in the country, run by the only Djiboutian pathologist in the country and assisted by qualified technologists. There is an urgent need to expand clinical activities in the department of pathology and implement a second department in another public hospital.

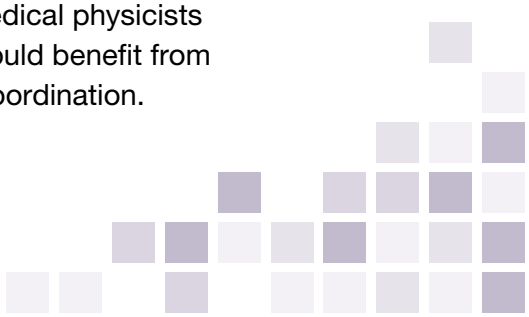
8. Treatment

Surgical oncology is available at several public hospitals, with general and organ-specific surgeons primarily carrying out the operations. One certified oncology surgeon does many cancer surgeries, particularly modified radical mastectomies for breast cancer.

There are 22 chemotherapy medications available for cancer patients in-country at the Police Hospital, given freely to nationals. Chemotherapy is prepared by general nurses trained on-the-job, with a laminar flow hood and personal protective equipment. The main treatment protocols are based on French protocols, NCCN and ESMO clinical guidelines. Standards and regulations for operating medical oncology facilities are not currently available in the country. Paediatric oncology patients seen primarily are those with solid tumours; ALL is not treated inside the country.

Radiotherapy is not currently available in-country, and the government (through CNSS) transfers approximately 100 patients per year to other countries to receive radiotherapy treatment. As there is currently no radiation oncologist, medical physicist or radiotherapy technician in the country or under training, plans for radiotherapy must take into consideration the necessary human resources. Additional challenges include the need for a regulatory framework with radiation protection regulations. The initiation of radiotherapy services in the country requires expert advice at all stages, especially in the design stage with regard to bunkers and related infrastructure.

The government has plans to develop a public, comprehensive cancer centre to include surgical oncology, medical oncology, radiation oncology, haemato-oncology and palliative care. These plans also include training healthcare workers, including a haematologist, two medical oncologists, four medical physicists and ten oncology nurses. This multidisciplinary approach could benefit from strengthened multidisciplinary tumour boards to enhance coordination.



9. Palliative care

There are currently no palliative care (PC) services in Djibouti, nor national level guidelines, plan or coordination. Several personnel having received PC training. Oral and injectable morphine is available at several hospitals, which can be prescribed by specialists and must be dispensed from the public hospital pharmacies. There is potential for development of an out-patient clinic, and an in-patient consultation service within the main facility delivering cancer services.

10. Health workforce – education and training

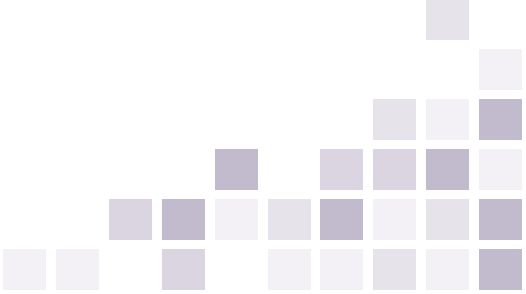
Multidisciplinary teams currently deliver cancer and NCD care, including doctors, nurses, community health workers, laboratory and radiology technicians at various levels of care. The Faculty of Medicine trains medical doctors in Djibouti, with the ISSS training other healthcare workers, including nurses, radiographers and biologists. Specialty education must be done abroad, and those trained usually return to practice in Djibouti. There is one surgical oncologist and three pathologists in the public sector. Currently, there are no radiation oncologists, medical oncologists or medical physicists. Continuous medical education is not currently available.

11. Radiation safety

Radiation sources are used for diagnostic radiology purposes (such as conventional radiography, CT scanners, mammography systems). The government has published laws regarding radiation safety, nuclear security and safeguards, and established the National Authority for Coordination, Regulation and Control of Nuclear, Radiological, Chemical and Biological Safety and Security, which is not yet fully staffed or operational. Infrastructure for radiation protection is not yet established or implemented, lacking control measurements and radiation protection officers.

12. Radioactive material security considerations

Djibouti has laid the foundation for a legal framework for nuclear safety and security with two pivotal laws: a law on radiation and nuclear safety, nuclear security and the implementation of safeguards, and a law on the creation of a national authority for nuclear, radiological, chemical and biological safety and security. The Integrated Nuclear Security Support Plan of 2020 was approved and aims to identify and consolidate Djibouti's nuclear security needs. There was a 2022 IAEA advisory mission on National Regulatory Infrastructure for Radiation Safety and Nuclear Security (RISS) with a subsequent report and action plan outlining areas for improvement.



Key priority recommendations

National cancer control planning and governance

- Develop a national cancer prevention and control plan for Djibouti with a phased, costed action plan and a monitoring and evaluation framework.
- Set up governance mechanisms to implement and monitor the NCCP.
- Implement a human resources development and training strategy.

Cancer registry and surveillance

- Establish a central national cancer surveillance and registration system as an essential component of national cancer control planning.
- Support population-based cancer registration (PBCR) procedures to facilitate planning, monitoring, and evaluation of the effectiveness of national cancer control activities.
- Introduce a legal framework for mandatory cancer notification and reporting, data privacy, and data sharing policies.

Prevention

- Embed prevention activities within the National Cancer Control Strategy currently being developed, in alignment with the overall roadmap for the Ministry of Health to address NCDs (and the National Multisectoral NCD Plan and Strategy).
- Develop a communication strategy and design and produce awareness messages on cancer risk factors to be widely disseminated through various means.
- Invest in capacity building for health staff on communication skills and counselling to capitalize on the role they can play in prevention; invest in training staff at public health facilities to overcome health illiteracy and to disseminate messages on cancer prevention in remote areas of the country; invest in training skilled workforce in preparation for the rollout of population-wide screening programmes for priority cancers.
- Implement all MPOWER measures, including raising taxes, strengthening cessation services and preventing tobacco industry interference, with appropriate enforcement of FCTC provisions.

Early detection

- Implement cancer early diagnosis programmes with sufficient capacity to avoid delays in diagnosis and improve access to cancer treatment, in line with the WHO Guide to Early Cancer Diagnosis.
- Expand capacities within Housseina Centre to further streamline breast and cervical cancer screening. Consider replicating its successful model, including by expanding services through the establishment of satellite facilities.
- Train healthcare providers on cancer early diagnosis (recognition of signs and symptoms) and on the effective referral pathway, including for prostate, colorectal and paediatric cancers, and ensure necessary resources.

Diagnosis (pathology and laboratory services)

- Enhance the existing national capacity building strategy for education and recruitment of human resources in all specialties dealing with cancer diagnostics, including cytology, pathology, biochemistry, diagnostic imaging, medical imaging, nuclear medicine, and medical physics.
- Implement a new, well-equipped department of histopathology in Peltier Hospital and reinforce the department of pathology of Balbala Hospital by replacing the existing equipment and ensuring the regular supply of reagents for appropriate cytological, pathological diagnosis, including immunohistochemistry for better cancer staging.
- Promote the unit of pathology at Housseina Centre to a department of cytopathology; recruit two pathologists and acquire new histopathology equipment to allow for all pathological diagnostics for women cancers in this Centre.
- Expand and upgrade the biochemistry laboratories of Peltier and Balbala Hospitals with new equipment, make specific tests for cancer diagnosis and follow-up (i.e., tumour markers) consistently available, and ensure regular supply of reagents.

Diagnosis (diagnostic imaging and nuclear medicine)

- Support the development of medical imaging, pathology services and surgical oncology in both Police and Military Hospitals.
- Acquire two new CT scanners and two digital mammography systems for the medical imaging departments of Peltier and Balbala Hospitals and upgrade their existing equipment by introducing ultrasound mammography and digital radiography to make more efficient the diagnosis, follow-up and staging of cancers.
- Reinforce endoscopy equipment in Peltier and Balbala Hospitals and promote surgical endoscopy for biopsies and extirpation of tissue samples.
- Develop a roadmap to implement a conventional department of nuclear medicine at Balbala Hospital with SPECT and SPECT/CT, depending on the existence of a planned nuclear medicine department in the future national centre for oncology.

Treatment (medical oncology)

- Enhance cancer education and training through courses, workshops, fellowships, and research activities and identify opportunities through existing WHO and IAEA programmes and initiatives.
- Formalize a chemotherapy administration unit and ensure the provision of continuous education programmes and weekly case discussions as part of a multi-disciplinary tumour board.
- Consider progressive allocation of funds towards capacity building and development of the future oncology network in a stepwise manner. The allocation of funds for the new oncology network can be done gradually (increasing the percentage on an annual basis) to accommodate the time required to establish the services nationally.

Treatment (radiation oncology)

- Develop a roadmap for the introduction of radiotherapy services, including the development of the requisite regulatory framework.
- Prioritize the development of a bankable document to inform resource mobilization efforts for radiation oncology.
- Develop a human resource strategy and start training initial staff (onco-radiotherapists and medical physicists) without delay.
- Set up a project team of national and international experts for the strategic planning, design, drafting of specifications and monitoring of the radiotherapy unit project.

Treatment (surgical oncology)

- Encourage and support multidisciplinary tumour boards, which should involve the radiologist, pathologist, oncology surgeon, the primary doctor and nurse in charge.
- Formally recognize surgical oncology subspeciality training in the country, allowing for development and increased future capacities.
- Develop a national oncology guideline for all cancers, to include surgical oncology, targeting surgeons who treat cancer patients, and including staging, recommended procedures, explanation of the procedures and caveats.

Palliative care

- Include a basic curriculum in palliative care for undergraduate doctors and nurses.
- Form a palliative care team with dedicated staff to start a hospital-based palliative care unit.
- Appoint a focal person in the Ministry of Health in charge of expanding palliative care.

Radiation safety considerations

- Finalise radiation safety and protection regulations.

Health workforce – education and training

- Assess the national need for human resource capacities and develop a human resources training plan accordingly by increasing the number of post-graduates in pathology, medical oncology, surgical oncology, medical imaging, radiation oncology, nuclear medicine and medical physics.
- Increase the number of medical doctors educated each year by the faculty of medicine of Djibouti.
- Introduce in the short term, with the assistance of foreign professors, postgraduate studies in internal medicine, general surgery, infectious and tropical diseases, and gynaecology.
- Review and update ISSS curricula in medical oncology, pathology and surgery and initiate training in medical imaging, in line with scientific evidence and international standards.

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 Djibouti: Djibouti Steps Up Plans for its First National Cancer Centre

IAEA International Atomic Energy Agency

World Health Organization

International Agency for Research on Cancer
World Health Organization

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