Joint ICTP-IAEA Workshop on Quality Assurance and Dosimetry in Brachytherapy

21- 25 November 2022
An ICTP - IAEA Meeting
Trieste, Italy

Further information:
http://indico.ictp.it/event/9844/
smr3754@ictp.it

When implementing new brachytherapy sources and image-guided techniques into clinical practice, rigorous quality assurance and dosimetry is needed to guarantee the safe use of this nuclear technology and to improve outcomes. National guidelines for brachytherapy differ widely across the world; therefore, a harmonized approach is needed. High dose rate brachytherapy is an advanced technology that involves complex dose prescription, optimization, recording and reporting.

The target audience include medical physicists involved in clinical brachytherapy service in the radiotherapy department. Participants shall have clinical experience and a basic background in dosimetry and quality control in radiotherapy. A 5-minute presentation is expected from each participant/hospital of their institutional procedures (QA and clinical workflow of a gynaecological patient using High Dose Rate Brachytheapy).

Topics:

- Introduction to the physics of brachytherapy
- Description of existing brachytherapy sources
- Source strength determination
- Dose calculation formalisms and uncertainties
- The brachytherapy processes for Level-2 ('2D') and Level-3 ('3D')
- Imaging in brachytherapy (X-ray, C-arm, US, CT, MRI)
- Applicator selection, reconstruction, commissioning in various imaging modalities
- Brachytherapy dose prescription, optimization, and reporting
- Medical physics aspects of quality management, quality assurance and auditing methodologies in the clinic
- Practical hands-on quality assurance and dosimetry using a High-Dose-Rate afterloader in a clinical setting

Prerequisites:

The workshop is for clinical qualified medical physicists (CQMP as per IAEA publication HHS-25) from United Nations, UNESCO or IAEA Member States who hold a postgraduate-level university degree, preferable in medical physics. The candidate should have at least 3 years working experience in a hospital in a radiotherapy department and should be involved in brachytherapy. The process of selection of participants might include a mandatory written examination.

How to apply:

Online application:
http://indico.ictp.it/event/9844/

Female scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Director:

D. BERGER, IAEA, Austria

Local Organiser:

L. BERTOCCHI, ICTP, Italy

Speakers:

R. HUDEJ*, Institue of Oncology Ljubljana, Slovenia
E. GRUSZCZYNSKA, The Maria Sklodowska-Curie Institute – Oncology Center, Warshaw, Poland
T. PAULSEN HELEBUST, Oslo University Hospital, Norway
S. SIMIELE, AAPM faculty member, MD Anderson, Houston, Texas, USA
L. TUNTIPUMIAMORN, Mahidol University Faculty of Medicine Siriraj Hospital, Bangkok, Thailand

Note: *for the practical demonstrations on the afterloader at the Institue of Oncology Ljubljana

Deadline:

30 September 2022

IYBSSD2022
International Year of Basic Sciences for Sustainable Development

IAEA
International Atomic Energy Agency

The Abdus Salam International Centre for Theoretical Physics
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Trieste, Italy