



Support to Quality Improvement and Safety in Medical Physics Services

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2022

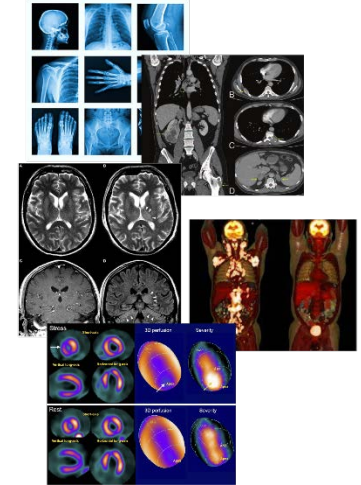
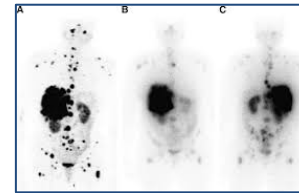
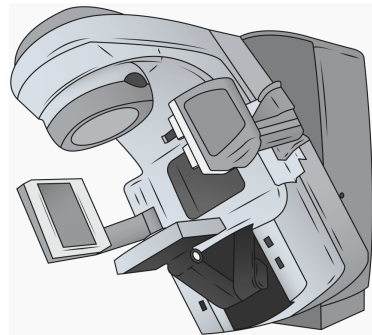
Radiation Medicine

- From crude beginnings more than 100 years ago ,

Diagnostic radiology (DIR),

Nuclear medicine (NM)

Radiation Therapy (RT)



Have all evolved into advanced techniques that are delivered with complex technologies.

Quality in Radiation Medicine



Radiation medicine



High quality

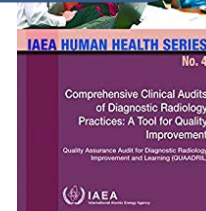


Under patient care, the role of a medical physicist involves quality and safety activities,

Comprehensive Quality Assurance Programme



Effectiveness



IAEA initiatives to support external audits in RT, DIR and NM

Quality in Radiation Medicine

The key responsibility of Medical Physicist



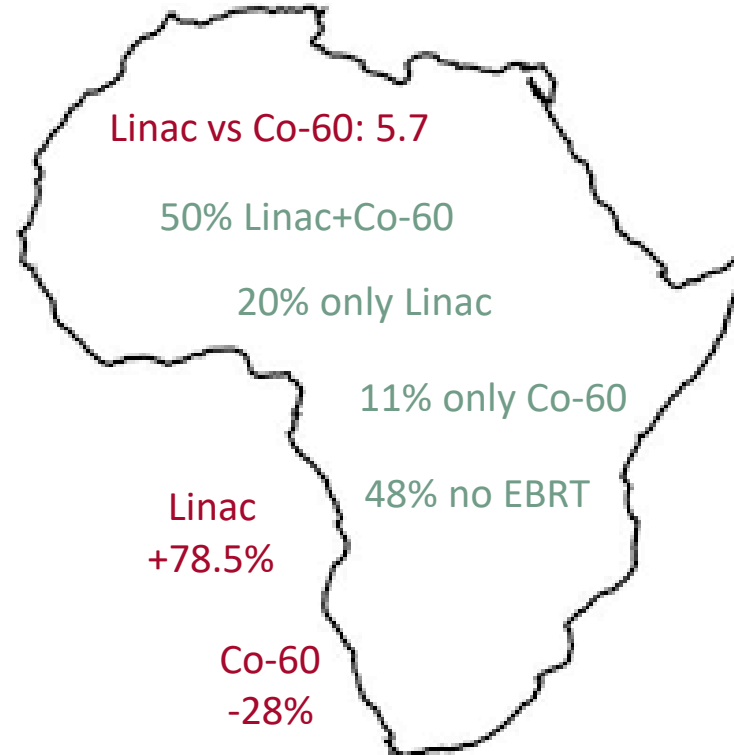
Getting the right dose to the right place



Regional situation: Africa

Fact & Figures

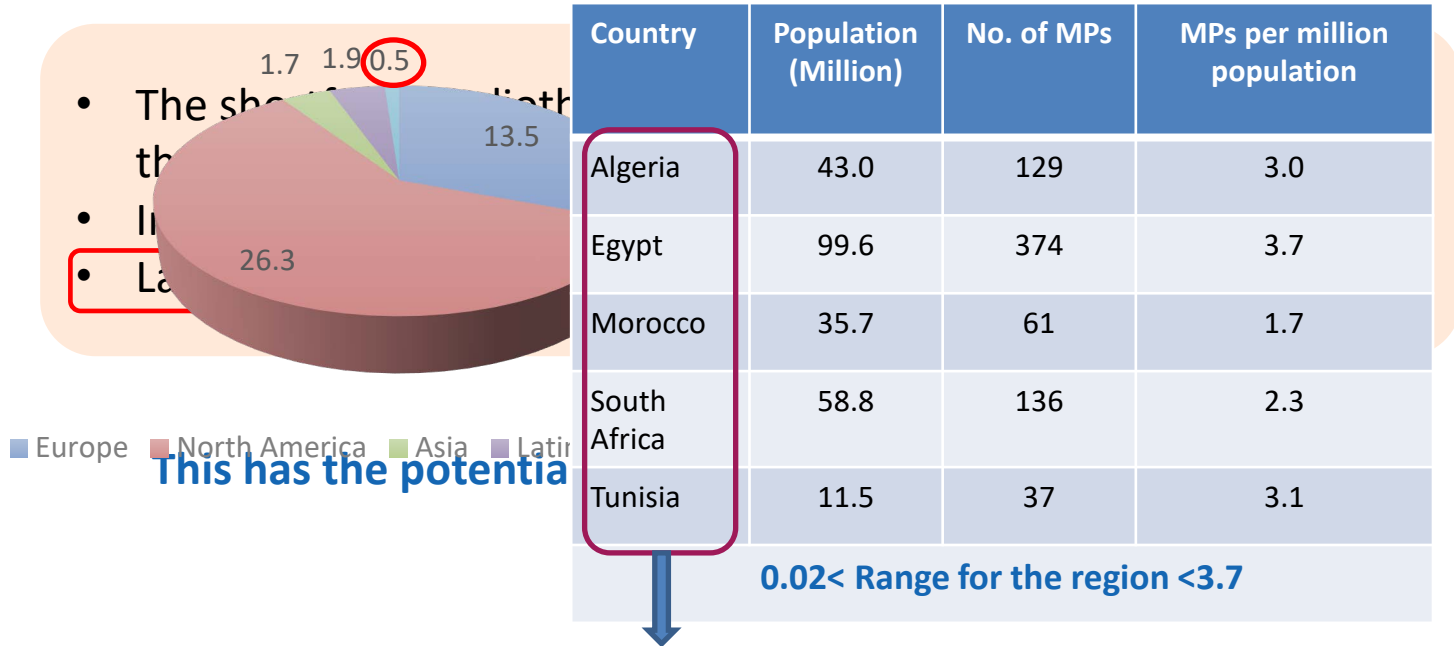
	Total cancer cases	MV unit per 10 ³ cancer cases	Coverage
2012			
↓	+33.0%	+15.2%	+2.75%
2020	844279	29.9%	0.38



Abdelwahab et al. The Lancet Oncology (2013)
Elmore et al. The Lancet Oncology (2021)

Regional situation: Africa

MPs per million population for different regions



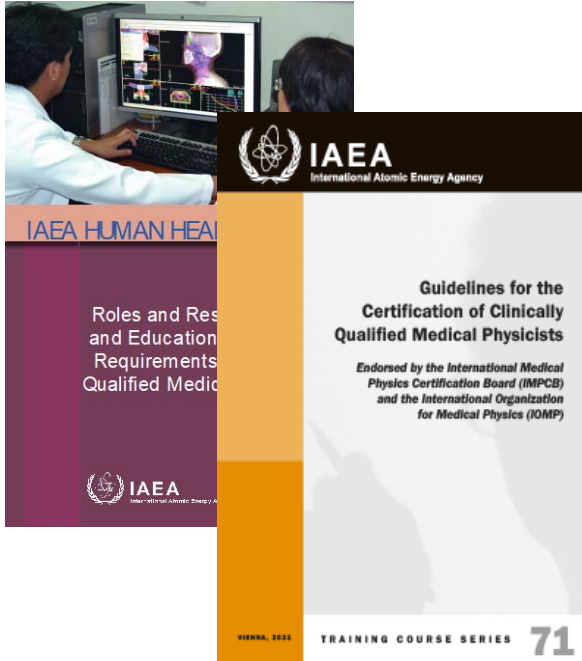
- The share of MV units in the region is 0.5%
- In 2019, the number of MV units in the region was 13.5
- In 2020, the number of MV units in the region was 26.3

■ Europe ■ North America ■ Asia ■ Latin America

This has the potential

79% of MV units of the region

Regional situation: Africa



MPs classified under group 2111 “Physicists and Astronomers”; a specific note was added, to reflect the role of MP in health care.

Much effort remains to be made at the level of MSs for the recognition of the MP as a health professional

Take on the challenge

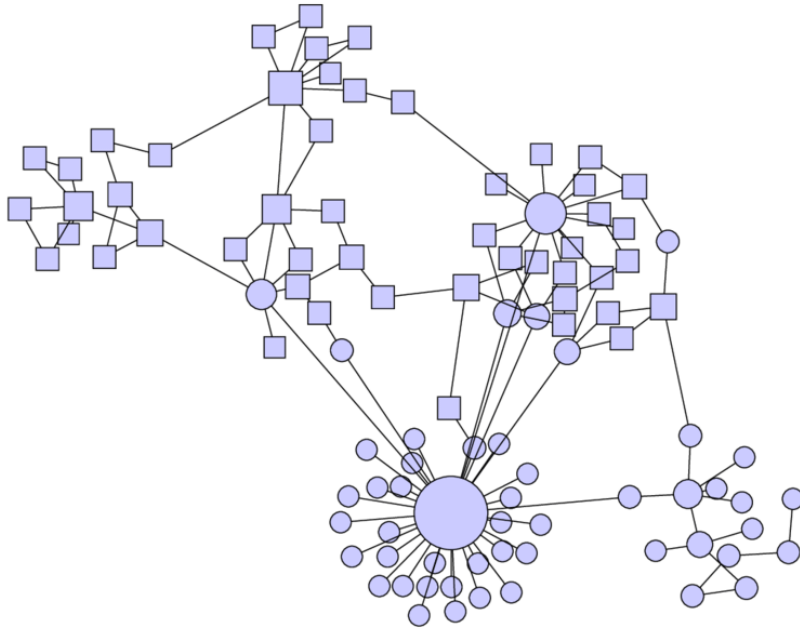
How to overcome this situation



IAEA support MSs' fight against cancer using nuclear and nuclear-related techniques

- Support of cancer radiotherapy treatment and diagnostic imaging projects and HR development.
- Development of guidelines; databases;
- Providing a quality assurance framework and review missions
- Providing technical, advisory and dosimetry laboratory services
- Educational and research initiatives.

IAEA Collaborating and Anchor Centres



Collaborating Centres network

Assist the IAEA by undertaking original research and development and training relating to nuclear science, technologies and their safe and secure applications.



UN' SDG

IAEA Collaborating and Anchor Centres

Promote IAEA Collaborating and Anchor Centres to fight cancer in Africa.



To participate in scientific and technical backstopping by providing expertise, participating in relevant research, organizing training courses, hosting fellowships and scientific visits, etc

Rays of Hope to raise Hope in Africa



Rays of Hope will integrate the IAEA's expertise to support MSs in the diagnosis and treatment of cancer using radiation medicine.

Rays of Hope will build or strengthen radiation safety legislation and infrastructure and provide quality control, guidance, training and equipment.

Collaborating Centre scheme helps reach important targets of the United Nations' Sustainable Development Goals

For a World without fear of cancer