

**MINUTES OF THE MEETING OF ICRP COMMITTEE 3**  
**Washington DC, 22-28 Oct. 2011**

**Participants:**

VANO Eliseo (Spain) Chairman  
COSSET Jean Marc (France) Vice-Chairman  
REHANI Madan (IAEA) Secretary

ÅHLSTRÖM RIKLUND Katrine (Sweden)  
BAEZA Mario (Chile)  
DAUER Lawrence (USA)  
GUSEV Igor (Austria)  
HOPEWELL John W (UK)  
KHONG Pek Lan (Hong Kong, China)  
MATTSSON Sören (Sweden)  
MILLER Donald (USA)  
ORTIZ LOPEZ Pedro (Spain)  
RINGERTZ Hans (Sweden)  
ROSENTEIN Marvin (USA)  
YONEKURA Yoshiharu (Japan)  
YUE Baorong (China)

**Observers:**

PEREZ Maria del Rosario (WHO)  
KASE Kenneth (IRPA)  
MALONE Jim (IEC)  
KESMINIENE Ausra (IARC).

The Chairman, Professor Eliseo Vano, welcomed members and observers. The proposed agenda was approved.

1. **Chair's report:** Professor Vano presented his report. It included the new strategic plan 2011-2017 in which the mandate of C3 is “..develops recommendations and guidance on protection of patients, staff and the public against radiation exposure in medicine”. ICRP has issued a statement on tissue reactions. Among the non-cancer effects, circulatory disease has been recognised as an important late effect of radiation exposure. Mechanisms for improving the presence of ICRP in the medical community: congresses, journals, etc., to improve the educational Web area of ICRP, to increase the cooperation with WHO, IAEA, IEC, EC and other international organizations to better approach the medical community, to detect special problems in RP in the medical area and suggest new documents to give advice.
2. Following three publications of C3 that had undergone public consultation were discussed and approved.
  - a. Patient and Staff Radiological Protection in Cardiology (Donald Miller)
  - b. Radiological Protection in Fluoroscopically Guided Procedures Performed outside the Imaging Department (Madan Rehani)
  - c. Radiological protection in paediatric diagnostic and interventional radiology (Pek L Khong).

3. **WP: Radiation protection in charged particle radiotherapy:** Yoshiharu Yonekura presented the document. It was decided that a TG proposal should be submitted inviting some members of committee 1, 2 and ICRU.
4. **TG: Dose to patients from radiopharmaceuticals.** Sören Mattsson presented the progress with this document (in cooperation with C2). The new biokinetic and dosimetric models for the following substances will be sent to MC for review prior to public consultation:  $^{18}\text{F}$ -FET,  $^{18}\text{F}$ -FLT,  $^{18}\text{F}$ -choline,  $^{11}\text{C}$ -raclopride,  $^{18}\text{F}$ -fluoride.
5. **WP: Follow up of persons accidentally exposed.** Igor Gusev presented outline of the document. Information may be obtained if WHO is preparing some document on this topic so as to avoid duplication.
6. **Effective dose:** There is TG of ICRP with 3 persons with background on medical exposure including representative of C3 (Pedro Ortiz-Lopez). A meeting of TG was held in 2011. There was considerable discussion and following points emerged:
  - a. The use of effective dose in medicine is useful in certain situations.
  - b. TG should provide clear guidelines on where effective dose should be used and where not.
  - c. C1 and C2 should provide coefficients and factors to allow estimation of detriment in medical exposure.
  - d. TG should provide advice on communication of radiation risks to medical professionals and patients.

## 7. Task Groups/Working Parties:

### A. Continuation/ extension of existing TGs

- i. TG 36: Radiation dose to patients from radiopharmaceuticals. Standing TG of C3 and C2 (S. Mattsson, chair). To involve members of C1, C2 and ICRU.
- ii. TG 70: Secondary cancer after modern radiotherapy. A new TG is proposed with Mario Baeza (Chair).

### B. New Task Groups.

Following TGs were proposed to address topics that were decided as future topics in the C3 meeting of 2010:

- a. TG: Imaging of asymptomatic individuals with ionizing radiation. To start a TG with Katrine Åhlström Riklund (Chair).
- b. TG: Radiological Protection in Ion Beam Radiotherapy, Yoshiharu Yonekura (Chair).
- c. TG: Radiological protection in cone-beam CT. To start a TG with Madan Rehani (Chair).
- d. TG: Occupational protection in brachytherapy. To start a TG with Lawrence Dauer (Chair).

### C. New Working Parties

- e. WP: Justification: Framework on justification on the use of ionizing radiation in medical imaging. Hans Ringertz (Chair) preferred to pursue this topic as WP.
- f. WP: Occupational protection issues in interventional procedures (fluoroscopy guided procedures. To start a WP with Pedro Ortiz Lopez (Chair).
- g. WP: Radiological protection in Therapy with Radiopharmaceuticals. Lawrence Dauer and Sören Mattsson (as co-chairs).

- h.WP: Diagnostic reference levels for interventional radiology, digital radiology and PET/CT. To start a WP with Eliseo Vano (Chair).

## 11. Future Topics

- i. Review existing documents by the IAEA and others on occupational protection issues in PET/CT and cyclotron use; decide action. Priority 2-Sören Mattson and Lawrence Dauer to keep under review.
- ii. Framework for optimization of individual patients. Madan Rehani to keep under review
- iii. Dose quantities for display in imaging equipment for guidance to IEC.
- iv. Communication of benefits and radiation risks to medical professionals and public
- v. Ethics in medical exposures

**12. Presentation by observers:** Observers of IRPA, IEC, WHO and IARC as listed in participants above made presentation about their activities.

## 13. ICRP Symposium

There were two sessions in ICRP Symposium as follows:

### **Radiological Protection in Computed Tomography**

*Chair: Eliseo Vañó, ICRP MC and C3 Chair*

CT Scanning: The Good, the Bad and the Ugly

Fred Mettler, ICRP MC Emeritus, New Mexico Federal Regional Medical Center, USA

ICRP and IAEA Actions on Radiation Protection in CT

Madan Rehani, ICRP C3 & International Atomic Energy Agency

Minimising Medically Unwarranted CT Scans

David J. Brenner, Columbia University Medical Center, USA

Paediatric CT

Pek-Lan Khong, ICRP C3 & University of Hong Kong, China

### **Prevention of Accidents in Radiation Therapy**

*Chair: Madan Rehani, ICRP C3*

Accident Prevention in Day-to-day Clinical Radiation Therapy Practice

Mario Baeza, ICRP C3 & Instituto de Radiomedicina, Chile

Impact of Complexity and Computer Control on Errors in Radiation Therapy

Benedick Fraass, Cedars-Sinai Medical Center, Los Angeles, USA

Prioritization of Quality Management Activities Based on What is Reasonably Achievable and Optimally Beneficial to Patients

M. Saiful Huq, University of Pittsburgh Cancer Institute and Medical Center, USA

Tools for Risk Assessment in Radiation Therapy

Pedro Ortiz Lopez, ICRP C3 & International Atomic Energy Agency

The sessions were well attended and led to active discussions.