The 2003 Meeting of the ICRU

Laura J. Atwell

ICRU, Bethesda, MD  20814, USA

The Annual Meeting of the ICRU was held in Oxford, UK from 6 September until 13 September, 2003. The meeting was held at St. Catherine’s College and supported by the Gray Cancer Institute. Drs. Barry Michael and Peter Dawson, with assistance from Myra Michael and Hilary Dawson, provided outstanding local arrangements support.

The Commission reviewed two draft documents:

- Requirements for Radioecological Sampling
- Stopping Power for Heavy Ions

As part of its review of the current status of efforts presently underway, the Commission noted the status of the many active or recently completed projects.

Recently Published

- ICRU Report 67, Absorbed Dose Specification in Nuclear Medicine
- ICRU Report 68, Retrospective Assessment of Exposures to Ionizing Radiation
- ICRU Report 69, Direct Determination of the Body Content of Radionuclides
- ICRU Report 70, Image Quality in Chest Radiography

Preparing for the Printer

- Prescribing, Recording and Reporting Electron Beam Therapy
- Dosimetry of Beta Rays and Low-Energy Photons for Brachytherapy with Sealed Sources
- Patient Dosimetry for X Rays Used in Medical Imaging

Drafting Work Underway

- Approaches to the Dosimetry of Low-Dose Exposures to Ionizing Radiation
- Assessment of Image Quality in Nuclear Medicine
- Bone Densitometry
- Dose and Volume Specifications for Reporting Intracavitary Therapy in Gynecology
- Doses from Cosmic Ray Exposure for Aircrew (joint w/ICRP)
- Dosimetry Systems for Radiation Processing
- Elastic Scattering of Electrons and Positrons
- Mammography—Assessment of Image Quality
During the meeting five seminars were presented:

1. André Wambersie, Chairman of the ICRU, presented “Biological Weighting of Absorbed Dose in Radiotherapy.” He stressed the need for introducing a weighting factor (or function) to correlate absorbed dose and biological effects for the different therapy modalities (e.g., fractionated irradiation, high-dose-rate brachytherapy, hadron therapy, etc.). The numerical value of the weighting factor should always be clearly indicated, but the quantity absorbed dose should also always remain part of the treatment report. Due to its previous achievements for promoting a common language for reporting radiotherapy treatments, the ICRU has a definite role to play in defining terms and concepts for weighting the absorbed dose for differences in fractionation, dose rate, LET, etc., and harmonising the way of reporting the weighting factor(s). However, at present it is probably too early to make definitive recommendations about the names and symbols to be used.

2. Sue Edyvean of the Medicines and Healthcare products Regulatory Agency, Department of Health, UK, presented “Image Quality and Dose in CT,” an excellent overview and summary of CT processes, and guided a discussion on dose, quality, regulations, public and professional acceptance of the processes, automation status and future plans.

3. Peter Dawson, Commission Member, presented “Functional Imaging,” with an emphasis on the universality of the term, i.e., that it can be used to apply to almost all the imaging fields of medicine. Thus, the association with CT as its only application, as implied in the topical report title, should be changed, and perhaps CT alone would be sufficient.

4. Les Braby, Chairman of the Low Dose Report Committee, presented the initial work on the effort. He noted the vast scope of the information available to date and how the Committee intended to structure its review so that a coherent overview of the issue can be developed, without being excessively inclusive.

5. Dieter Regulla, Head of Medical Physics in the Institute of Radiation Protection, GSF, presented, “Reporting X-Ray Diagnostics,” stressing the diversity of practices actually used, between centers and countries, for reporting examination frequency and patient exposure in diagnostic imaging. In these conditions, comparison of techniques and patient irradiation becomes indeed very difficult. He made a plea for harmonisation in reporting techniques, dosimetric methods and patient exposures, and agreement of the relevant quantities to be reported. Due to its tradition and expertise in the field, the ICRU has an important role to play in improving the use of a common language and accurately defined concepts. Harmonisation in reporting medical imaging would be of particular help for international organizations, such as UNSCEAR, WHO, etc., for performing relevant comparisons between the level of radiological care in the countries throughout the world. An extensive discussion followed and the Commission included the harmonization idea as a future report consideration area.

Discussions on potential work for the future included the following topics:
• Harmonization in Reporting Dose in Radiological Imaging
• Image Quality and Patient Exposure in CT
• Key Data for Dosimetry

Next Meeting

The next meeting of the Commission will be hosted by Mr. Stephen Seltzer in the Washington, DC area. The date of the meeting was set at 5-12 September 2004.