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Medical physics capacity building as part of cancer control programmes in developing countries – IOMP partnering with IAEA & WHO

Round Table:

Goals for Medical Radiation Protection in 2020

IAEA Bonn 2012

International Conf. Radiation Protection in Medicine

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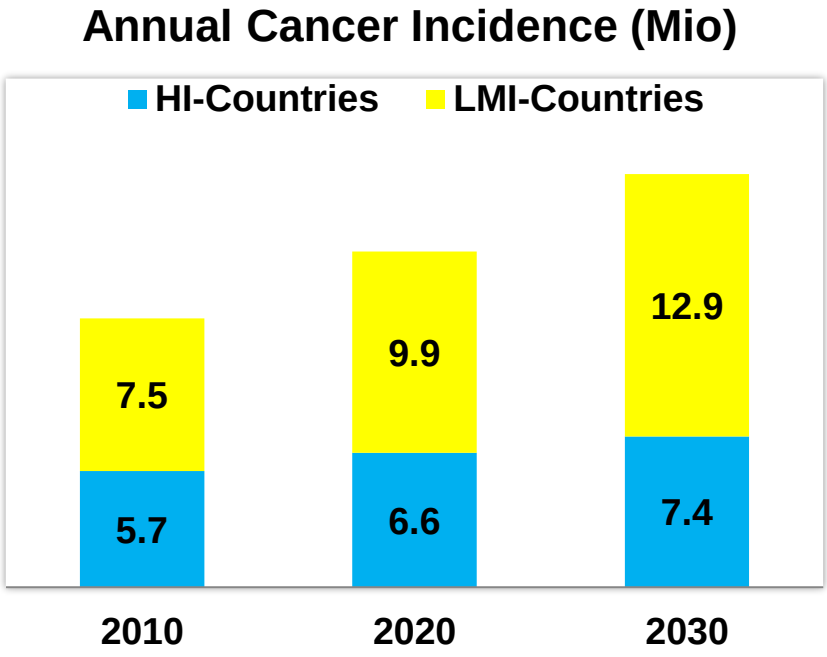
Setting the Scene for the next Decade

Cancer: Perspective 2020



(IAEA / GLOBOCAN(2008)

- Low increase in HI-Countries
- Large increase in LMI-Countries (improved hygene, life expectancy)

Radiotherapy is an effective, gentle and cheap treatment

- About 2/3 of all cancer patients are benefitting of radiotherapy
- Every second cancer patient cured received a radiation treatment
- LMI-countries 85% world´s population but only 1/3 of world´s RT-units

Access to high quality and safe radiotherapy is particularly essential for LMI countries

Particular Challenges in LMI-Countries

- Appropriate Equipment & Instrumentation
  - Radiology, Nuclear Medicine, Radiotherapy
  - Dosimetry, Monitoring, QA
- **Qualified Staff**
- Functional System of Protection & Safety

Medical Physicists are the gate keeper in high quality and safe radiotherapy

- IOMP: Policy Statements
  - The Medical Physicist: Role and Responsibilities
  - Basic Requirements for Education and Training of Medical Physicists
- ILO/ ISCO-88: Recognition of the Profession
- IAEA/WHO-BSS:
  - Responsibilities, Requirements, System of Protection & Safety
- IRPA-IOMP: Statement of Collaboration

The IOMP Education & Training Scheme

- Basic Education
  - Validation and Accreditation of MSc Courses
- Professional Training (Residency) Program
  - Certification through a national or international body
- Continuing Professional Development
  - Re-Certification

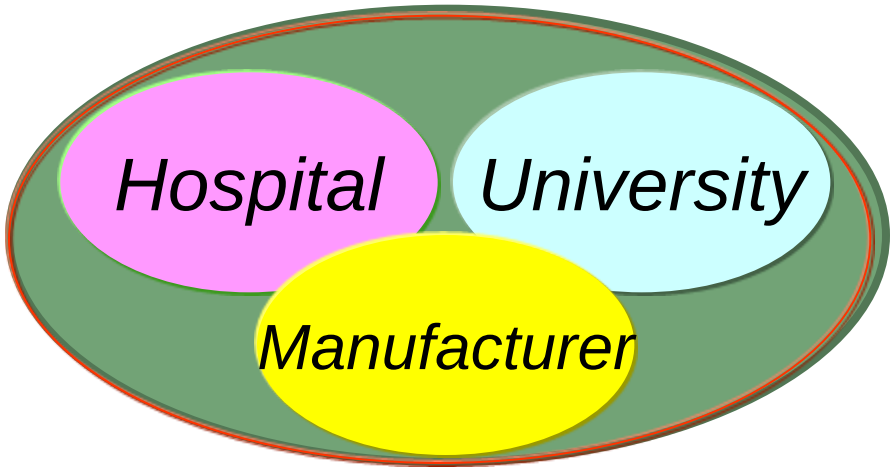
How to adapt the Standard Scheme to the constraints in LMI countries?

Fast Track E&T Approach for LMI-Countries

Radiotherapy as an anchor for building cancer control capacity & infrastructure (WHO/IAEA Joint Programme PACT/AGaRT)

- At present shortfall of 5000 RT machines in LMI-countries: Mobilization of resources & **training**
- Regional Networks, Partnerships, Mentoring
- Equipment training as part of a local Fast Track E&T program
- Partnering with IAEA, WHO, IOMP: providing experts, keeping agreed standards in E&T,
- Sustainable capacity building
- Preventing „brain drain“

Example:
Fast Track E&T in RT Medical Physics

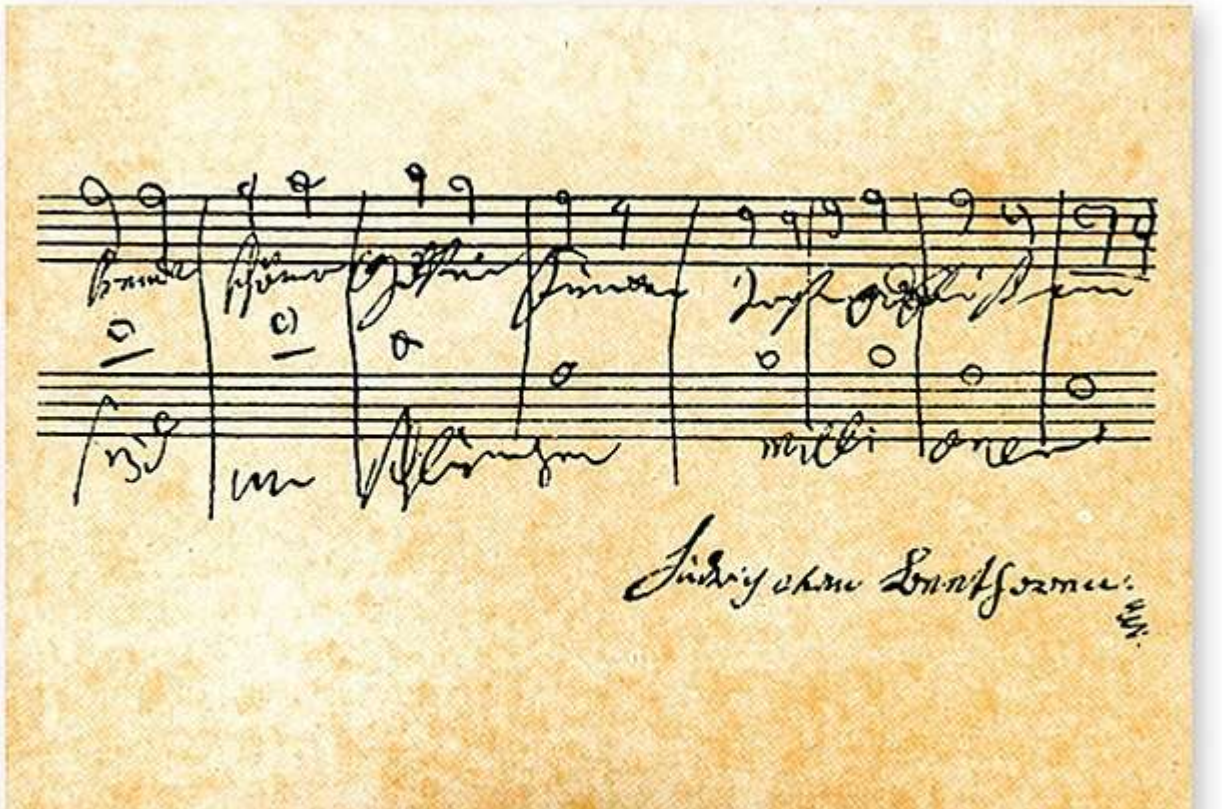


WHO **IAEA** **IOMP**

Course Materials
Selection of Experts
Accreditation

- **Location**: Customer´s Hospital (Reference site of the company)
- **Academia**: Link to a local University
- **Faculty**: Preferably local & few foreign Trainers
- **Sustainability:** repeated courses

- **Course:** 2 modules
  Module 1:Fundamental MP, lectures & practicals
  Module 2: First line equipment maintenance, equipment specific QA



Thank you