



Schweizerische Gesellschaft für Strahlenbiologie und Medizinische Physik

Société Suisse de Radiobiologie et de Physique Médicale

Società Svizzera di Radiobiologia e di Fisica Medica

Swiss Society of Radiobiology and Medical Physics

Member of the European Federation of Organisations for Medical Physics (EFOMP) and the International Organization for Medical Physics (IOMP)

DESCRIPTION OF SSRMP WORKING GROUP

Working group name: Medical Imaging Physics (MIP)

Chairperson: Gerd Lutters; PhD medical physicist SGSMP

Aims and roadmap: Implementation and development of medical physics involvement in all types of clinical routine medical imaging with special emphasis on requirements of radiation protection ordinance Art74 (Excluding: radiation oncology therapy imaging, duties of radiation protection officer, license holder and medical technique manufacturer/service concerning machine QA as stated in the CH radiation protection ordinance);

The MIP working group operates on a 2 years period. By the end of this period, the members evaluate and report on the achieved goals defined for the past period. The WG defines a 2 year roadmap (within the WG aim given above) which is mandatory for a renewal of the working group for another 2 year period.

The group is open for, and supports, communication between SGSMP medical physicist, technicians, physicians, manufacturers, radiation protection officials (FOPH) involved in medical imaging, especially related to radiation protection ordinance Art 74 issues. The group meets 2-4 times a year (Tuesdays afternoon 14:15-16:45 Bern University, communication in English language) and issues a meeting report.

Anticipated results: Report Recommendation Other: Collaboration with physicians, technicians, manufacturer, FOPH

Science relevance:

- i) patient dosimetry, dose estimation and statistics, optimization and risk assessment;
- ii) image quality assessment (technical) and optimization in respect to patient dose;
- iii) staff dose: statistics, measurement (interventional radiology, surgery and nuclear medicine) and workflow optimization;
- iv) radiation safety;
- v) equipment testing (evaluation and acceptance testing);
- vi) use/display of dose indicators in imaging;

vii) Work flow analysis and optimization (dose or/and image quality related).

The MIP group supports creation of research/development groups and communication of their results with special interest in image quality, dose assessment, work flow optimization, radiology IT and education of radiation protection workers in medicine.

Professional relevance: Defining the role, duties, responsibility and skills of medical physics concerning medical imaging (except radiation oncology therapy). Including: continuous education, examination and quality of involvement of medical physicist in medical imaging.

Additionally, the MIP group medical physicists serves as knowledge base concerning radiation risk assessment (life time risk, dose to fetus, questions from general public etc.), safety analysis (e.g. HFMEA) and supports definition of standard operation procedures and good clinical practice concerning the use of ionising radiation in medicine. Trained individual experts participate in clinical audit.

The MIP provides a platform for establishing the link and regular communication with physicians, technician and medical technique manufacturers and create collaborations in order to reach the defined working group aims.

Educational relevance: Training and implementation of new skills for medical physics experts concerning medical imaging including non-ionizing radiation imaging.

Strengthening the scientific approach of dose optimization in medical imaging through exchange of information concerning dose optimization practices and scientific results.

Training and education of other radiation protection workers in medicine.

Start date: past

End date: 31. Dez. 2017 (start new radiation protection ordinance, next roadmap is due on October 2017 MIP meeting)