

### SCIENTIFIC PROGRAMME

#### DAY 1 – SUNDAY 10 March 2024

Time	Lecture	Speaker	
<b>Introduction and basics I</b> Chairperson: M. Krengli	13:00-13:15	Welcome	M. Krengli/ T. Lomax
	13:15-13:45	History and rationale of particle therapy	M. Krengli
	13:45-14:15	Physical basis of particle therapy	S. Molinelli
	14:15-14:45	Particle generation and accelerator technology	T. Lomax
	14:45-15:15	Active beam delivery and IMPT	T. Lomax
	15:15-15:45	Discussion	
	<b>15:45-16:15</b>	<b>Coffee break</b>	
<b>Introduction and basics II</b> Chairperson: S. Harrabi	16:15-16:45	Radiobiological basis of particle therapy	T. Lomax P. Fossati
	16:45-17:15	Clinical basis of particle therapy	B. Timmermann
	17:15-17:30	Discussion	

#### DAY 2 – MONDAY 11 March 2024

Time	Lecture	Speaker	
<b>Beam production, delivery</b> Chairperson: S. Molinelli	09:00-09:30	Treatment planning basics for particles	M. Schwarz
	09:30-10:00	Quality assurance	S. Molinelli
	10:00-10:30	Discussion	
	<b>10:30-11:00</b>	<b>Coffee break</b>	
<b>Clinical radiation biology</b> Chairperson: S. Harrabi	11:00-11:30	RBE for protons – experimental data and models	M. Schwarz
	11:30-12:00	Fractionation, prescription and reporting in particle therapy	P. Fossati
	12:00-12:15	Discussion	
	<b>12:15-13:15</b>	<b>Lunch</b>	
<b>Clinical Particle Therapy I</b> Chairperson: P. Fossati	13:15-13:45	Sarcoma	S. Harrabi
	13:45-14:15	Head and Neck and CNS	M. Krengli
	14:15-14:45	Re-Irradiation	S. Harrabi
	14:45-15:00	Discussion	
	<b>15:00-15:30</b>	<b>Coffee break</b>	
	15:30-16:00	Pancreas and Rectum	P. Fossati
	16:00-16:30	Liver and Esophagus	S. Harrabi
	16:30-16:45	Discussion	
16:45-17:15	Case presentation and discussion by an RO and MP	P. Fossati, S. Molinelli	

**DAY 3 – TUESDAY 12 March 2024**

<b>Time</b>	<b>Lecture</b>		<b>Speaker</b>
<b>Clinical physics</b> <i>Chairperson: S. Molinelli</i>	09:00-09:30	Image guidance	S. Molinelli
	09:30-10:00	Dosimetry	C. Goma
	10:00-10:30	Robustness	M. Schwarz
	10:30-11:00	<i>Coffee break</i>	
<b>Uncertainties</b> <i>Chairperson: M Schwarz</i>	11:00-11:30	LET/RBE in treatment planning	S. Molinelli
	11:30-12:00	Myths and realities of Range Uncertainty	T. Lomax
	12:00-12:30	Discussion	
	12:30-13:30	<i>Lunch</i>	
<b>Clinical particle therapy II</b> <i>Chairperson: B. Timmermann</i>	13:30-14:10	Late toxicity-secondary malignancy / Radionecrosis	D. De Ruysscher
	14:10-14:50	Lymphoma / Breast	S. Harrabi
	14:50-15:20	<i>Coffee break</i>	
<b>Organ motion management</b> <i>Chairperson: T. Lomax</i>	15:20-15:50	Immobilization and margins	S. Harrabi
	15:50-16:20	Markers and optical systems	M. Schwarz
	16:20-16:50	Gating & re-scanning	S. Molinelli
	16:50-17:00	Discussion	
	17:00-17:30	Case presentation and discussion by an RO and MP	D. De Ruysscher/S. Harrabi, T. Lomax

## DAY 4 – WEDNESDAY 13 March 2024

Time	Lecture		Speaker
<b>Evidence and Costs</b> Chairperson: M. Schwarz	09:00-09:30	Ongoing trials	C. Ares
	09:30-10:00	Cost effectiveness	B. Timmermann
	10:00-10:30	Clinical evidence for particle therapy	D. De Ruyscher
	10:30-10:45	Discussion	
	10:45-11:15	<i>Coffee break</i>	
<b>Clinical Particle Therapy II</b> Chairperson: M. Krengli	11:15-11:45	Prostate	M. Krengli
	11:45-12:15	Eye tumors	B. Timmermann
	12:15-12:45	Skull base and spine	M. Krengli
	12:45-13:00	Discussion	
	13:00-14:00	<i>Lunch</i>	
<b>Clinical Particle Therapy III</b> Chairperson: M. Krengli	14:00-14:30	Pediatrics	B. Timmermann
	14:30-15:00	Case presentation and discussion by an RO and MP	B. Timmermann, M. Schwarz
<b>Protocol and Journal Club</b>	15:00-15:30	<i>Medical topic: Proton beam radiotherapy versus transarterial chemoembolization for hepatocellular carcinoma: Results of a randomized clinical trial. Bush DA, Volk M, Smith JC, Reeves ME, Sanghvi S, Slater JD, deVera M. Cancer. 2023 Nov 15;129(22):3554-3563. doi: 10.1002/cncr.34965.</i>	Student
	15:30-16:00	<i>Physics topic: Proton monoenergetic arc therapy (PMAT) to enhance LETd within the target by A. Bertolet and A. Carabe</i>	Student
	16:00-16:30	<i>Coffee break</i>	
<b>Research topics in PT</b> Chairperson: D. De Ruyscher	16:30-17:00	Particle therapy and immunotherapy	D. De Ruyscher
	17:00-17:30	FLASH with particle therapy	T. Lomax
	17:30-17:45	Discussion	

## DAY 5 – THURSDAY 14 March 2024

Time	Lecture		Speaker
<b>Clinical Particle Therapy IIII</b> Chairperson: D. De Ruyscher	09:00-09:30	Lung tumors	D. De Ruyscher
	09:30-10:00	Future developments - technology	M. Schwarz
	10:00-10:30	Future developments - clinics	D. De Ruyscher
	10:30-10:45	Discussion	
	10:45-11:15	<i>Coffee break</i>	
<b>Point-counterpoint discussion</b> Chairperson: M. Krengli	11:15-12:15	The seated/upright setup will replace the supine/prone setup for most of the tumors	<b>In favour:</b> M. Schwarz <b>Against:</b> T. Lomax
	12:15-12:30	General Q & A, final remarks	T. Lomax/M.Krengli