

# 5<sup>th</sup> MR in RT Symposium: Program Details



## Tuesday 20<sup>th</sup> June

<b>0900-1030</b>	<b>Symposium Opening &amp; Welcome to Country</b>	<i>Gary Liney</i>
	<b>The MR in RT Symposium</b>	<i>James Balter</i>
	<b>5<sup>th</sup> MR in RT Opening Lecture: Will we still need Radiotherapy in 20 years?</b>	<i>Michael Barton</i>
	<b>The Peter Mansfield Lecture: Biofocussed prostate cancer RadioTherapy (BiRT): A synergy of traditional Brachytherapy techniques with a modern approach</b>	<i>Annette Haworth</i>
<b>1030-1100</b>	Morning tea Networking Break	
<b>1100-1230</b>	<b>Education Session 1: Introduction to MRI for RT</b>	
Education Session 1a	MRI: From Picture to Photon	<i>Donald McRobbie</i>
Education Session 1b	MRI-Simulation: Quality Assurance	<i>Amy Walker</i>
Education Session 1c	MRI-Simulation: Practicalities of Set-up & Coils	<i>Robba Rai</i>
<b>1230-1330</b>	<b>PHILIPS Lunchtime Symposium</b>	
<b>1330-1500</b>	<b>Education Session 2: Advanced Applications</b>	
Education Session 2a	CT generation from MRI	<i>Jason Dowling</i>
Education Session 2b	PET-MRI	<i>Tufve Nyholm</i>
Education Session 2c	Motion Management & 4D MRI	<i>Eric Paulson</i>
<b>1500-1530</b>	Afternoon tea Networking Break	
<b>1530-1700</b>	<b>Scientific Session 1: MRI Planning &amp; Workflow</b>	
Scientific Session 1a	Reversing the Treatment Planning Workflow of MRI-assisted Radiotherapy to the Neck using 3D anatomy Surface Printing: A Proof of Concept	<i>Houda Bahig</i>
Scientific Session 1b	Clinical workflow for MR-only simulation and planning in prostate	<i>Neelam Tyagi</i>
Scientific Session 1c	Geometric and dosimetric evaluation of three atlas-based segmentation methods for head and neck cancer patients on MR images	<i>Jennifer Kieselmann</i>
Scientific Session 1d	The Reversed Simulation Workflow for Hybrid CT Validation in Brain	<i>Eric Paulson</i>
Scientific Session 1e	Multi-channel deformable image registration based on MRI tissue classes	<i>Markus Glitzner*</i>
Scientific Session 1f	Automated reference-free local error assessment in MR-CT deformable image registration	<i>Richard Speight</i>
Scientific Session 1g	Quantifying the effect of combined MR residual system and patient-induced geometrical distortions on prostate Radiotherapy Treatment Plans	<i>Mikael Bylund</i>
<b>1700-1800</b>	<b>Welcome Reception &amp; Poster Viewing</b>	

# Wednesday 21<sup>st</sup> June

<b>0900-1030</b>	<b>Keynote Session: IMAGE → Anatomy &amp; Beyond</b>	
	<b>Functional imaging techniques</b>	<i>Uulke van der Heide</i>
	<b>Clinical focus: Prostate &amp; Head and Neck</b>	<i>Piet Dirix</i>
	<b>Clinical focus: Brain &amp; Liver</b>	<i>Yue Cao</i>

<b>1030-1100</b>	Morning tea Networking Break	
------------------	------------------------------	--

<b>1100-1230</b>	<b>Scientific Session 2: Validation, Monitoring &amp; Response</b>	
Scientific Session 2a	Serial multiparametric MRI in head and neck cancer treated with radical Radiotherapy	<i>Christopher Rumley</i>
Scientific Session 2b	Field quantification and generalized phantom design for MR imaging by solving 2D/3D inner and outer Dirichlet problems	<i>Teo Stanescu</i>
Scientific Session 2c	Zero TE MRI-only treatment planning for Radiation Therapy of brain tumours after resection	<i>Christine Boydev</i>
Scientific Session 2d	Zero TE MR-based pseudo-CT comparison with true CT Radiation Therapy Planning for Head application	<i>Cristina Cozzini</i>
Scientific Session 2e	Histology correlation of in-vivo PET/MRI data	<i>Kristina Sandgren*</i>
Scientific Session 2f	Clinical validation of MR-only prostate treatment planning in a multi-center/multi-vendor environment and patient positioning feasibility using synthetic CT images	<i>Emilia Persson</i>
Scientific Session 2g	Automatic identification of gold fiducial markers in MRI target delineation images intended for prostate Radiotherapy without the need for image registration	<i>Christian Gustafsson</i>
Scientific Session 2h	Quantitative cardiac MRI to detect changes in myocardium in patients treated with tangential left breast Radiotherapy only	<i>Simon Tang</i>

<b>1240-1340</b>	 <b>Lunchtime Symposium</b>	
------------------	--	--

<b>1340-1510</b>	<b>Scientific Session 3: Motion Management</b>	
Scientific Session 3a	Benchmark in 4DMRI: preliminary results	<i>Chiara Paganelli</i>
Scientific Session 3b	Respiratory motion-resolved, self-gated 4D-MRI using Rotating Cartesian K-space (ROCK): initial clinical experience on a 0.35T MRI-guided radiotherapy system	<i>Fei Han</i>
Scientific Session 3c	4D-Dixon MRI for 4D pseudo-CT generation in a thoracic MR-only workflow	<i>Joshua Freedman</i>
Scientific Session 3d	4D MRI with self-gating for Radiation Therapy planning: feasibility study	<i>Li Pan</i>
Scientific Session 3e	How should we acquire 2D cine MR images to determine lung tumor shifts perpendicular to treatment beam direction?	<i>Martin Menten</i>
Scientific Session 3f	Diffusion-weighted MRI of the lung at 3T evaluated using EPI-based and TSE-based acquisition technique	<i>Tyagi Neelam</i>
Scientific Session 3g	Simultaneous orthogonal plane imaging with balanced SSFP contrast using k-t GRAPPA	<i>Nikolai Mickevicius</i>

**1510-1540**

Afternoon tea Networking Break

**1540-1700**

**Poster Presenters Session and General Poster Viewing**

Poster a	MICE Studio – an interactive research tool for image analysis	<i>Joakim Jonsson</i>
Poster b	Evaluation of the Atlas Based Segmentation in RayStation using a pelvic MRI T2-weighted atlas	<i>Sebastian Andersson</i>
Poster c	Four-dimensional MRI of the liver using a self-gated radial sequence: Initial Experience	<i>Robba Rai</i>
Poster d	Deformable motion correction for reconstruction of abdominal DCE-MRI images	<i>Adam Johansson</i>
Poster e	A clinical case of patient rotation in particle therapy at the Italian National Centre for Oncologic Hadrontherapy (CNAO): experience to transfer in MRI-guidance	<i>Chiara Paganelli</i>
Poster f	Assessing the impact of magnetic resonance treatment simulation (MRSIM) on target volume delineation and resultant dose to organs at risk for oropharyngeal radiotherapy	<i>Haylea Richardson</i>
Poster g	Functional MRI assessment of primary and secondary brain tumour response to radiation therapy: A pilot study	<i>Michael Jameson</i>
Poster h	A robust trailing strategy using beam's eye view cine imaging on the MR-Linac	<i>Tessa van de Lindt</i>
Poster i	Geometric alignment and dosimetric characterisation of the Australian MR-Linac	<i>Jarrad Begg</i>
Poster j	Optimisation of passive shielding for MRI-Linac systems	<i>Brendan Whelan</i>
Poster k	Magnetic Field effects on the photon beam output of an Inline MRI-Linac	<i>Bin Dong</i>
Poster l	Investigate the use of PRESAGE® 3D dosimeter as a QA tool for an MR-linac	<i>Filipa Costa</i>

<b>0900-1030</b>		
<b>Keynote Session: INNOVATE → From Benchtop to Clinic</b>		
<b>Designing the next generation systems</b>		
<b>MR-only in the clinic</b>		
<i>Stuart Crozier James Balter &amp; Juha Korhonen</i>		
<b>Innovative Clinical Trial Strategies: The Machine that Learns</b>		
<i>Cynthia Menard</i>		
<b>1030-1100</b>		
Morning tea Networking Break		
<b>1100-1230</b>		
<b>Scientific Session 4: Quantitation &amp; Radiomics</b>		
Scientific Session 4a	Repeatability of dose painting by numbers in prostate cancer radiotherapy based on multiparametric MRI	<i>Marcel van Schie*</i>
Scientific Session 4b	Impact of MRI acquisition on radiomic texture features	<i>Robba Rai*</i>
Scientific Session 4c	Gray level-invariant Haralick texture features	<i>Patrik Brynolfsson</i>
Scientific Session 4d	Localizing prostate cancer aggressiveness at a voxel level using quantitative MRI	<i>Ghazaleh Ghobadi</i>
Scientific Session 4e	Outcome prediction after local prostate cancer treatment with the use of T2w magnetic resonance imaging (MRI) – a Radiomics approach	<i>Catarina Fernandes</i>
Scientific Session 4f	Quantitative estimation of prostate cell density and stratification of prostate tumour aggressiveness from multiparametric MRI	<i>Yu Sun</i>
Scientific Session 4g	Development of a biological atlas using mpMRI and PET for use in prostate focal therapy	<i>Hayley Reynolds</i>
<b>1230-1330</b>		
 <b>Lunchtime Symposium</b>		
<b>1330-1500</b>		
<b>Scientific Session 5: Problems &amp; Solutions to Real-Time Guidance</b>		
Scientific Session 5a	The impact of lung tumor motion to the dose delivery in magnetic fields	<i>Oliver Schrenk</i>
Scientific Session 5b	Proton beam delivery in MRI guided proton beam therapy: feasibility of compact gantry systems	<i>Brad Oborn</i>
Scientific Session 5c	Real-time MRI-guided Cardiac Radiosurgery on an MRI-Linac: Treatment planning and MLC tracking results	<i>Suzanne Lydiard</i>
Scientific Session 5d	Real-time adaptive radiotherapy on an MRI-Linac: End-to-end proof-of-principle demonstration	<i>Kevin Zhang</i>
Scientific Session 5e	High resolution response maps illustrating the impact of magnetic fields on dose measurement with small ion chambers	<i>Joerg Lehmann</i>
Scientific Session 5f	3D gel methodology for determining MR and radiation isocenter registration in MR-IGRT	<i>Hannah Lee</i>
Scientific Session 5g	A patient rotation system for MR guided Radiotherapy: Quantification of anatomical deformations due to rotation	<i>Jarryd Buckley*</i>
<b>1500-1530</b>		
Afternoon tea Networking Break		
<b>1530-1700</b>		
<b>Poster Viewing &amp; Panel Discussion (tba)</b>		

# Friday 23<sup>rd</sup> June



<b>0900-1100</b>	<b>Keynote Session: TREAT → MRgRT: A New Weapon in the Battle Against Cancer</b> Sponsored by Viewray/MD Solutions	
	<b>Clinical experience with daily real time MRI-guided adaptive radiation therapy</b>	<i>Mike Roach</i>
	<b>The Atlantic Consortium</b>	<i>Bas Raaymakers</i>
	<b>The Australian MRI-Linac Program</b>	<i>Paul Keall</i>
<b>100-1130</b>	Morning tea Networking Break	
<b>1130-1240</b>	<b>Scientific Session 6: MR-Guided RT in the Clinic</b>	
Scientific Session 6a	MRI-guided dose-escalation on local recurrences after radical prostatectomy	<i>Piet Dirix</i>
Scientific Session 6b	Quantitative diffusion measurements on the MR-Linac	<i>Folkert Koetsveld</i>
Scientific Session 6c	Fast online intrafraction replanning for the MR-linac	<i>Charis Kontaxis*</i>
Scientific Session 6d	Accelerated 3D bSSFP imaging for treatment planning on a low-field MRI-guided radiotherapy system	<i>Yu Gao*</i>
Scientific Session 6e	Dynamic Contrast-Enhanced and Intravoxel Incoherent Motion MRI analysis for carbon-ion beams radiation treatment monitoring in patients with Adenoid Cystic Carcinoma	<i>Natalia Arteaga-Marrero</i>
Scientific Session 6f	Distortion-free diffusion MRI using an MRI-guided radiotherapy system: sequence validation and preliminary clinical experience	<i>Yu Gao</i>
<b>1240-1300</b>	<b>Announcement of Young Investigator award &amp; Meeting Close</b>	<i>Gary Liney</i>
<b>1400-1700</b>	<b>Technical Tour at Liverpool Cancer Therapy Centre (MRI-Linac &amp; MRI-Simulator),</b> <b>Followed by</b> <b>Networking Event at Ingham Institute</b> <i>Restricted numbers</i>	<i>Gary Liney, Bin Dong &amp; Robba Rai</i>

\*Young Investigator award finalist

