

## SCIENTIFIC PROGRAMME AND WORKING SCHEDULE

### Course Directors:

Eduard Gershkevitsh

### Faculty:

Marion Essers

Shaista Hafeez

Louise Murray

Kenneth Poels

Michael Gubanski

Milan Tomsej

Stephanie Peeters

## PRE-RECORDED LECTURES (45 minutes each)

The following lectures will be available few weeks in advance for participants to study at their own pace **prior** to the webinar. To access the lectures the students must complete an **ENTRY EXAM**, which consists of a multiple-choice questionnaire for a self-assessment.

Lecture	Speaker
Imaging for GTV definition	S. Hafeez
Imaging for treatment preparation and planning	M. Gubanski
Volumes in EBRT and introduction to GTV definition	S. Hafeez
<b>Clinicians:</b> Basics of radiation physics for clinicians	E. Gershkevitsh
<b>Physicists:</b> Modern dose calculation algorithms	M. Tomsej
<b>Clinicians:</b> Principles of Radiotherapy Equipment	E. Gershkevitsh
<b>Physicists:</b> Oncological Concepts	S. Peeters
PTV margin calculation	B. Heijmen
Field junctions: how, when, and alternatives	S. Hafeez / B. Heijmen
Radiation Protection and risk analysis	S. Molinelli
Commissioning and QA/QC of equipment and software	M. Tomsej
Clinicians: Physical principles of advanced Radiotherapy	S. Molinelli
Physicists: Reference Dosimetry	E. Gershkevitsh
Radiobiology in the clinic	L. Murray
Brachytherapy	S. Hafeez
Radiotherapy dose and induction of secondary tumours	M. Gubanski
Rotational therapy and flattening filter free dose delivery	S. Molinelli
Adaptive Radiotherapy	S. Hafeez

### LIVE WEBINARS 22 – 25 MAY 2023

Participants will have the opportunity to meet with the faculty during interactive live webinar sessions. Invitations to the teleconferences will be sent prior to the webinars.

#### DAY 1 – MONDAY 22 MAY

Time	Lecture	Speaker
12.30 – 13.00	Welcome and Introduction to the course	Course directors
13.00 – 13.45	IMRT - Physics aspects	TBC
13.45 – 14.30	IMRT - Clinical application and impact	M. Gubanski
14.30 – 15.00	<i>Coffee break</i>	
15.00 – 15.45	Stereotactic radiotherapy - radiobiology, clinical application and impact	S. Peeters
15.45 – 16.30	Stereotactic radiotherapy - physics aspects	M. Tomsej
16.30 – 17.00	Q&A	All teachers

#### DAY 2 – TUESDAY 23 MAY

Time	Lecture	Speaker
11.00 – 13.00	<b>Homework:</b> Discussions on H&N case	TBA
13.00 – 14.00	<i>Lunch</i>	
14.00 – 14.45	IGRT – equipment for in-room imaging	L. Murray
14.45 – 15.30	IGRT – tumor set-up correction strategies	TBC
15.30 – 16.00	<i>Coffee break</i>	
16.00 – 16.45	Challenges in dose prescription and plan evaluation	L. Murray
16.45 – 17.15	Q&A	All teachers

#### DAY 3 – WEDNESDAY 24 MAY

Time	Lecture	Speaker
13.00 – 15.00	<b>Homework:</b> Discussions on lung case	TBA
15.00 – 15.30	<i>Coffee break</i>	
15.30 – 16.15	<b>Clinicians:</b> Dose calculation principles	M. Tomsej
	<b>Physicists:</b> QA for advanced delivery techniques	
16.15 – 17.00	<b>Clinicians:</b> Calculation of dose in the TPS	E. Gershkevitch
	<b>Physicists:</b> Non-reference dosimetry	
17.00 – 17.30	Q&A	All teachers

#### DAY 4 – THURSDAY 25 MAY

Time	Lecture	Speaker
11.00 – 13.00	<b>Homework:</b> Discussions on breast case	TBA
13.00 – 14.00	<i>Lunch</i>	
14.00 – 14.45	Implementing patient-specific QA	TBC
14.45 – 15.30	Physics aspects of proton-, ion-, and electron beam therapy	S. Molinelli
15.30 – 16.00	<i>Coffee break</i>	
16.00 – 16.45	Clinical aspects and evidence for particle therapy and other novel technology	S. Peeters
16.45 – 17.15	Q&A	All teachers
	<b>EXIT EXAM</b>	