

Joint ICTP-IAEA Workshop on Medical Physics Aspects of Stereotactic Radiotherapy



21 - 25 March 2022

**International Atomic Energy Agency Laboratories,
Seibersdorf, Austria**

Further information:

[http://indico.ictp.it/event/9808/
smr3692@ictp.it](http://indico.ictp.it/event/9808/smr3692@ictp.it)

There is an increasing number of requests from Member States for assistance in the introduction of stereotactic radiotherapy and radiosurgery for intra-and extra-cranial targets. This workshop will assist clinical medical physicists to understand the complexities of this mode of radiotherapy.

Description:

Modern radiotherapy has substantially increased the use of various forms of Stereotactic Radiotherapy (SRT), including Stereotactic Body Radiotherapy (SBRT) and Stereotactic Radiosurgery (SRS). For these techniques a high radiation dose is delivered in a reduced number of fractions. These treatments are not only performed with specialized, dedicated machines, but also with conventional, non-dedicated linear accelerators equipped with high resolution multi-leaf collimators.

In radiotherapy, accurate dose delivered to the patient is essential. For conventional radiotherapy this has been achieved by internationally adopted codes of practice and standardized radiotherapy techniques. However, many of these techniques are not applicable for stereotactic radiotherapy. This course will instruct the participant on how to ensure the quality of stereotactic radiotherapy to provide patients with safe and effective treatments.

Topics:

- Justification for using stereotactic radiotherapy (SRT)
- The physics of SRT with an emphasis on small field dosimetry
- Simulation and Treatment planning for SRT
- Treatment delivery of SRT to include the technologies, motion management and image guidance
- Radiobiology of SRT including fractionation and dose constraints
- Audits, Clinical trials and quality control

Prerequisites:

This workshop is for clinically qualified medical physicists (CQMPs as per IAEA publication HHS-25) from United Nations, UNESCO or IAEA Member States who hold a postgraduate-level university degree, preferably in medical physics. The candidate should also have at least 3 years working experience in a hospital and must participate in stereotactic radiotherapy in the clinic. Participants should have an understanding of IAEA TRS-398, "Absorbed dose determination in external beam radiotherapy" and IAEA TRS-483, "Dosimetry of small static fields used in external beam radiotherapy".

The process of selection of participants might include a mandatory written examination.

The workshop will be beneficial to clinically qualified medical physicists working in radiotherapy and employing treatment modalities using small fields such as SRT, SBRT and SRS.

Director:

M. CARRARA, IAEA, Austria

Lecturers:

K. CHELMINSKI, IAEA, Vienna, Austria
L. CORDERO MENDEZ, IAEA, Vienna, Austria
A. DIMITRIADIS, IAEA, Vienna, Austria
E. LINDBÄCK, Karolinska University Hospital, Stockholm, Sweden
M. HEARD, IAEA, Vienna, Austria
P. MANCOSU, HUMANITAS Cancer Center, Rozzano, Italy
T. RITTER, McGuire VA Medical Center, Richmond, USA

ICTP Scientific Contact:

R. PADOVANI, ICTP, ITALY

How to apply:

Online application:
<http://indico.ictp.it/event/9808/>

Female scientists are encouraged to apply.

Registration:

There is no registration fee.

Deadline:

10 January 2022



The Abdus Salam
International Centre
for Theoretical Physics
www.ictp.it
Trieste, Italy

