

Working towards an appropriate level of radiation protection in medicine in the next decade

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The 2001 Malaga Conference, the International Action Plan for the Radiological Protection of Patients

- The relevant actions considered were:
 - 1) **Education and training** (including digital radiology, CT, interventional. new techniques in radiotherapy, etc)
 - 2) **Information exchange** (including prevention of accidents)
 - 3) **Assistance** (including the role of medical physicists, technologists, audit services, etc)
 - 4) **Guidance** (including cooperation with the radiology industry)
 - 5) **Appraisal and other services** (including development of local diagnostic reference levels, infrastructure, QA etc)
 - 6) **Coordinated research activities.**

The International Action Plan for the Radiological Protection of Patients and ICRP contribution

- **Computed Tomography** (ICRP publications 87, 102, 121 paediatrics).
- **Interventional** (publications 85, 117, 120, 121).
- **Education and Training in RP** (Supporting Guidance, 93 digital, 105, 113).
- **Radiotherapy** (86, 97, 98, 112).
- **Nuclear Medicine** (94, 106).

ICRP Work in Progress

- **Ion beam radiotherapy**
- **Cone beam CT**
- **Mitigating second cancer risks in modern radiation oncology**
- **Justification**
- **Reference levels in diagnostics and intervention**
- **Use of effective dose**

Interaction and cooperation of ICRP with other international organizations and scientific societies

- During the annual meetings, ICRP and its Committees organize **scientific symposia or seminars** to discuss the ICRP programme of work.
- External experts are **invited to participate as members of the task groups** or working parties.
- Draft documents at the ICRP are **posted at the web site for public consultation** before approval. This represents an opportunity to interact with the scientific community and stakeholders

Towards the next decade. What is still missing in radiation protection in medicine (1)

- **Justification of medical procedures.** Also considering the impact of external factors as infrastructure, existing protocols and trained professionals.
- **Optimization of RP for new technology in medicine.** New technology with not enough time to train operators on aspects of radiation safety. Industry involvement.
- **Management of patient and staff protection as a global approach.**
- **Occupational lens doses and extremity doses.** Interventionists and nuclear medicine operators.
- **Radiation risk communication to patients.**

Towards the next decade. What is still missing in radiation protection in medicine (2)

- **Tissue reactions.** Especially during some complex interventional procedures. Training on that topic.
- **Patient exposure tracking in imaging,** with special attention to paediatrics.
- **Expanding the use of Diagnostic Reference Levels** for optimization.
- **Radiation risk assessment in Radiotherapy.** Increasing complexity involves increasing probability for errors.
- **Sufficient trained staff in RP** (medical, and paramedical including medical physicists, radiographers and nurses).

Conclusions

- ICRP is ready to **cooperate** with other international organizations and with medical societies involved in the use of ionizing radiation to address the **topics in which radiological protection advice is needed**.
- ICRP is determined **to improve the standards and the system of RP in medicine using scientifically-based evidence** and to encourage **the use of good science** underlying radiation protection in medicine.