TC Regional Training Course on Advanced Dosimetry and Quality Control Tools in Diagnostic Radiology

Hosted by

The Government of Latvia*

through the

Liepaja Regional Hospital
Lieapaja, Latvia*

23-27 September 2024

Ref. No.: TN-RER6042-2403222

Information Sheet

Purpose

The objective of the regional training course is to equip clinically qualified medical physicists with knowledge and skills necessary to measure and assess radiation dose and to implement quality control protocols in sophisticated X-ray imaging modalities, with overall goal to ensure quality and safety in X-ray imaging.

Working Language(s)

The working language of the event will be English.

Deadline for Nominations

Nominations received after **05 July 2024** will not be considered.

(*) Subject to the acceptance of the Host Government Agreement

Scope and Nature

The regional training course will consist of lectures relevant to the contemporary technologies used in X-ray imaging, image reconstruction algorithms, image quality metrics, dosimetry quantities and methods, uncertainty assessment, flowed by practical exercises in hospitals and classroom discussions.

Background Information

Development of new technology in different X-ray modalities in diagnostic and interventional radiology has led to the need for greater involvement of medical physicists in clinical practice.

In the past couple of decades, implementation of more sophisticated technology in different modalities in diagnostic radiology has contributed to the improved image quality and increasing the type of examinations, as well as the number of examinations. The gradual shift towards digital radiology in this region is almost over, they bring an immense improvement in the different modalities and even the introduction of artificial intelligence in clinical practice in diagnostic radiology is expected in this decade.

Dosimetry is an area of increasing importance in diagnostic radiology. Dosimetric methods are used in radiology departments for a variety of purposes including the determination of patient dose levels to allow examinations to be optimized and to assist in decisions on the justification of examination choices. Therefore, the technological development is posing a higher demand on the medical physics community which is expected to have a major role in quality management (QM) system, through enhancement of quality assurance (QA) and quality control (QC) practice.

Medical physicists in diagnostic radiology provide a key contribution to the optimization of X-ray imaging procedures, e.g. in the balancing the image quality and radiation dose. They are responsible for the dosimetry of the patient, image quality assessment and to assist medical practitioners in the evaluation of examination efficacy. Their knowledge is applied to the characterization and optimization of new imaging techniques, and they play an important role in the adoption, development, implementation and safe use of advanced techniques in diagnostic radiology.

The project RER6042, based on results and achievements of previous regional projects, has the main objective to improve quality and safety in diagnostic and interventional radiology in the region by building the capacity of medical physicists through increase of their knowledge, skills, and competences.

Participation

The meeting is open to 25 participants from TCEU Member States participating in the projects: RER6042 “Building Capacities of Medical Physicists in Diagnostic Radiology to Support the Establishment of Quality Management Systems”.

Each country is invited to nominate **two participants** who must match the profile described in the corresponding paragraph, indicating the order of priority.

Participants' Qualifications and Experience

Noting that the scope of the project is related to clinical diagnostic radiology, and in line with the requirements of the International Basic Safety Standards, the participant should be a clinically qualified medical physicist currently working, or having been recruited to work, in a diagnostic radiology department. In case of lack of an appropriate candidate, and based on proper justification, a medical physicist working in radiotherapy or nuclear medicine and involved in X-ray imaging may be considered.

This course is not intended for participants working for regulatory authorities or as inspectors or for radiographers. As the course will be conducted in English, participants should have sufficient proficiency to deliver and follow lectures and express themselves in this language without difficulty.

Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (https://intouchplus.iaea.org) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (https://websso.iaea.org/IM/UserRegistrationPage.aspx) before proceeding with the event application process below.

2. On the InTouch + platform, the candidate must:
    a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
    b. Download and complete the Designation of Beneficiary and Emergency Contact Form, and upload to InTouch+ ('Profile' tab under the personal section) specifying the document name. If already provided, kindly discard this step; and
    c. Search for the relevant technical cooperation event (**EVT2403222**) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

NOTE: Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the provided designation deadline.

For additional support on how to apply for an event, please refer to the InTouch+ Help page. Any issues or queries related to InTouch+ can be addressed to InTouchPlus.Contact-Point@iaea.org.

Should online application submission not be possible, candidates may download the nomination form for the meeting from the IAEA website and submit their applications to their National Authorities. The nomination forms once fully approved can be submitted by e-mail in a PDF format through the official channels via the IAEA Official E-Mail (Official.Mail@iaea.org) with copy to Mr Katukhov (A.Katukhov@iaea.org) and Mr Bru (Y.Bru@iaea.org).

NOTE: A medical certificate signed by a registered medical practitioner dated not more than four months

prior to starting date of the event must be submitted by candidates when applying for candidates over the age of 65 regardless of the event duration.

Occupational Exposure to Radiation

This event may involve occupational exposure to radiation. Therefore, candidates are required to duly complete and return the Occupational Exposure History (OEH) form upon applying for the event. The IAEA will provide selected participants in due course with a dosimeter to monitor their occupational exposure during this event.

Administrative and Financial Arrangements

Nominating authorities will be informed in due course of the names of the candidates who have been selected, and will at that time be informed of the procedure to be followed with regard to administrative and financial matters.

Selected participants will receive an allowance from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency American Express, or a travel grant, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

Disclaimer of Liability

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

Note for female participants:

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant.

The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.

Organization and IAEA Contacts

Programme Management Officer (responsible for substantive matters):

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Subsequent correspondence on scientific matters should be sent to the Programme Management Officer and correspondence on other matters related to the meeting to the Administrative Contact.