Delivering HOPE

IAEA

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RAYS OF HOPE

CANCER CARE FOR ALL

Dear partners, country representatives, dear friends of Rays of Hope,

On World Cancer Day in February 2022, the IAEA launched Rays of Hope: Cancer Care for All. The flagship initiative was inaugurated at the African Union summit together with Senegalese President Macky Sall, chairperson of the African Union, with firm support from Tedros Ghebreyesus, Director-General of the World Health Organization.

We launched Rays of Hope in Africa because it is where the cancer care gap is starkest. More than 20 African nations lack even a single radiotherapy machine. Many patients across the continent receive limited or no care, while others must travel many miles to neighbouring countries.

It is a priority for the IAEA and for me personally to help make it possible for all patients who need radiotherapy to access this life-enhancing treatment, whether they live in Africa or beyond.

We know radiotherapy helps in about half of all cancer cases. But we also know that this form of treatment requires substantial initial funding, large scale and sustainable financing

streams, a body of highly trained medical professionals, and a robust safety, security and quality assurance framework. We cannot do it alone. The global scale of the challenge requires a dedicated and concerted response.

This is why we need your support. I hope you will join us in delivering **#CancerCare4All.**

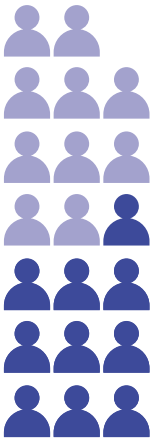
Rafael Mariano Grossi
Director General, IAEA

The challenge that lies ahead

In 2022

10 million deaths

20 million new cases

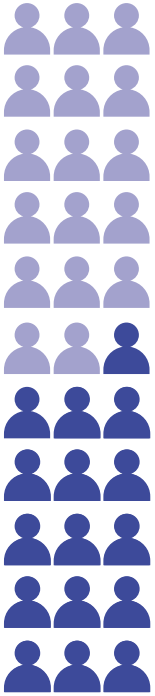


In 2022, 10 million people died from cancer.

In 2045

17 million deaths

33 million new cases



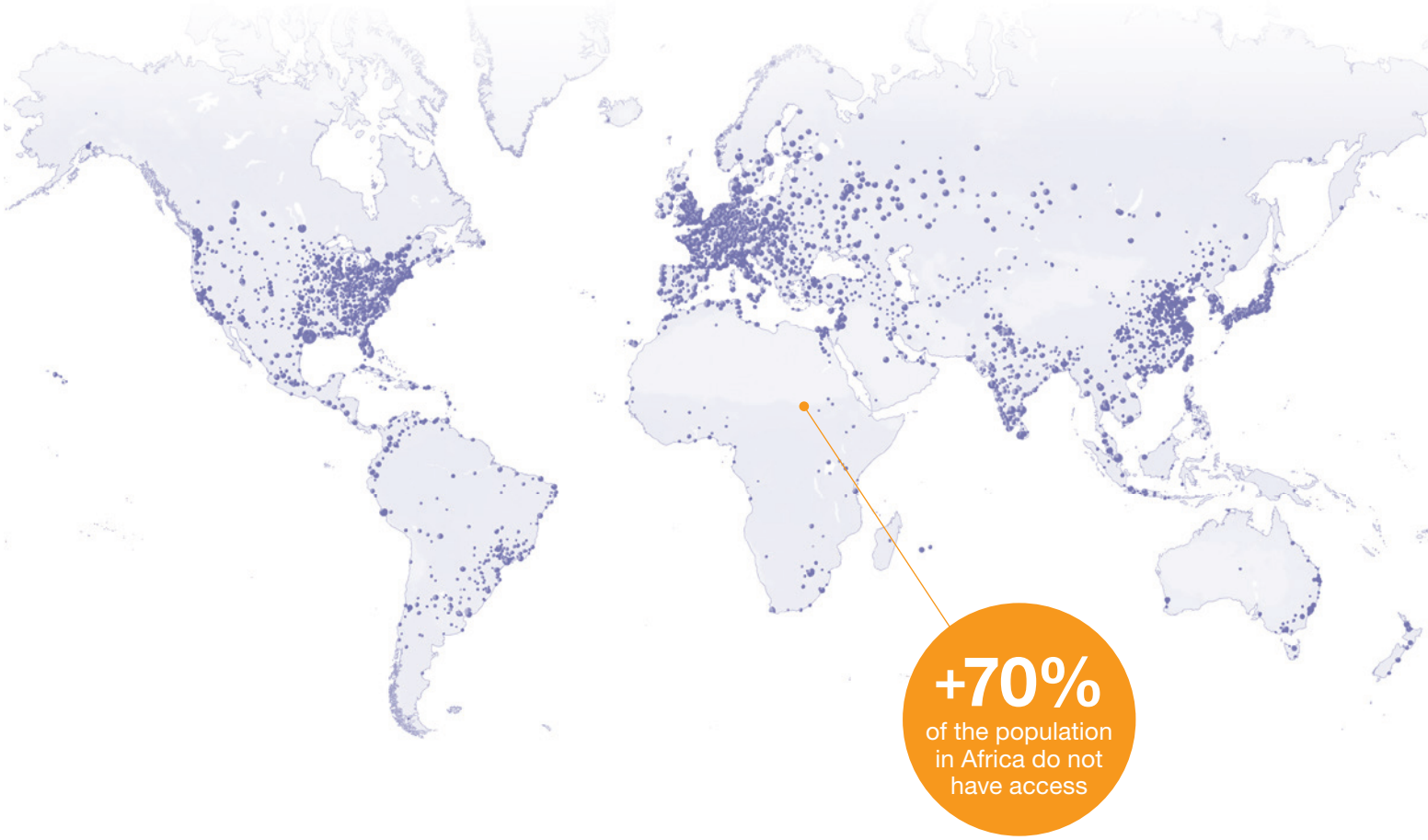
This number is expected to grow over the next two decades, with low and middle income countries expected to carry the highest burden.

Source: Globocan 2022

The unequal distribution of radiotherapy resources worldwide means not all patients benefit from the same access to cancer care.

Lisa Stevens
Director of Programme of Action for Cancer Therapy, IAEA

The situation is most acute in countries that lack radiotherapy facilities and trained personnel



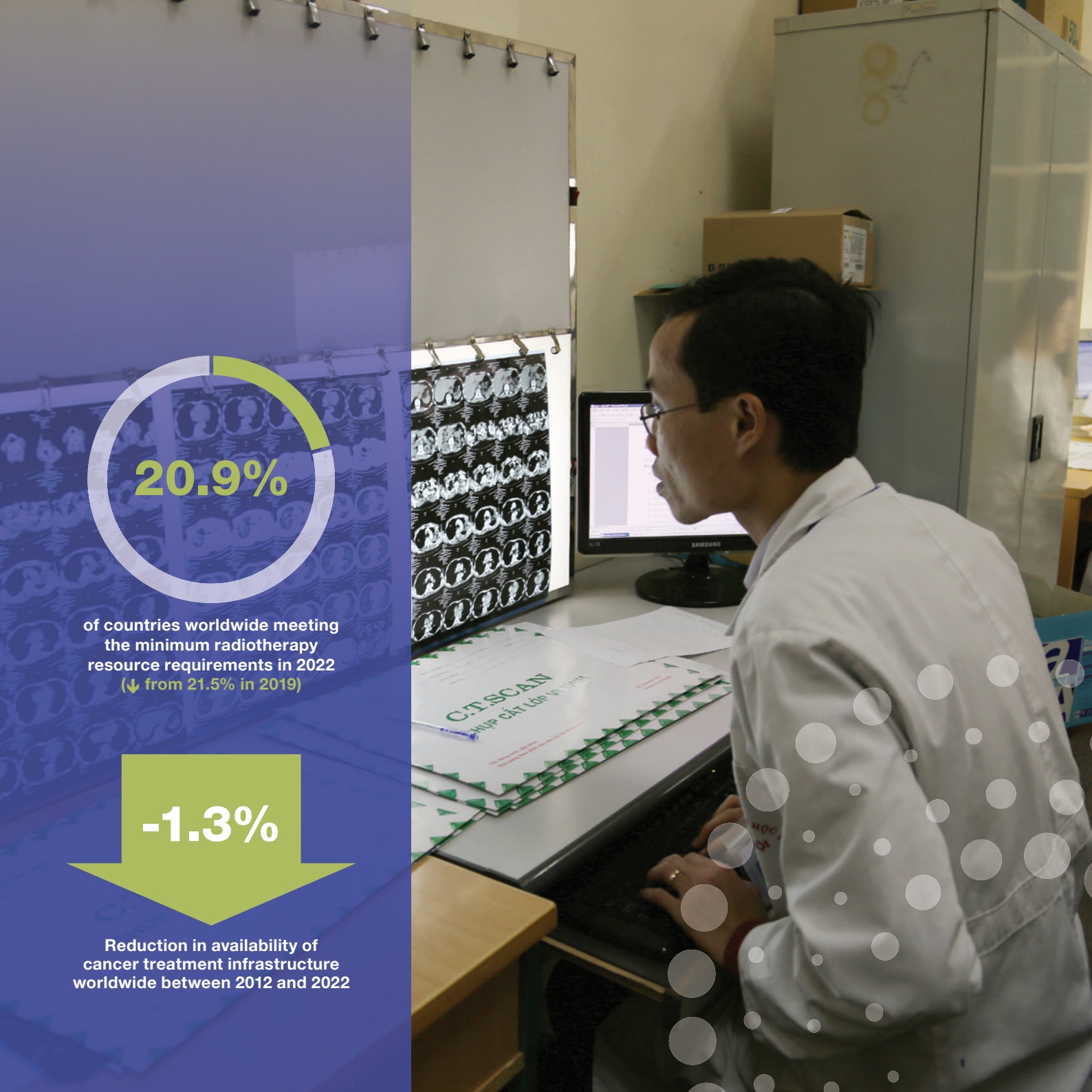
Radiation therapy equipment (Source: IAEA, 2024)

A worrying trend

Along with information collected by the International Agency for Research on Cancer (Globocan 2020), data from the IAEA's DIrectory of RAdiotherapy Centres (DIRAC) reveals an alarming trend: in 2022, technology adoption was developing positively across the board with one exception—radiotherapy.

This means that cancer cases requiring radiotherapy are outpacing available technology.

World Intellectual Property Organization,
2023 Global Innovation Index


20.9%
of countries worldwide meeting the minimum radiotherapy resource requirements in 2022
(↓ from 21.5% in 2019)
-1.3%
Reduction in availability of cancer treatment infrastructure worldwide between 2012 and 2022

> **Half of cancer patients who need radiotherapy in low- and middle-income countries do not have access to it. This is a sobering statistic. And it is unacceptable.**
>
> *Rafael Mariano Grossi*
> *Director General, IAEA*

Our vision

Cancer care for all

With the support of a variety of partners, Rays of Hope strives to reduce cancer deaths worldwide by increasing access to safe and secure radiotherapy and diagnostic imaging. It works with national governments to strengthen radiation safety and nuclear security legislation and infrastructure based on needs and commitment. Focusing on those countries where the needs are the greatest, Rays of Hope prioritizes high-impact, targeted and sustainable interventions.

How the IAEA supports Member States th

	Laying the foundations	Defining needs	Requesting RoH support
Member State	Member States work to lay the foundations in terms of legislation, radiation safety, nuclear security and physical infrastructure	The Member State is encouraged to prepare a National Cancer Control Plan on which to base their request for support	On the basis of the needs analysis and with strong quality assurance and safety foundations in place, the Ministry of Health officially requests RoH support
IAEA assistance	IAEA experts can advise on legislation, regulatory infrastructure, radiation safety, nuclear security and physical infrastructure	IAEA/WHO/IARC cancer experts can provide a full gap analysis and advise on future needs, including through imPACT Reviews	IAEA experts analyse the request

rough Rays of Hope (RoH)

Member States are supported to approach financial institutions, banks and private donors directly to help raise funds

Sourcing funds

IAEA experts can help with the preparation of strategic funding documents

Highly trained professionals are essential for radiotherapy and radiodiagnostics to be provided safely, securely and accurately in the Member State

Training professionals

IAEA training is channelled through technical cooperation projects with the support of Anchor Centres—regional leaders in cancer care

The Member State is responsible for ensuring a safe and stable operating environment for the new equipment

Procuring equipment

The IAEA can advise on which specialist equipment to procure and coordinate the purchase

The role of Anchor Centres

Anchor Centres are regional leaders in cancer care with decades of experience participating in IAEA coordinated research projects and training programmes. They are selected based on technical, sustainability, quality assurance, logistics and governance criteria.

Their role is to create opportunities for regional, subregional and interregional advancement on education, training, research, quality assurance and innovation, as well as to catalyse the development of global databases and platforms for cancer care providers around the world.

Expected functions

Education and training

- Provide supervised, structured and practical clinical training
- Host training events with IAEA support
- Participate in regular meetings with the IAEA to synergize efforts

E-learning

- Support the production of training and e-learning materials
- Publish training materials to support capacity building in the medical uses of radiation and imaging

Experts

- Provide expertise to support: plans and designs for new facilities; implementing best practices; introducing new imaging and treatment methods; quality assurance; on-site education and training, etc.

Research

- Designing, implementing and following up on IAEA coordinated research activities
- Provide countries with training in the design and implementation of clinical trials

Guidelines

- Support IAEA activities in the development of best practice and evidence-based guidelines on medical uses of radiation and imaging

Quality improvement

- Support IAEA activities in quality improvement by promoting and conducting local Quality Assurance/Control audits or by promoting the implementation of relevant IAEA methodologies (QUATRO, QUANUM, QUAADRIL) in the region

“As capacity building and knowledge hubs for their respective regions, Anchor Centres play a pivotal role in advancing cancer care by directly benefiting neighbouring countries. Through Anchor Centres, the progress that has been achieved in each country—these individual rays of hope—can be sustained and scaled up, ensuring a brighter future of equitable cancer care for all.”

May Abdel-Wahab
Director of Division of Human Health, IAEA

“Together, and with Rays of Hope adding new impetus, the IAEA and WHO remain committed to upscaling their long-standing close collaboration toward common goals, closing the cancer care inequity gaps and accelerating progress toward the achievement of the 2030 UN Agenda for Sustainable Development.”

IAEA/WHO Joint Statement on Reducing Inequity in Access to Cancer care through Rays of Hope Initiative, 4 February 2022

The role of partner organizations

The IAEA works in close partnership with Member States, United Nations agencies, research organizations, the private sector and civil society to maximize the impact of the Rays of Hope initiative.

Organizations such as the World Health Organization and other global leaders work with the Agency to increase access to cancer care through capacity building and training, and to collaborate on research, quality assurance and data collection.

Through Rays of Hope, the Agency is engaging with the private sector, banks, international development funds and development agencies in Member States to leverage support at every level.

Partner expertise, educational resources and training are also channelled through regional Anchor Centres, building on the IAEA's established strengths in South-South and triangular cooperation to foster long term solutions.

Construction of radiotherapy centre on-going in one of the first African countries to benefit from Rays of Hope support

How you can get involved

There are many ways in which you can support Rays of Hope, including:

- Amplifying the visibility of Rays of Hope for increased access to cancer care
- Partnering with the Agency in training, technology, innovation and other areas
- Providing in-kind support by offering equipment, educational grants and hosting fellowships
- Contributing financial resources
- Participating as an expert in Agency missions and events

Supporters of Rays of Hope are its best advocates—we encourage you to reach out to your networks!

If you are interested in collaborating, supporting or partnering with the IAEA on the Rays of Hope initiative, please contact partnerships@iaea.org

Find out more

In the spotlight

A few numbers we are especially proud of

Since its launch in February 2022, Rays of Hope has:

€90m+

Received more than **€90m+** from different kinds of donors and partners, including Member States and the private sector.

Received **90+** requests for support.

Signed partnership agreements with **25+** governments, private sector, financing institutions, and other stakeholders.

40+

Started delivering tangible results in **40+** countries around the globe.

12

Established an agreement with **12** Anchor Centres.

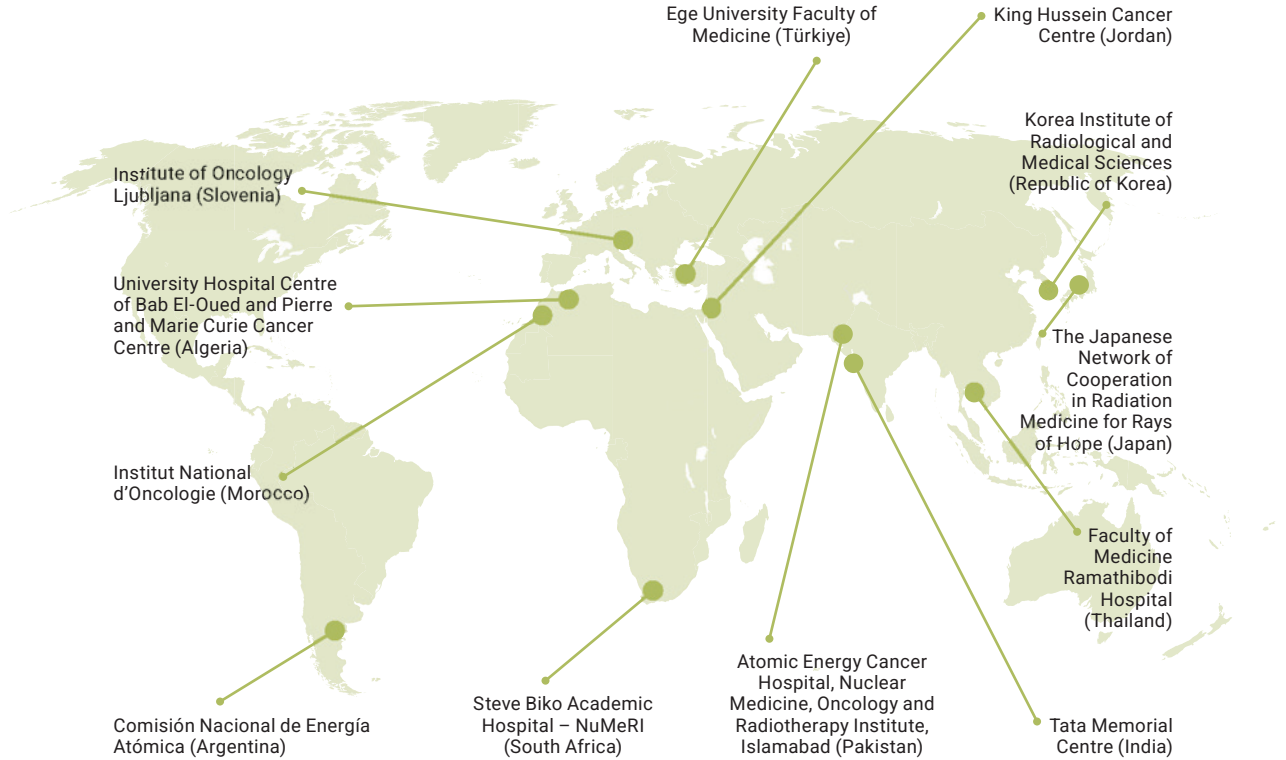
Initiated the procurement of specialized radiotherapy or medical imaging equipment in **40+** countries.

100

Commenced the training of over **100** specialized medical professionals.

25-02344E Publication date: June 2025

In the spotlight: **Rays of Hope Anchor Centres**



Between February 2022 and May 2025:

24 cancer centres applied to become Anchor Centres

17 were approved by the IAEA's review process

12 signed an agreement with the IAEA to become Anchor Centres

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In the spotlight: **our goal**

Over 90 Member States have already requested IAEA support through the Rays of Hope initiative.

90+

We have estimated that the needs for support to improve access to cancer care in each of these countries could range from €7.5m* to €16m*.

Will you help us reach our goal?

* Based on packages of assistance that are tailored to specific country needs

In the spotlight: **contributing Member States**

A special thank you.

We would like to thank our community of donors and partners whose contributions are already helping patients with cancer in low and middle income countries. With this support, patients can access life saving diagnostic and radiotherapy equipment, and countries can build a trained, sustainable medical workforce.

Member States sharing the costs of Rays of Hope interventions in their countries*

Albania
Honduras
Jordan
Lesotho
Malawi
Niger
Uzbekistan

Member States donating to support others through Rays of Hope*

United States of America	€55 513 638
Japan	10 500 215
Saudi Arabia	2 252 500
Australia	1 663 759
France	1 372 109
Belgium	917 500
Russian Federation	347 653
Italy	300 000
Sweden	276 295
Spain	270 000
Germany	200 000
Monaco	154 613
Korea, Republic of	132 960
Finland	100 000
Israel	41 318
Malta	30 000
Latvia	20 000
Portugal	20 000
Mexico	18 460
Philippines	9 240

* As of June 2025

25-02350E Publication date: June 2025

In the spotlight: **broad partnerships for hope**

Rays of Hope aims to galvanize action to establish or expand radiation medicine services in underserved countries. The urgency of the task requires that we work with a wide variety of partners to swiftly equip hospitals and train medical professionals to deliver quality services.

We are proud of our partnerships with academia, professional societies, financing institutions and other stakeholders to accelerate #CancerCare4All!

Thank you for your support.

City Cancer Challenge Foundation

Canadian Nuclear Isotope Council

RAD-AID

Sovereign Military Hospitaller Order of Saint John of Jerusalem of Rhodes and of Malta

St. Jude Children's Research Hospital

Asian Development Bank

Islamic Development Bank

OPEC Fund for International Development on Cooperation

Radiation oncology, medical imaging and medical physics societies:

African Organisation for Research and Training in Cancer (AORTIC)

American Association of Physicists in Medicine (AAPM)

American Society for Radiation Oncology (ASTRO)

Arab Medical Association Against Cancer (AMAAC)

Canadian Association of Radiation Oncology (CARO)

European Society for Radiotherapy and Oncology (ESTRO)

European Federation of Organisations for Medical Physics (EFOMP)

European Association of Nuclear Medicine (EANM)

European Society for Radiology (ESR)

Federation of Asian Organizations for Radiation Oncology (FARO)

Ibero Latin American Radiation Oncology Association (ALATRO)

International Cancer Expert Corps (ICEC)

International Gynecologic Cancer Society (IGCS)

International Society of Radiology (ISR)

Radiological Society of North America (RSNA)

Royal Australian and New Zealand College of Radiologists (RANZCR)

Royal College of Radiologists (RCR)

Society of Nuclear Medicine and Molecular Imaging (SNMMI)

World Federation of Nuclear Medicine and Biology (WFNMB)

In the spotlight: **private sector partners**

Private sector partners play a crucial role in advancing our goal to increase access to radiotherapy and medical imaging services in low and middle income countries in a safe and sustainable manner.

We thank the private sector partners supporting us in this mission.

Elekta · GE HealthCare · iba · 会津中央病院 · shonmedi+physics · PTW · Roche · SIEMENS Healthineers · STANDARD IMAGING · Sumitomo Heavy Industries, Ltd. · TECHNOL · TNS Tokyo Nuclear Service Co.,Ltd. · MedAccess

In November 2024, under Rays of Hope, the IAEA signed agreements with Elekta and GE Healthcare to support training and research to close gaps in cancer care globally.

> **No one can tackle this major health crisis alone. We must amplify our joint efforts to help save lives, including by cooperating with leading medical technology companies. We can't afford to lose any more time.**
>
> *Rafael Mariano Grossi*
> *IAEA Director General*

25-02351E Publication date: June 2025

In the spotlight: **the role of innovation**

How innovation can speed up the progress towards #CancerCare4All

Innovation can accelerate the speed and scale of progress in the global fight against cancer through:

- groundbreaking research that provides the much needed evidence base for resource efficient treatment approaches;
- global databases that generate novel insights; and
- state-of-the-art learning platforms that advance education and training.

Through Anchor Centres, Rays of Hope will support the IAEA's efforts on innovation to help upscale global access to cancer care even further.

May Abdel-Wahab
IAEA Director of
Division of Human Health

In the spotlight: **examples of innovation**

A few ways in which the IAEA is breaking boundaries through cancer research

Some recent examples of the IAEA's work on innovation in cancer care include:

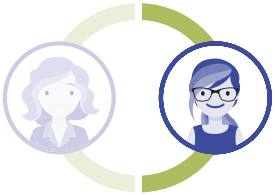
- Applied research (the HYPNO trial) examining a more intensified treatment regimen (hypofractionation) for head and neck cancer. Through this technique, radiation oncologists can treat patients in nearly half the time, shortening waitlists and enabling more patients to receive timely treatment.
- The development of virtual reality models for three cancer treatment procedures. This cost effective tool provides trainees with an immersive learning environment to strengthen their skills. It can be particularly advantageous when the necessary medical equipment has not yet been installed or made available.

Healthcare professionals (a medical physicist and a radiation oncologist) in Mozambique using the IAEA's new virtual reality tool to train in brachytherapy procedures.

23-05842E Publication date: January 2024

In the spotlight: **Paraguay**

Expanding access to brachytherapy



Maria is from Paraguay, where cervical cancer killed one in two women diagnosed with the disease in 2022 (Globocan).

When Maria started her treatment, there were only two public radiotherapy machines available in the country, and a lot of people needing treatment. Thanks to IAEA support for training personnel and delivering the country's first public brachytherapy machine in 2018, Maria is alive and feeling well. But we need to do more for women like Maria, much more.

Will you help us increase access to this life-saving technology in Paraguay and beyond?

Yesterday, my doctor confirmed that I am getting ahead of the disease. And I feel good, I feel good.

Maria Bavera, Paraguay

In the spotlight: **Kenya**

Ensuring radiation safety for patients and staff

As one of the first countries to benefit from the Rays of Hope initiative, Kenya has received assistance from the IAEA for both training and procurement.

In particular, the IAEA helped Kenya build an appropriate radiation safety infrastructure. As a result, Kenya has been able to issue the regulations that ensure the proper protection of workers and patients, and the safe use of radiation in medicine.

With this safety infrastructure in place, two external beam radiotherapy units (linear accelerators) are currently under installation and training is on-going for medical physicists and radiation oncologists. Each linac has the capacity to treat up to 1000 people per year.

Kenya is fully aware that an adequate radiation safety infrastructure is a pre-requisite for any IAEA equipment. With the two linacs installed, not only are patients healthier, but they and the medical staff who treat them are safer.

James Keter Chumba
Director General, Kenya Nuclear Regulatory Authority

24-03207E Publication date: August 2024

In the spotlight: **Malawi**

On the way to national treatment capacity

With a cancer population of nearly 20 000 expected to double by 2045 (Globocan 2022), Malawi was one of the first countries to benefit from Rays of Hope support.

2022: **19.8k** 2045: **43.6k**

Since joining the initiative, long term training and refresher courses for radiotherapy and medical imaging professionals have been held and one linear accelerator, HDR brachytherapy machine, CT-simulator and dosimetry equipment have been procured and delivered. Additional specialized equipment is in the process of being procured, including one additional LINAC. In addition, radiotherapy and brachytherapy bunkers have been constructed — ready for the launch of the country's first public radiotherapy facility.

We are a testimony of what Rays of Hope is doing in terms of training young scientists in nuclear related fields, providing expert services and procuring radiotherapy equipment. As a country, we are delighted that very soon we will be able to treat our cancer patients in Malawi.

Khumbize Kandodo Chiponda
Malawi Minister of Health

In the spotlight: **Tanzania**

Building capacity to treat patients in their home country

In the United Republic of Tanzania, cancer is the second leading cause of death among women, with cervical cancer accounting for 40 per cent of all newly diagnosed cancers in women (Globocan 2022).

With IAEA support, these women now have access to much needed radiotherapy through the delivery and installation of a high dose rate (HDR) brachytherapy machine in Dar es Salaam.

This is an example of the sort of comprehensive assistance the IAEA can provide to countries in their fight against cancer. But we need to do more, much more to increase access to cancer diagnosis and treatment.

Now we can offer treatment within the county and treat many more patients who otherwise would face expensive trips abroad. I think we are able to give patients with cancer more hope.

Dr Sadiq Siu
The United Republic of Tanzania

24-03209E Publication date: August 2024

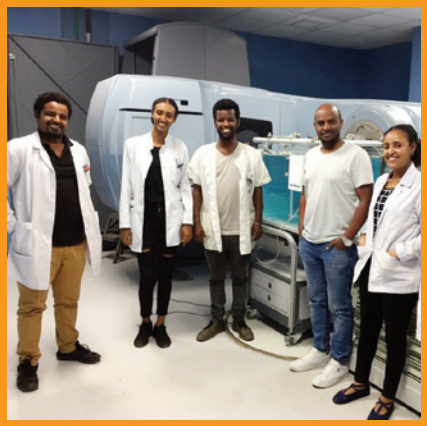
In the spotlight: **Ethiopia**

Sharing knowledge to build national and regional capacity

Staff work long hours and the radiotherapy machine is available 95% of the time. However, there is currently a two year waiting list for radiotherapy treatment at the Black Lion Hospital in Ethiopia, and many patients die before having the chance to receive it.

It was Dr Munir A Aman who led the clinical implementation of the hospital's only linear accelerator. He is also one of the first radiation therapists to have been trained by the IAEA in Ethiopia. He is now sharing that knowledge with others.

Will you help medical professionals like Dr Aman give their patients the treatment options they deserve?



Dr Munir A Aman and his team at the Black Lion Hospital, Ethiopia (Photo: M. Aman/Black Lion Hospital)

> **Thanks to an IAEA fellowship, I led the first linear accelerator clinical implementation at Black Lion Hospital in Ethiopia, and over 3 000 cancer patients have been treated.**
>
> *Dr Munir A Aman, Ethiopia*

24-00164E Publication date: January 2024

In the spotlight: **Mongolia**

Building on South-South and triangular cooperation

The situation of cancer care in Mongolia is alarming, with the nation experiencing the world's highest rate of cancer mortality per 100 000 population (one in five).

With national cancer cases expected to double in the next 20 years (Globocan 2020), Mongolia is one of the countries who has requested support from Rays of Hope.

Harnessing existing technical cooperation projects in the field of health and building on several IAEA missions to the country, Mongolia signed a trilateral partnership agreement with the IAEA and the Korea Institute of Radiological and Medical Sciences (KIRAMS) in September 2023 with the aim of establishing a robust and sustainable healthcare infrastructure.

High level representatives from the Korea Institute of Radiological and Medical Sciences (KIRAMS), the Ministry of Health of Mongolia and the IAEA following the signature of Practical Arrangements to strengthen triangular cooperation in cancer care and radiation medicine.

> **We are confident that our agreement with the IAEA and KIRAMS will help strengthen and improve our national capacity, including technological advancement, equipment and human resources development.**
>
> *Manlaijav Gunaajav*
> *Secretary of the Nuclear Energy Commission of Mongolia*

In the spotlight: **Chile**

Investing in the future of radiotherapy in Latin America and the Caribbean

In response to a shortage of trained radiation oncologists and a growing cancer burden in the region, the IAEA is supporting a Master's programme in Advanced Radiotherapy together with Chile.

Co-hosted by the Arturo López Pérez Foundation and supported by the Chilean Nuclear Energy Agency (CCHEN), successful participants are awarded a Master's degree from the University of Los Andes at the end of the one-year programme. Intensive workshops are delivered by internationally recognized doctors in subjects such as Robotic Radiotherapy, High Dose Rate Brachytherapy, Tomotherapy and Modulated Volumetric Arcotherapy.

Each year, around eight radiation oncologists have the opportunity to participate.

As students, it is our duty to share the lessons we are learning. This will mean that advanced radiotherapy is not just a title but becomes a truly accessible form of treatment — a new reality delivered to patients through increasingly effective and safe forms of treatment.

María Cecilia Atencio Rosselot, radiologist from Argentina, cohort 2017–2018

In the spotlight: **Ukraine**

Providing urgent support to patients with cancer

Since 2023, Ukraine has received targeted support under Rays of Hope to address the urgent and increasing needs it faces to strengthen its diagnostic and treatment capacities for patients with cancer.

With the financial support of Member States, the IAEA has been providing expert support, equipment and training in three priority institutions identified by the Ukrainian Ministry of Health to ensure that cancer patients continue to receive the care they need.

In addition, efforts are underway to train more professionals in radiology, nuclear medicine and radiotherapy through the development of a comprehensive, multidisciplinary virtual training programme and the establishment of an in-country training facility.

The team of experts working on the virtual program that will help train specialized medical professionals in Ukraine

> **Through Rays of Hope, our goal is to strengthen Ukraine's capacity to deliver radiology, nuclear medicine, and radiotherapy services to patients in a safe and secure manner.**
>
> *Eve-Külli Kala*
> *Director of the Division for Europe, IAEA Technical Cooperation Department*

24-03262E Publication date: August 2024

In the spotlight: **Türkiye**

Bringing medical professionals together under Rays of Hope

In April 2024, the Ege University Faculty of Medicine, Europe's first Anchor Centre, held a landmark workshop bringing together close to 100 radiotherapy professionals from around the region to exchange best practices and knowledge on paediatric radiotherapy.

Participants held focused discussions on how to successfully integrate radiotherapy into comprehensive treatment plans; explored how radiation oncology services can be optimized at the national level; discussed priorities and needs in terms of education, research and training; and debated which actions were needed to improve the quality of clinical care for children and adolescents.

The benefit of sharing experiences was underlined by the many participants of the workshop.

"The full room you see here speaks volumes of the interest in this important subject. Though rare, childhood cancer can be fatal if diagnosed late or poorly treated. This is why we chose to hold this workshop, to maximize each individual child's chances of survival from cancer."

Professor Yavuz Anacak
Ege University, Department of Radiation Oncology

In the spotlight: **Saving lives**

Enhancing diagnostic services for the early detection of breast cancer

In Latin America and the Caribbean, breast cancer is the leading cause of cancer deaths among women — 60 000 in 2022 alone (Globocan).

Regular mammograms (X ray pictures of the breast) can save lives by detecting this disease early, even before there are symptoms.

To support breast cancer screening services and diagnosis in the region, 32 mammography units were procured through Rays of Hope for 19 countries in 2024 — allowing up to 250 000 women to be screened per year.

The IAEA also offered technical guidance and manuals to help centres to plan, design and operate high quality and safe breast cancer screening services.

We are excited about the potential these mammography units have to increase early breast cancer detection and diagnosis rates in the region — thereby reducing breast cancer mortality and ultimately saving lives.

Luis Longoria, Director of the Division for Latin America and the Caribbean, IAEA Technical Cooperation Department

24-03263E Publication date: August 2024

In the spotlight: **Indonesia**

Supporting the expansion of radiation medicine facilities

In May 2023, Indonesia and the IAEA formalized their intention to collaborate on a 2023–2027 road map to expand access to radio-diagnostic, nuclear medicine and radiotherapy facilities for cancer patients across the country. This followed on from several in-country missions and workshops.

The technical expertise and advice provided by the IAEA is being used by the Government of Indonesia to support their expansion plan for these new facilities intended to support cancer patients in the country.

This is a concrete example of how Rays of Hope can help countries to develop concrete plans within their own national framework to support their cancer patients.

Professor Gondhowiardjo treating a patient at Cipto Mangunkusumo General Hospital Jakarta (RSCM).

Radiotherapy is an essential part of cancer treatment, and a global effort is needed to close the gap. As a radiation oncology professional from the developing world, I strongly believe that the IAEA's Rays of Hope initiative will make a difference.

Soehartati Gondhowiardjo, Radiation Oncologist, Indonesia

In the spotlight: **Democratic Republic of the Congo**

A significant milestone for public radiotherapy

In November 2023, IAEA Director General Rafael Mariano Grossi attended a high profile ceremony held in the Democratic Republic of the Congo (DRC) to lay a foundation stone of the country's first public radiotherapy centre.

The DRC was in the first wave of countries to receive IAEA support under Rays of Hope.

Prior to this, only one private radiotherapy facility served a country of approximately 90 million people. Most diagnostic and treatment services were only available in private facilities in Kinshasa, creating considerable geographical and economic disparity in access to diagnostic services across the country.

1 facility

90m people

The foundation stone of DRC's first public radiotherapy centre was laid at a ceremony attended by IAEA Director General Rafael Mariano Grossi, Minister of Scientific Research Gilbert Kabanda Kurhenga and Minister of Higher and University Education Muhindo Nzangi Butondo.

> **Today in the DRC, we laid the first brick of the country's first public radiotherapy centre—a big step for cancer care in the country and in the region.**
>
> *Rafael Mariano Grossi*
> *IAEA Director General*

24-03283E Publication date: August 2024

In the spotlight: **Niger**

New equipment increases services for patients

Rays of Hope supported Niger in establishing a new cancer treatment facility with a linac, a computed tomography-simulator, an advanced treatment planning system, dosimetry equipment and related accessories.

The new equipment increases access to care at Niger's only public radiotherapy centre, which serves a population of 24 million people.

In addition, the IAEA also trained over 32 radiation oncologists, medical physicists, radiation therapy technologists and oncology nurses to support the expanded services.

To support the establishment of the new centre, the IAEA facilitated a partnership with the Islamic Development Bank, which provided the financial support to Niger for the procurement of the linac. The United States of America also contributed to the computed-tomography equipment and training.

Niger's new linac bunker was inaugurated in October 2024 in the presence of the President of Niger, Abdourahamane Tchiani, and IAEA Deputy Director General Hua Liu.

> **The availability of this machine in our country will have a very positive impact on the quality of life of the people of Niger, as it will enable a substantial reduction in treatment costs and medical evacuations.**
>
> *Abdourahamane Tchiani*
> *President of Niger*

In the spotlight: **Uzbekistan**

Bringing partners together to foster medical capacity

The IAEA is supporting Uzbekistan in expanding human resources for health to meet a growing demand for cancer diagnosis and treatment services.

The new Republican Oncology Centre Tashkent was completed in 2024 and, following a request from Uzbekistan's Ministry of Health, Rays of Hope is supporting capacity building for oncology professionals to boost services at the centre.

IAEA Director General Rafael Mariano Grossi visited the new Republican Oncology Centre in December 2024.

> **Congratulations to Uzbekistan and Health Minister Khudayarov on completing the Republican Oncology Center Tashkent. Supported by the IAEA's Rays of Hope and the Islamic Development Bank, this milestone brings real impact for patients and cancer care in Uzbekistan.**
>
> *Rafael Mariano Grossi*
> *IAEA Director General*

25-02389E Publication date: June 2025

In the spotlight: **Cambodia**

Planning for the future

Cambodia has taken critical steps to improve cancer control in 2024, launching a new National Cancer Control Plan (NCCP) and initiating the construction of the country's first cyclotron facility to support early cancer detection and treatment.

The new facility at Calmette Hospital in central Phnom Penh will enable radioisotopes to be produced locally, expanding access to advanced diagnostic imaging for patients across the country. Throughout the process, IAEA specialists are providing guidance and training to staff on maintenance and operation.

The new NCCP provides a framework to support the continued expansion of radiotherapy services in the country, alongside the development of adequate regulatory frameworks and resource mobilization efforts.

Design of the finished cyclotron building at Calmette Hospital in Phnom Pen, Cambodia (Photo: Calmette Hospital)

> **"The Cambodian Ministry of Health is fully committed to implementing the NCCP to expand the range of service delivery and enhance the quality of medical services for patients in terms of cancer prevention, screening, diagnosis, treatment, care and support."**
>
> *Beauta Rath*
> *Advisor to the Ministry of Health, Cambodia*

In the spotlight: **Jordan**

Bringing care closer to more patients

In February 2025, the Kingdom of Jordan opened its first advanced nuclear medicine diagnostic centre in a public hospital, increasing access to early detection services.

The PET-CT equipment was provided to the Oncology, Radiation Therapy and Nuclear Medicine Hospital at Al-Bashir under a cost-sharing arrangement with the Jordanian Government and the United States of America.

Al-Bashir is the only public hospital in Jordan with a nuclear medicine department offering integrated services for cancer patients. Until recently, over 500 patients a year had to be referred to private institutions if they required advanced diagnostic services.

The new PET-CT equipment at Al-Bashir Hospital increases access to early detection services. (Photo: S. Taher/Al-Bashir Hospital Department of Nuclear Medicine)

> **The introduction of the PET-CT in Al-Bashir is an important step toward enhancing the healthcare system in Jordan, as it will reduce the need for patients to travel abroad for such advanced tests, saving time, effort and costs for patients and their families.**
>
> *Firas Al-Hawari*
> *Jordanian Minister of Health*

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In the spotlight: **Nuclear security**

Building skills for the secure use of high activity radioactive sources in medicine

In 2024, the IAEA offered for the first time a 10-day training course for medical professionals on the security of radioactive material and associated facilities in cancer care.

The course was conducted exclusively under Rays of Hope at the IAEA's Nuclear Security Training and Demonstration Centre (NSTDC), located in Seibersdorf, Austria.

The event brought together more than 20 participants from 14 countries in Africa, Asia and Latin America, mainly professionals working in medical facilities. They were introduced to key aspects of nuclear security, including information and computer security.

The comprehensive training covers risk management, physical protection, and insider threat prevention techniques, among other topics, and is supported by exercises and hypothetical scenarios.

A new NSTDC training course was specifically designed for countries participating in or planning to join the IAEA's Rays of Hope initiative.

> **This hands-on training on physical protection and computer security of radioactive material and associated facilities is tailored to the needs of cancer care professionals working with high-activity radioactive sources.**
>
> *Elena Buglova*
> *Director, Division of Nuclear Security*

In the spotlight: **Radiation safety**

Strengthening oversight as the foundation for expanded care

As the global cancer burden increases, so does the demand for diagnostic and therapeutic technologies using radiation.

In August 2024 the IAEA, in collaboration with the Pan American Health Organization/World Health Organization Regional Office for the Americas, brought together health and nuclear regulatory authorities from 13 countries in Costa Rica to strengthen the effective control of radiation sources and radiation-generating equipment in medicine.

Participants agreed on the San Jose Action Plan, which foresees improved cooperation between health and nuclear authorities, increased training for regulatory personnel and medical professionals, a review and update of national regulation and inspection capabilities, and an update of national inventories.

Health and nuclear regulatory authorities met in Costa Rica to improve cooperation for the regulatory control of radiation sources and radiation-generating equipment

> **The Plan marks a turning point, as it incorporates actions for both nuclear and health authorities to strengthen the control of radiation sources and radiation-generating equipment in the medical field, which will increase the impact of our support.**
>
> *Raúl Ramírez*
> *Section Head, IAEA Division for Latin America and the Caribbean*

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In the spotlight: **Argentina**

Anchor Centre workshop focuses on childhood cancer

In November 2024, Argentina's Rays of Hope Anchor Centre brought together 46 radiotherapy professionals from 14 countries and other partners to develop a roadmap to strengthen paediatric radiotherapy services across the region.

During the week-long event, participants identified gaps and explored ways to optimize service delivery. At the end of the workshop, they created a regional paediatric radiotherapy network to facilitate the exchange of knowledge and resources among healthcare professionals.

The event also featured sessions delivered by experts from partner institutions such as St. Jude Children's Research Hospital on advanced aspects of childhood cancer treatment, such as craniospinal irradiation, magnetic resonance simulation for radiotherapy planning and total body irradiation set-ups.

The week-long workshop brought together radiotherapy professionals and global experts to examine the status of paediatric radiotherapy in the region.
(Photo: Hospital de Pediatría Juan Pedro Garrahan)

> **"The workshop was an opportunity to exchange experiences about paediatric radiotherapy, master treatment standards from internationally renowned institutions, and learn about IAEA projects that can support improvements in paediatric cancer care on the continent."**
>
> *Michael Chen*
> *A.C. Camargo Cancer Center, Brazil*

In the spotlight: **imPACT Reviews**

Expert assessment for evidence-based cancer control planning

The global cancer burden is on the rise, with most of the increase in cancer incidence and mortality in low and middle income countries. For many national authorities, formulating realistic, robust cancer control strategies while considering available resources is a challenge.

To help address this, the International Atomic Energy Agency (IAEA), the International Agency for Research on Cancer (IARC) and World Health Organization (WHO) offer the imPACT Review – a joint assessment of national capacities and health system readiness to plan and implement adequate cancer control strategies.

The review provides governments and their partners with a baseline analysis and a set of recommendations to guide planning and investment for comprehensive cancer control and is tailored to a country's specific context and priorities.

An international team of experts visit the Primero de Maio primary care centre in Maputo, Mozambique, during a 2024 imPACT Review.

> **The imPACT Review represents a valuable opportunity to identify critical gaps and outline concrete strategies to strengthen our capacity to address cancer.**
>
> *Armindo Tiago*
> *Mozambique's former Minister of Health*

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Join our mission

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