

Ensuring safe and effective radiotherapy in Europe

The challenge...

The medical physicist fulfils an essential role in the safe and effective use of radiation in medicine, most commonly in cancer treatment and various types of radiation diagnosis. Cancer rates are rising worldwide. However, this rate of increase is significantly higher in developing countries, thus requiring additional medical physics support. In recent years, the increasing complexity of both treatment and diagnostic radiation equipment, coupled with rising expectations for good health care, as well as the implementation of more stringent radiation safety standards and accreditation requirements, have exacerbated the already critical shortage of competent medical physicists in most countries in the European region.

The project...

Through this technical cooperation project, the knowledge and clinical skills of medical physicists and technicians working in radiation medicine were upgraded through the provision of training to enhance diagnostics, treatment planning and delivery according to international standards. Training in safe and effective radiotherapy is required as hospitals acquire new technologies, and in order to maintain the highest levels of best practice.

Six regional training courses were co-organized by the IAEA together with the European Society for Therapeutic Radiology and Oncology. Two of the courses were conducted in Russian upon the request of Member States, to increase training opportunities for Russian speaking medical professionals. The IAEA organized a course on radiotherapy treatment planning systems. Support was provided to 10 participants to attend a training course on medical imaging with ionizing radiation organized by the European School of Medical Physics. Two medical physicists received on-the-job training abroad, via the IAEA fellowship and scientific visit programme, on the practical implementation of thermoluminescence dosimetry audits in radiotherapy and in vivo optically stimulated luminescence dosimetry systems.

The impact...

As a result of this project, medical physicists from the European region have increased their knowledge and skills in the field of radiation oncology. The training has allowed specialists to upgrade their capabilities and has contributed to their professional development, providing encouragement and incentive for further development in their field. Opportunities for training and ongoing professional growth can increase motivation, staff retention and professional qualifications. The second phase of this project is currently under way through a new project and focuses on group training in subjects required for the ongoing professional training of medical radiation physicists in radiotherapy.

