SCIENTIFIC PROGRAMME

Course Director
Rob Tijssen (NL)

Faculty
Cihan Gani (DE)
Christian Richter (DE)
Kathrine Røe Redalen (NO**)**
Patrick Brynolfsson (SE)
Rune Slot Thing (DK)

Guest Teacher
Joanna Kazmierska

DAY 1 – Status Quo and recommendations, MONDAY 29 JANUARY

Time	Lecture	Speaker
09.00 – 09.40	MRI for RTP*: how & where to start	Rob Tijssen
09.40 – 10.20	CT for RTP*: technical requirements and QA guidelines	Christian Richter
10.20 – 10.40	*Coffee break*	
10.40 – 11.20	CBCT: what determines image quality?	Rune Slot Thing
11.20 – 12.00	Image registration tools	Patrik Brynolfsson
12.00 – 13.00	*Lunch break*	
13.00 – 13.40	PET: What is going on? Where are we going?	Cihan Gani, DE
13.40 – 14.20	PET: pitfalls in image reconstruction and quantification	Kathrine Røe Redalen
14.20 – 14.40	*Coffee break*	
14.40 – 16.30	Peer-to-peer sessions	All

*RTP =
radiotherapy
treatment
planning

DAY 2 – Advanced applications currently used, TUESDAY 30 JANUARY

Time	Lecture	Speaker
09.00 – 09.40	4D-CT and 4D-CBCT explained	Rune Slot Thing
09.40 – 10.20	Optimizing MRI sequences for RTP	Rob Tijssen
10.20 – 10.40	*Coffee break*	
10.40 – 11.20	Diffusion MRI for RT; opportunities and challenges	Cihan Gani
11.20 – 12.00	State of the art (auto)-segmentation tools	Patrik Brynolfsson
12.00 – 13.00	*Lunch break*	
13.00 – 13.40	EPI & Diffusion from MR physics perspective	Rob Tijssen
13.40 – 14.20	The use of QMRI and PET for adaptive radiotherapy	Kathrine Røe Redalen
14.20 – 14.40	*Coffee break*	
14.40 – 15.20	Dual energy/spectral CT	Christian Richter
15.20 – 16.00	Q&A	All

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DAY 3 – Hot & happening, WEDNESDAY 31 JANUARY

Time	Lecture	Speaker
09.00 – 09.40	AI for MR image reconstruction (4D and real-time)	Rob Tijssen
09.40 – 10.20	High precision image-guided proton therapy in 10 years	Christian Richter
10.20 – 10.40	*Coffee break*	
10.40 – 11.20	Latest developments in MRgRT: trials you should know about	Cihan Gani
11.20 – 12.00	Will imaging make personalized dose prescription feasible?	Kathrine Røe Redalen
12.00 – 13.00	*Lunch break*	
13.00 – 13.40	Dose accumulation. Nearly there, or just a pipedream?	Patrik Brynolfsson
13.40 – 14.20	CBCT beyond IGRT	Rune Slot Thing
14.20 – 14.40	*Coffee break*	
14.40 – 15.20	The use of AI in RT from a clinical perspective	Joanna Kazmierska
15.20 – 16.00	Q&A + wrap up	All / Rob Tijssen

In preparation of the course an online refresher day will be provided a few weeks in advance. During this day the basic principles of CT, MRI, and PET will be explained and additional (optional) reading will be provided for those who are interested. Practical details on the course and the peer-to-peer sessions on day one will also be given.

DAY 0 - Online refresher day, 9 January 2024

Time	Lecture	Speaker
09.00 – 09.30	Welcome and introduction	Rob Tijssen
09.30 – 10.00	Historical overview: what has imaging brought us so far?	Cihan Gani
09.30 – 10.10	Basic CT physics	Christian Richter
10.10 – 10.30	*Coffee break*	
10.30 – 11.10	Basic CBCT physics	Rune Slot Thing
11.10 – 11.50	Basic PET physics	Kathrine Røe Redalen
11.50 – 12.30	Basic MRI physics	Rob Tijssen
12.30 - 13.30	*Lunch*	
13.30 – 14.00	Q&A	All
14.00 – 14.30	Peer-to-peer preparation & practical details	Rob Tijssen