



Joint Symposium 4

Dosimetry Committee / European Society for Therapeutic Radiology and Oncology (ESTRO)

Tuesday, September 12, 08:00 – 09.30

Session Title

Dosimetry in Different Modalities - Where We Are and Where We Want To Be

Chairpersons

Caroline Stokke (Oslo, Norway)

Mattias Sandström (Uppsala, Sweden)

Programme

08:00 - 08:25 Eduard Gershkevitsh (Tallinn, Estonia): Dosimetry for EBRT and Brachytherapy

08:25 - 08:55 Cecilia Hindorf (City, Sweden): Dosimetry for Selective Internal Radiotherapy

08:55 - 09:20 Jonathan Gear (Sutton, United Kingdom): Dosimetry for Molecular Radiotherapy

09:20 - 09:30 Marta Cremonesi (Milan, Italy): Comparisons and future perspectives

Educational Objectives

1. Understand how dosimetry is performed for various radiation-based therapies
2. Understand how dosimetry can be used as treatment prescription and current challenges
3. Identify the potential for future development

Summary

Personalised treatment is an essential concept in radiation-based therapies. For external beam radiotherapy (EBRT) and brachytherapy (BT), there has been a long tradition of treating patients with absorbed dose as the basis for prescription. For treatments belonging to the field of nuclear medicine, dosimetry guidance has more recently started to emerge on a broader scale in clinical routine. This session will highlight the similarities and differences between dosimetry methods and current use for various form of radiotherapies, with the aim of both inspire new concepts and result in transfer of knowledge. The talks will include a short introduction to the methodologies, the uncertainties, and absorbed dose-effect curves as basis for treatment prescription. Also, current challenges and future perspectives will be included. Relevant comparisons of nuclear medicine treatments to EBRT and BT, especially on how to potentially integrate normal tissues complication probability and tumour control probability curves, will be included.

Key Words

Dosimetry, external beam radiation treatment, brachytherapy, SIRT, molecular radiotherapy, dose-effect correlations, radiobiology