



IAEA

International Atomic Energy Agency
Atoms for Peace and Development

IAEA in a nutshell: from research and technical assessments to measurable implementation on the ground

Anne Starz, Section Head and Coordinator for Resource Mobilization

Atoms for Peace and Development



“The Agency is a formidable institution that deals with issues of war and peace, of human health, of energy, food and water – fundamental concerns of all human beings.”



Rafael Mariano Grossi,
Director General, IAEA

IAEA at a glance



175
Member States
(as of March 2022)



2,500+ staff
from
over 100
countries

- 
- HQ in Vienna
 - Laboratories in Seibersdorf, Monaco and Vienna.
 - Regional offices in Toronto and Tokyo.
 - Liaison offices in New York and Geneva

Operational regular budget: EUR 384 million (2021)

Main areas of work



Science and Technology

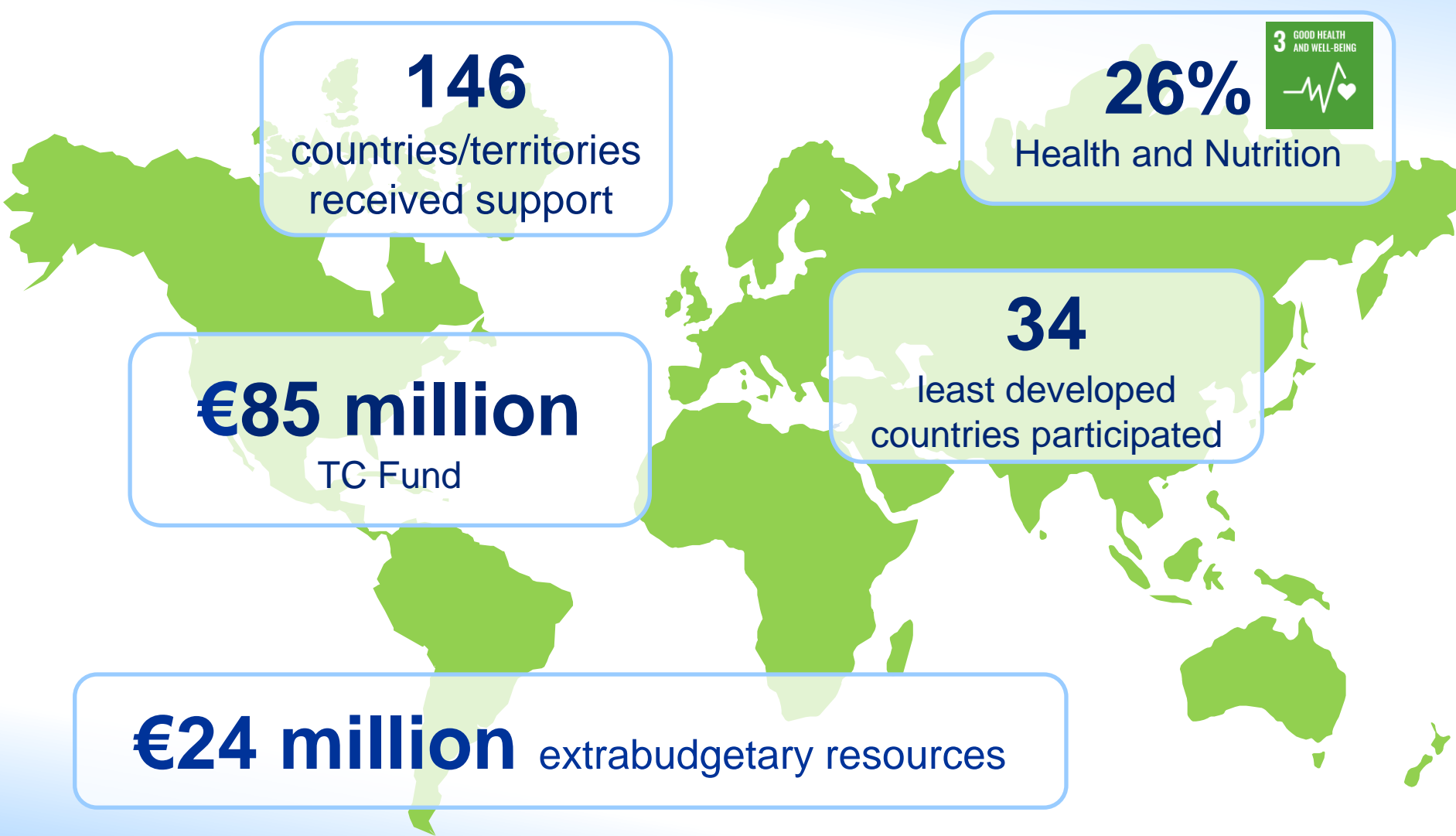


Safety and Security



Safeguards and Verification

TC Programme in numbers (2021)



146
countries/territories
received support

26%
Health and Nutrition

3 GOOD HEALTH AND WELL-BEING

€85 million
TC Fund

34
least developed
countries participated

€24 million extrabudgetary resources

What services does the TC programme provide?

Capacity building
Networking
Knowledge sharing
Partnership building

TC Programme aims to support sustainable socioeconomic development in Member States

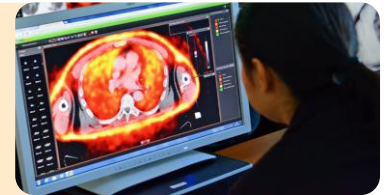


**Technical Cooperation (TC)
Projects**

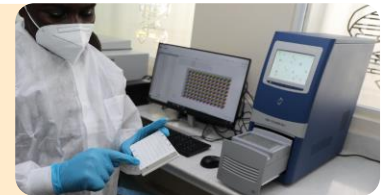
Expert missions



Fellowship training & scientific visits



Equipment & materials



Conferences, symposia & seminars



Training courses & workshops





IAEA

International Atomic Energy Agency

Atoms for Peace and Development

The Value and Impact of Diagnostic Imaging and Radiotherapy

Jose Alfredo Polo Rubio, Radiation Oncologist

Why radiation medicine?



- Limited access to radiotherapy
 - 90-100% in High Income Countries
 - 50-60% in Low Middle Income Countries
 - 10% in Low Income Countries
- Limited access to medical imaging



80% of Africa's 1.2 billion inhabitants have no access to radiotherapy and related cancer services

-5,600 radiotherapy machines in LMICs

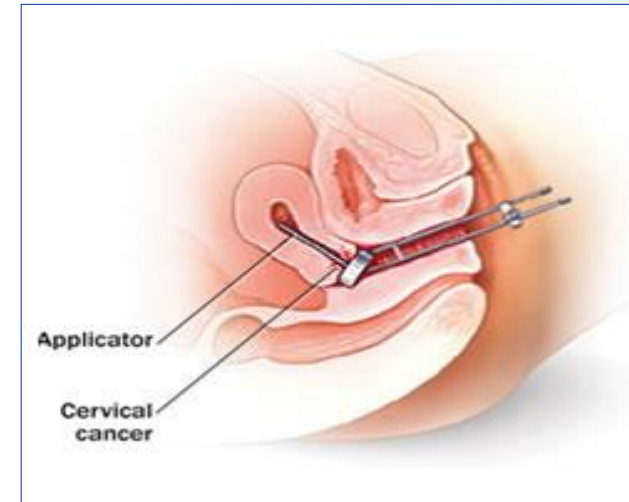
Radiation Techniques



<https://www.iaea.org/newscenter/news/iaea-receives-medical-linear-accelerator-under-partnership-from-manufacturer>

Teletherapy

Brachytherapy is a mandatory component of curative RT*



Brachytherapy . (2013). Retrieved from http://www.simballc.org/brachy_therapy.html

Brachytherapy

*Comprehensive Cervical Cancer Control, WHO guidelines, 2006-2014

Imaging

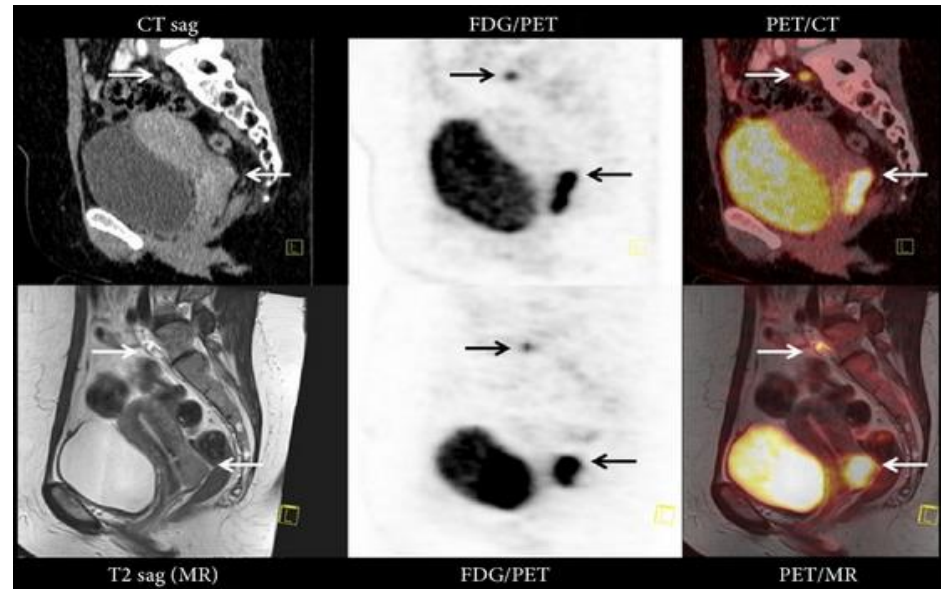
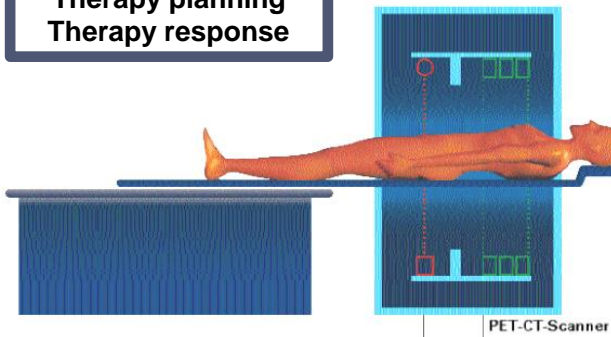
Structural Information:

Size Shape Location

Uptake Information

Activity Function Localization

CT or PET/CT:
Staging
Restaging
Therapy planning
Therapy response



(Kjær, Loft et al. 2013)

Understanding the cost of health

VALUE FOR MONEY

- Cost-effectiveness of service delivery
- Thresholds based on GDP per capita
- Competing priorities

AFFORDABILITY

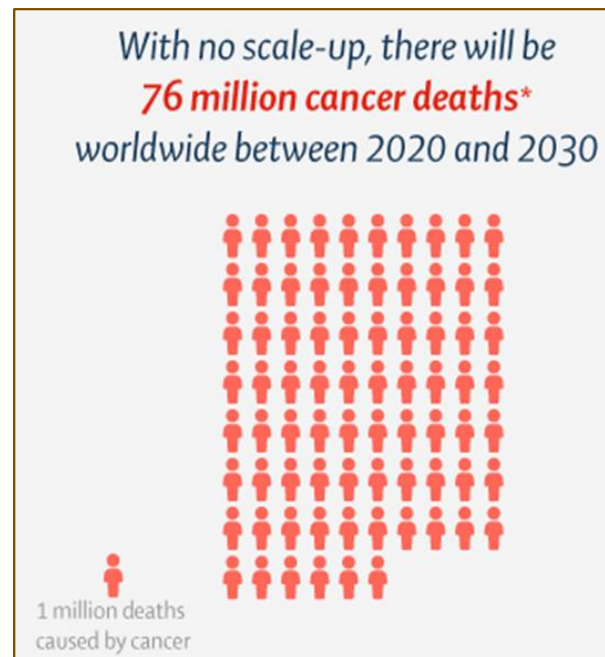
- Budget Impact Analysis
- Time horizon = 5 years
- Innovative financing needed

Capital expenditure
Operational expenditure

* Value-based healthcare concept defines “value” as health outcomes achieved for patients relative to the costs of achieving them

Lancet Oncology Commission on Imaging and Nuclear Medicine

Scaling up Imaging Would Avert Millions of Deaths Caused by Cancer



Radiation medicine return on investment

Investment in a comprehensive scale-up of treatment, imaging, and quality of care in LMICs

\$1 = \$6.15



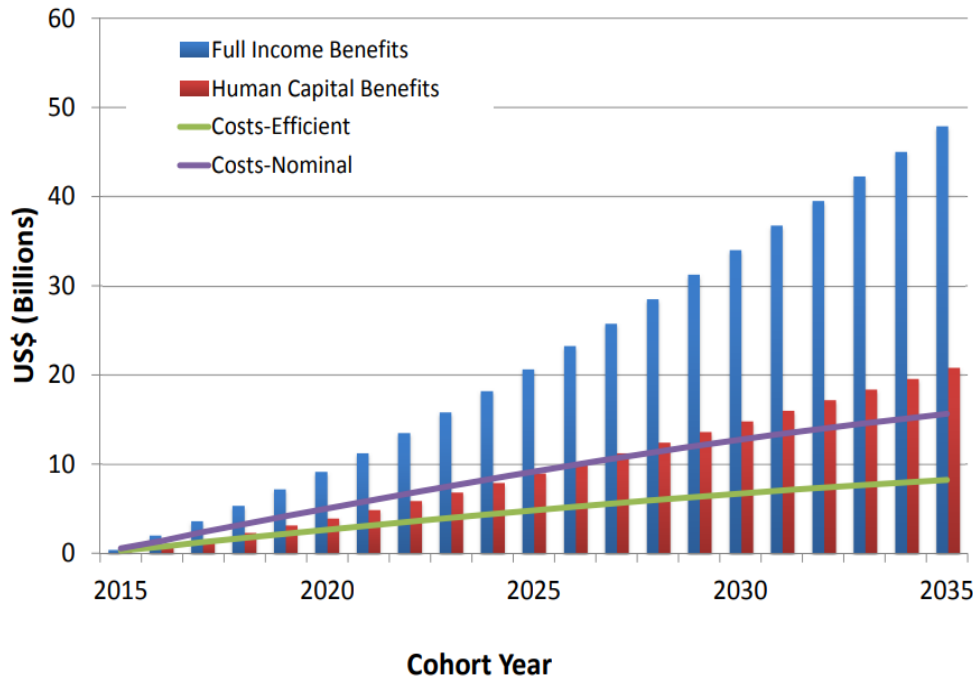
Scale-up of only
Treatment &
Quality of Care

\$12.43



Scale-up of Treatment,
Quality of Care & IMAGING

Radiotherapy Return on Investment



Radiotherapy in cancer care

- Around 1/2 of all patients with cancer need radiotherapy
- Typical course of treatment costs less than \$1500 in LMIC
- 40% of cancer patients *cured* have received radiotherapy

50%

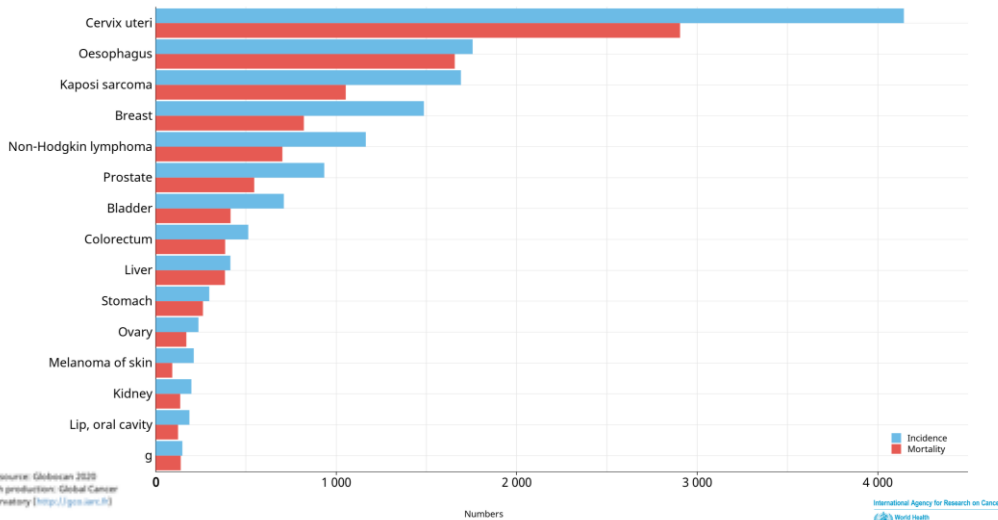
< \$ 1,500

40% of cured cases

	Nominal Model	Efficiency model
Low income	\$26.6 Bn	\$14.1 Bn
Lower-middle income	\$62.6 Bn	\$33.3 Bn
Upper-middle income	\$94.8 Bn	\$49.4 Bn
Total	\$184.0 Bn	\$96.8 Bn

Technical Evaluation - A Country Example

Cancer Incidence and Mortality



New cases per year (IARC): 18,000
Years of Life Lost: 360,000

Country Information

Population (World Bank): 19 million
Area: 120,000 km²
Low-income Country
GDP per capita (World Bank): \$400

Radiation Medicine Infrastructure Available



Diagnostic Imaging

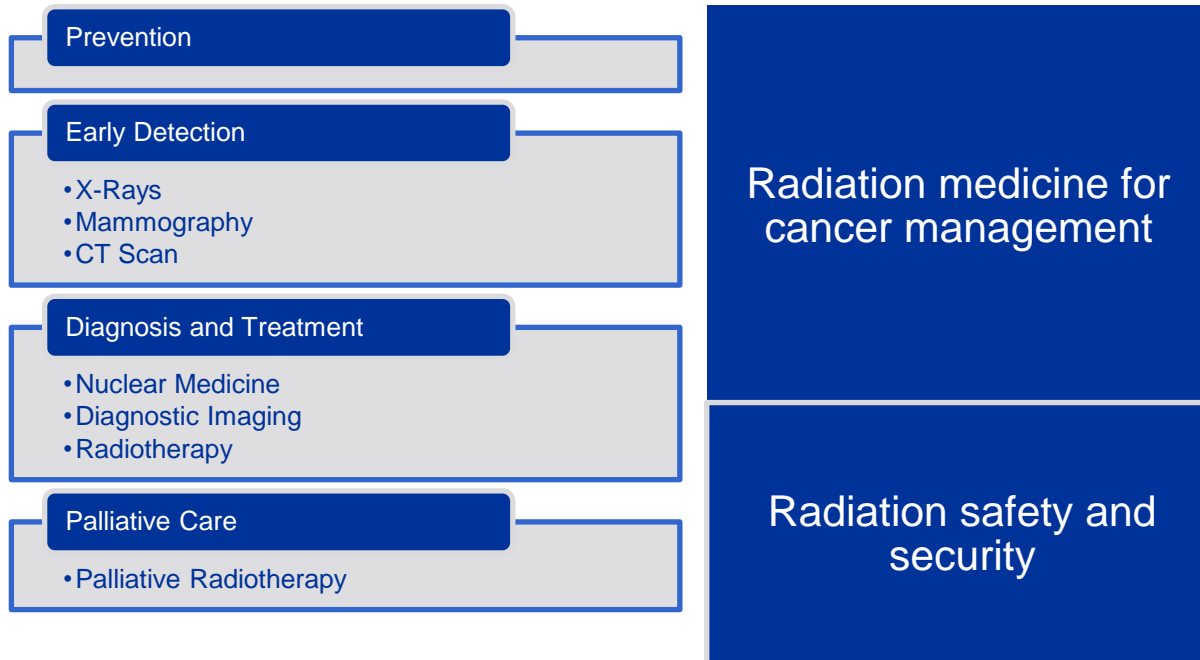
MRI units: 1
CT scanners: 7 units
Mammography: 5 units
X-Ray units: 44



Radiotherapy

No radiotherapy
First centre under construction

IAEA's Role in Comprehensive Cancer Control





IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Rays of Hope

Building a coalition of donors and partners

Anne Starz, Section Head and Coordinator for Resource Mobilization

Rays of Hope – Launch at AU Summit with African Leaders

IAEA Chief to Launch Initiative to Promote Cancer Care for All at Joint Event with Current and Incoming AU Chair

1/2022

Addis Ababa, Ethiopia

Director General Rafael Mariano Grossi will on Friday, World Cancer Day, announce the launch of an IAEA initiative to fight cancer at a joint event co-hosted by President Félix Antoine Tshisekedi Tshilombo of the Democratic Republic of Congo, the current Chairperson of the African Union, and Senegal's President Macky Sall, the incoming Chairperson.

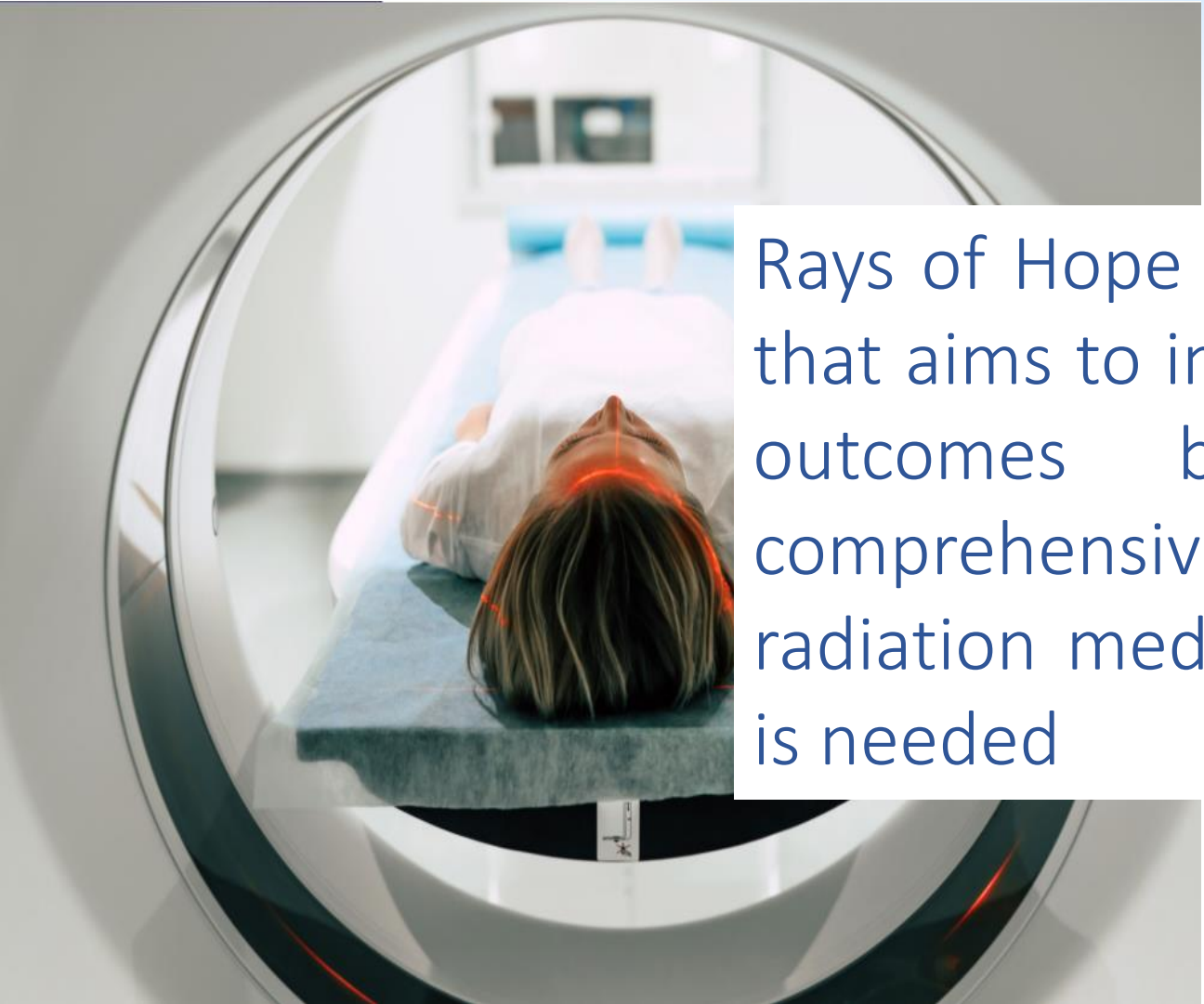
Moussa Faki Mahamat, Chairperson of the African Union Commission (AUC), will also address the event held on the sidelines of an African Union summit in Addis Ababa, Ethiopia.

The IAEA's Rays of Hope initiative will help provide cancer care in low- and middle-income countries in Africa and other parts of the world now lacking such capacities. The IAEA will work closely with donors and recipient countries to establish facilities for delivering radiotherapy, medical imaging and nuclear medicine services which are critical for detecting and treating a disease which kills millions of people every year.

The high-level event "Rays of Hope" will take place between 16:00 and 16:35 EAT (14:00 and 14:35 CET) in Medium Conference Hall (NCC) at the AU Headquarters in Addis Ababa. It will be followed by a photo opportunity. After the event, Director General Grossi will hold a press conference about the initiative starting at 16:35 EAT in the same room. Journalists can attend in person or via the livestream link that will be available on the [IAEA website](#).



Rays of Hope: Cancer care for all



Rays of Hope is an initiative that aims to improve cancer outcomes by providing comprehensive access to radiation medicine where it is needed

Rays of Hope – the IAEA’s comprehensive approach

- Technical assessments
- Capacity building
- Support for radiation safety and security;
- Quality assurance services and missions
- Regional Anchor Centres
- Partnerships



Rays of Hope

Regional Anchor Centres

- Advanced clinical services
- Education and training
- Continuous professional development
- Quality assurance



Building a coalition of donors and partners



TRADITIONAL
DONORS
(MEMBER STATES)



INTERNATIONAL
FINANCING
INSTITUTIONS

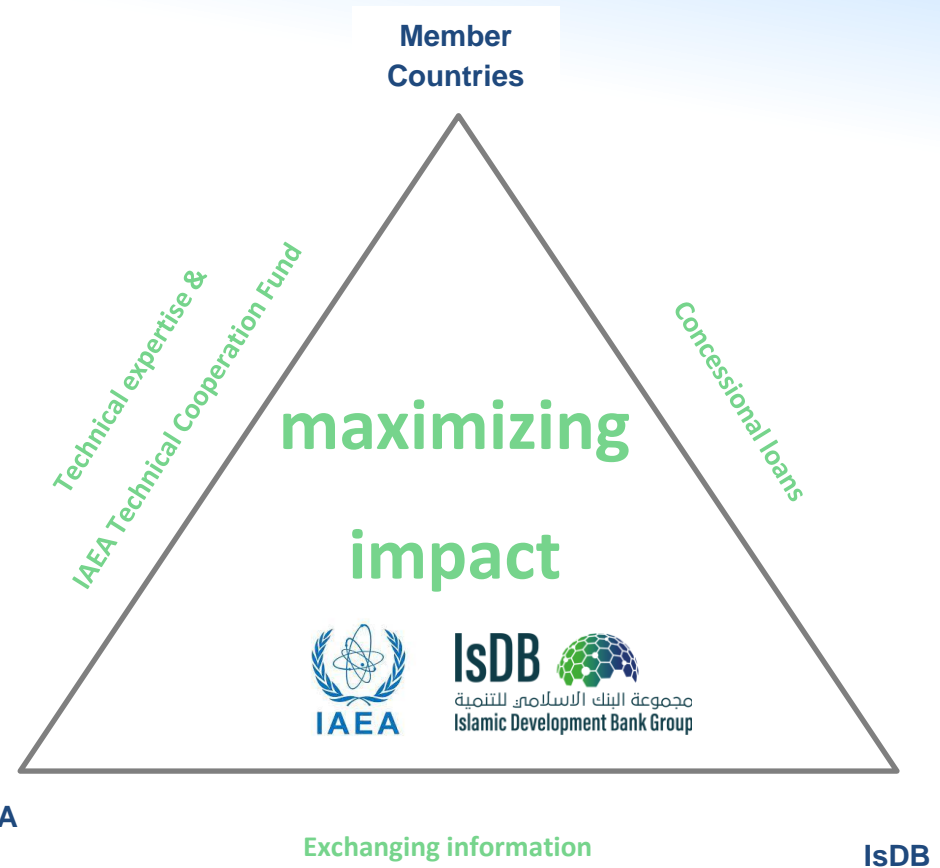


PRIVATE
SECTOR

Working together with IFIs



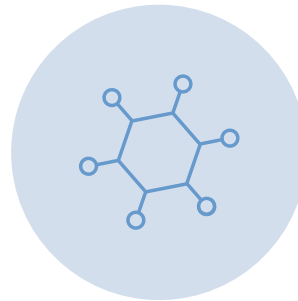
IAEA



Collaborating on Global Cancer Initiatives



WHO CERVICAL
CANCER ELIMINATION



WHO BREAST CANCER
INITIATIVE



WHO CHILDHOOD
CANCER INITIATIVE



THANK YOU

#CancerCare4All