Strengthening Knowledge and Skills in Radiotherapy Quality and Safety in Latvia

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Introduction

Training on radiation protection and safety in Latvia is organized according to Cabinet Regulation No. 752 (2015), which states the requirements of training in radiation safety issues within the scope of a course programme developed by an educational establishment not less than once every five years for employees working with ionizing radiation, both in medical and non-medical areas. This training is coordinated by the Radiation Safety Centre and the professional societies of the relevant sector.

Currently, training on radiation safety issues in the medical area is provided by three higher education institutions in Latvia, but the training is aimed at medical staff like radiologists, medical physicists (MPs) and radiographers in diagnostic imaging, as it covers radiation safety issues at low radiation doses only.

The Faculty of Medicine at the University of Latvia is the exclusive provider of the radiation protection and safety course modules in radiation therapy with mostly theoretical education within undergraduate studies for therapeutic radiographers or radiation therapists (RTTs). There is no specific training for practicing RTTs in Latvia on radiation protection issues with high radiation doses, like in radiation therapy, and RTTs take courses in radiation protection and safety for radiographers working only with low doses of radiation in diagnostic imaging. As such, there is a lack of appropriate training for RTTs in Latvia.

Materials and Methods

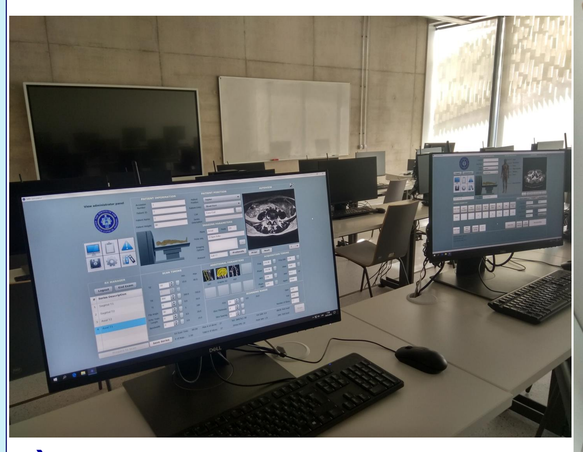
The IAEA TC project LAT0003 "Strengthening Knowledge and Skills in Radiotherapy Quality and Safety in Latvia" is aimed:

- to train the trainers,
- to upgrade existing equipment,
- to introduce new visual aids for radiation safety training in radiation therapy.

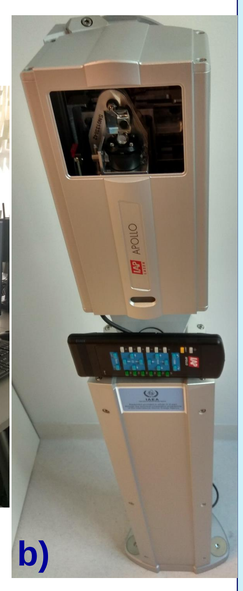
RTTs are the main target group during the project (2018-2019).

Results

- The initial expert mission was aimed to discuss specifications for procurements and planning topics for the national training course – train the trainers (TTT).
- National TTT course:
  - the training staff consisted of radiotherapy experts: 2 MPs and 2 RTTs,
  - duration of the training – 5 workdays,
  - theroretical and practical training,
  - 15 course participants for whole training,
  - additional participants for particular topics.
- Procured equipment:
  - CT and MRI simulation softwares (a). Both the professionals and undergraduate students had possibility to perform CT and MRI examination procedures on the software (without real patients) and to learn from possible mistakes and errors, both from the point of radiotherapy quality and the radiation/ magnetic field safety.
  - patient setup laser system (b) with 3 lasers for precise patient positioning.



a)



b)

- Activities in 2019:
  - procurement of treatment planning systems (5 workstations);
  - procurement of immobilisation set for different locations and modalities;
  - 2 RTTs visit other centres where relevant training is conducted;
  - 1 RTT visit other centre with advanced technologies in radiotherapy;
  - National training course on radiation protection for RTTs. The pediatric radiotherapy topics for RO, MP will be included as part of the course.

Conclusion

- Only 2 RTTs and 13 trainees from other areas were able to participate in the course.
- Limited participation of RTTs was related to heavy workload at the radiotherapy centers due to breakdowns of the old linear accelerators.
- Non-medical trainees will be involved in future training of the radiation safety course participants.
- The training course was very helpful for radiotherapy area trainees as the new equipment is in process of installation at the Latvian Oncology Centre which is the main training clinics for RTTs in Latvia.
- The knowledge obtained during the course is helpful to plan more efficient and safe workload for RTTs.
- Discussions with professionals after the course and recommendation from the experts suggest to shift the training course to the weekends.
- New lab exercises for radiotherapy patients need to be added to the databases of CT and MRI simulation softwares.
- The UL and Riga Technical University have agreed on the use of radiotherapy training equipment in the process of medical physicists training (based on the Partnership Agreement Nr. 6012-A53/151 from 29.12.2015).

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