



Regional Training Course on TRS483 Dosimetry of Small Static Fields Used in External Beam Radiotherapy: An International Code of Practice for Reference and Relative Dose Determination

Hosted by

The Government of Croatia

through the

University Hospital Center "Sestre Milosrdnice"

Zagreb, Croatia

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Information Sheet

Purpose

The purpose of the event is to train clinical medical physicists on how to implement TRS483 Dosimetry of Small Static Fields Used in External Beam Radiotherapy: An International Code of Practice for Reference and Relative Dose Determination.

Working Language(s)

The working language(s) of the event will be English.

Deadline for Nominations

Nominations received after 1 July 2019 will not be considered.

Project Background

Modern radiotherapy has increased substantially the use of small radiation fields like those used in various forms of Stereotactic Radiotherapy (SRT), Stereotactic Body Radiotherapy (SBRT) Stereotactic Radiosurgery (SRS) and Intensity Modulated Radiation Therapy (IMRT). These treatments are not only performed with specialized, dedicated machines such as TomoTherapy, CyberKnife or GammaKnife, but also with conventional, non-dedicated accelerators equipped with high-resolution multi-leaf collimators.

In radiotherapy it is essential that the dose delivered to the patient is known accurately so that the correct amount of radiation is delivered that kills the cancer cells while at the same time sparing healthy tissue. Therefore, a key step in the radiotherapy process is the requirement for consistent reference dosimetry traceable to metrological primary standards and to enable common procedures within a country to be followed for reference dosimetry. For conventional radiotherapy this has been achieved by universally

adopted Codes of Practice such as IAEA TRS 398 (IAEA, Vienna, 2000). However, the standard Codes of Practice are based on the use of a 10 cm x 10 cm reference field that may not be achievable using some modern specialized machines.

A joint working group between the IAEA and AAPM (American Association of Physicists in Medicine) has written a new small field Code of Practice. The aim of this course is to teach how to implement the new Code of Practice in the clinic.

Expected Outputs

The course is an opportunity for medical physicists from Member States to get first-hand information on the dosimetry of small fields in radiotherapy. It will be beneficial to clinical medical physicists working in radiotherapy modalities using small fields such as Stereotactic Radiotherapy (SRT), Stereotactic Body Radiotherapy (SBRT) Stereotactic Radiosurgery (SRS) and Intensity Modulated Radiation Therapy (IMRT).

Scope and Nature

This five-day course will consist of lectures, presentations, discussion and at the weekend the participants will perform practical sessions in the local radiotherapy center.

The topics to be covered include the following:

- Physics and challenges of small fields MV photon beams
- Description of the new IAEA/AAPM Code of Practice for dosimetry of static small photon fields.
- Discussion on small field detectors
- Absorbed dose to water standards for small fields
- Machine Specific Reference dosimetry
- Output factors: Definition, measurement and correction
- Relative dose measurements in small fields.

Participants' Qualifications and Experience

Candidates should be clinically qualified medical physicists and should hold a university degree preferably in medical physics. The candidate should also have at least 3 years working experience in a hospital and must participate in small field clinical techniques. Successful completion of the online test on TRS 398 is also required.

As the training course will be conducted in English, participants should have sufficient proficiency to follow lectures and express themselves in this language without difficulty.

Application Procedure

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

- Access the IAEA TALEO page (<https://iaea.taleo.net/careersection/ex/jobsearch.ftl>) and complete the Candidate Profile.
- Be registered on the Nucleus page of the IAEA (<https://nucleus.iaea.org/>).
- Through Nucleus, access the InTouch+ platform where the Profile is completed (My Profile tab) (<https://nucleus.iaea.org/Pages/InTouchPlus.aspx>).

NOTE: The email used for TALEO and Nucleus must be the same. If not, the candidate's profile will

not appear complete.

- On the InTouch + platform, under the 'My InTouch +' tab, the candidate needs to:
 - a. select the institute / organization that he/she works at / represents ('My Institute' section);
 - b. click on the link called '**Refresh Personal History Form**' to update the system, *otherwise the nominations submitted will have these fields empty and it will not be possible to evaluate them during the selection of candidates* ('IAEA Recruitment Platform' section).

NOTE: Once the above steps are finalized, the candidate's profile will appear as completed and he/she can apply for Technical Cooperation events.

- In the InTouch+ platform (<https://intouchplus.iaea.org>), in the 'Applications' tab, search by the event number provided in the invitation.

The help for each step is located at the top of the page. For additional help on how to register, create a profile and apply for an event, please refer to the online guide and training videos available under the following links: [how-to guide](#) and [training videos](#). Any issues or queries related to the new system can be addressed to InTouchPlus.Contact-Point@iaea.org or TC-AIPS-PL4.Contact-point@iaea.org.

Should this not be possible, applicants may download the Nomination Form for the TN from the IAEA website <https://www.iaea.org/services/technical-cooperation-programme/how-to-participate>.

- Applications should contain sufficient information to establish that the nominees have the required qualifications. Please note that the information regarding LANGUAGE SKILLS, EDUCATION AND WORK EXPERIENCE is exported from TALEO. If an applicant's profile in TALEO is not updated, the information in INTOUCH+ for these sections appears as empty and the candidates cannot be evaluated. Completed applications need to be endorsed by the relevant national authority, i.e. the National Liaison Office and submitted through the established official channels.

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.

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