Overview of ICRP Committee 3
Protection in Medicine

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ICRP 2013: 2nd International Symposium on
the System of Radiological Protection
Abu Dhabi. October 2013
Committee 3, Protection in Medicine: develops recommendations and guidance on the protection of patients, staff, and the public against radiation exposure in medicine.

Respond to new challenges in radiological protection.
ICRP C3 (October 2013) (Protection in Medicine)

- **Applegate** Kimberly Prof DR (USA) 2013
- **Bourguignon** Michel Prof (France) 2013
- **Dauer** Lawrence Dr MP (USA)
- **Demeter** Sandor Dr NM (Canada) 2013
- **Kang** Keon Prof NM (Korea) 2013
- **Khong** Pek-Lan Prof DR (China)
- **Loose** Reinhard Prof DR (Germany) 2013
- **Martin** Colin Dr MP (UK) 2013
- **Miller** Donald Prof DR (USA) **Vice-Chairman**
- **Ortiz-Lopez** Pedro Dr MP Spain)
- **Rehani** Madan M. Prof MP (India/Austria) **Secretary**
- **Riklund** Katrine-Åhlström Prof DR, NM (Sweden)
- **Scalliet** Pierre Prof RT (Belgium) 2013
- **Vano** Eliseo Prof MP (Spain) **Chairman**
- **Yonekura** Yoshiharu Prof NM, RT (Japan)
- **Yue** Baorong Prof (China)
Medical exposure of patients, including their comforters and carers, and volunteers in biomedical research.

Application of the fundamental principles (justification, optimisation of protection, and dose limits not applicable for patients).
The system of RP in medicine

- The Commission uses a division into three types of exposure:
  - **medical exposure**, which is principally:
    - the exposure of persons as part of their diagnosis or treatment (or exposure of a patient's embryo/fetus or breast-feeding infant) and
    - their comforters and carers (other than occupational),
    - but also includes volunteers in biomedical research;
  - **occupational exposure**, which is exposure incurred at work and principally as a result of work; and
  - **public exposure**, which comprises all other exposures.
It is not appropriate to apply dose limits to medical exposure of patients, because such limits would often do more harm than good.

The emphasis is on justification of the medical procedures and on the optimisation of radiological protection.

In radiation therapy, in addition to optimization, the avoidance of accidents is a predominant issue.

With regard to comforters and carers, and volunteers in biomedical research, dose constraints are appropriate.
In several areas of medicine, the control of occupational exposure is of particular importance.

- Nursing of brachytherapy patients when the sources have been implanted.
- Fluoroscopically guided interventional procedures (and now, with the new limit for the lens of the eye).
- Radiopharmaceutical preparation, administration and imaging by staff in nuclear medicine.
The ICRP reports (18) dealing with radiological protection (RP) in medicine from 2000 cover topics on:

- *Education and training in RP*;
- *Preventing accidental exposures in radiation therapy*;
- *Doses to patients from radiopharmaceuticals*;
- *Radiation safety aspects of brachytherapy*;
- *Release of patients after therapy with unsealed radionuclides*;
- *Managing radiation dose in interventional radiology, digital radiology, computed tomography, paediatrics, cardiology and other medical specialties.*
ICRP Committee 3: The most recent documents

ICRP Publication 117
Radiological Protection in Fluoroscopically Guided Procedures Performed Outside the Imaging Department

ICRP Publication 120
Radiological Protection in Cardiology

ICRP Publication 121
Radiological Protection in Paediatric Diagnostic and Interventional Radiology
ICRP C3 publications from 2000

ICRP C3 publications from 2000

ICRP C3 publications from 2000

ICRP C3 publications from 2000


ICRP C3 publications from 2000

ICRP C3 publications from 2000

Educational area at the ICRP website
http://www.icrp.org/page.asp?id=35

Free Educational Downloads
The following files are downloadable here at no cost. They can be used by teachers, doctors, and those interested in radiological protection in medicine, together with recent medical reports.

Please note that while we encourage you to download and use these modules, ICRP has the copyright and you must not edit or try to sell the files.

- ICRP 84. Pregnancy and medical radiation (1.3 Mb)
- ICRP 84. Pregnancy and medical radiation, Spanish version (2.3 Mb)
- ICRP 85. Interventional radiology (1.4 Mb)
- ICRP 88. Accidents in radiotherapy (0.8 Mb)
- ICRP 88. Accidents in radiotherapy, Spanish version (0.5 Mb)
- ICRP 87. CT dose management (0.5 Mb)
- ICRP 93. Digital radiology (1.2 Mb)
- ICRP 93. Digital radiology, Spanish version (1.2 Mb)
- ICRP 112. Preventing accidental exposures from new external beam radiation therapy technologies (0.5 Mb)
- ICRP 112. Preventing accidental exposures from new external beam radiation therapy technologies, Spanish version (0.9 Mb)
Free available translations of the ICRP publications to several languages
ICRP C3 Protection in Medicine. Work in Progress

- RP in Ion Beam Therapy,
- RP in Cone Beam CT,
- Occupational Protection in Brachytherapy,
- Justification in Imaging,
- Doses to Patients and Staff from Radiopharmaceuticals (update),
- Occupational Protection in Interventional Radiology,
- Diagnostic Reference Levels for Diagnostic and Interventional Imaging.
- The Committee is also involved in preparation of a document on effective dose (and its use in medicine).