

PRELIMINARY PROGRAM

Monday, April 14

7:00 AM

Registration & Breakfast

Welcome and Introduction

8:00 AM

- Michael P. Recht, MD
*Louis Marx Professor and Chair, Department of Radiology,
NYU Langone Health, New York, NY, United States*
 - Erik P. Sulman, MD, PhD
*Assistant Dean for Physician Scientist Education
Vice-Chair for Research, Department of Radiation Oncology
Director, Medical Scientist (MD/PhD) Training Program
Co-Director, Brain and Spine Tumor Center, Perlmutter Cancer
Center
Professor of Radiation Oncology and Neurosurgery
NYU Langone Health, New York, NY, United States*
 - Riccardo Lattanzi, PhD
*Director, Center for Biomedical Imaging
Professor, Department of Radiology
NYU Langone Health, New York, NY, United States*
 - Neelam Tyagi, PhD & Li Feng, PhD
*MRinRT Symposium Co-Chairs
New York, NY, United States*
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Clinical Evidence and Trial Progress in MRgRT

Moderator(s): Michael Chuong, MD & Li Feng, PhD

8:30 AM

- MR-Linac for Pancreatic Cancer: Redefining the Standard of Care
Michael Chuong, MD
Miami Cancer Institute, Miami, FL, United States
 - Precision and Progress: MRI-Guided SABR for Renal Tumors
Anna Bruynzeel, MD, PhD,
Amsterdam University Medical Centers, Amsterdam, The
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Netherlands

- MR-guided Prostate SBRT: Targeting the Critical and Sparing the Essential
David Byun, MD
NYU Grossman School of Medicine, New York, NY, United States
- MR-Guided Radiotherapy as Targeted Treatment for Lung Cancer
Stephen Rosenberg, MD, MS
Moffitt Cancer Center, Tampa, Florida, United States

Proffered Papers 1 - Clinical Studies and Applications in MRgRT

Moderator(s): Carri Glide-Hurst, PhD

10:00 AM

Time	Title	Speaker
10:00 AM	A Super-Resolution model for auto-segmentation of low-resolution Prostate MR-Linac data	Rob Tijssen
10:10 AM	Simulation and Pre-Planning Omitted Radiation Therapy (SPORT): Advancing MR-Guided Adaptive Radiotherapy for Prostate Cancer	Tsuicheng Chiu
10:20 AM	Liver Function Preservation after Feraheme-Enhanced MRI-Guided SBRT on 1.5T MR-Linac in Patients with HCC and Advanced Hepatic Cirrhosis	Parisa Shamsesfandabadi

10:30 AM

Coffee Break

Sustainability in MRgRT: Strategies for Resource Management and Local Practices

Moderator(s): Rob Tijssen, PhD & Sebastian Christ, MD, PhD

11:00 AM

- Introduction of Sustainability in MRgRT
Rob Tijssen, PhD
Catharina Hospital, Eindhoven, The Netherlands
- MRgRT: More Than Just Niche
Daniel Hyer, PhD
University of Iowa, Iowa City, IA, United States
- Adaptive Therapy Meets Financial Reality: Securing MR-guided Radiotherapy's Future
Kathryn Mittauer, PhD
Miami Cancer Institute, Miami, FL, United States

12:00 PM

Lunch

Proffered Papers 2 - MRI for Treatment Planning

Moderator(s): Lars Olsson, PhD

1:00 PM

Time	Title	Speaker
1:00 PM	Evaluating MR based ultra-hypofractionated focal boost to intraprostatic lesions for high-risk localized prostate cancer with histological reference	Tufve Nyholm
1:10 PM	Longitudinal per fraction lesion segmentation and tracking via few-shot deep learning for MR-guided radiotherapy of prostate cancer patients	Josiah Simeth
1:20 PM	Identification of Radiotherapy Target Volumes in Glioblastoma using Advanced MRI and 18F-DOPA PET/CT	Eyesha Younus
1:30 PM	A simplified online adaptive workflow	Koen Kuijer

	for long-course MR-guided radiotherapy in esophageal cancer	
1:40 PM	Investigating artefact-free online MR imaging during actively scanned proton therapy using a bi-directional whole-body in-beam MRI scanner	Emely Weichert
1:50 PM	Initial clinical experience of stereotactic body radiotherapy (SBRT) for lung metastases with target intrafraction tracking and gating by means 1.5T MR-Linac	Michele Rigo

Improving Patient Throughput: Novel Workflows and Tools in MRgRT

Moderator(s): Kathryn Mittauer, PhD

- 2:00 PM
- Optimizing MRgRT: Efficiency Gains with MRIdian A3i and Unmet QA Needs from a Multicenter Adaptive Trial
 Kathryn Mittauer PhD
Miami Cancer Institute, Miami, FL, United States
 - Feasibility of Alternative Workflow and Third-Party Tools for MRgRT on Unity
 Eric Paulson, PhD
Medical College of Wisconsin, Milwaukee, WI, United States
 - Impact of AI automation on MRgRT workflow
 Harini Veeraraghavan, PhD
Memorial Sloan Kettering Cancer Center, New York, NY, United States

3:00 PM **Coffee Break**

3:30 PM ***Young Investigator Award Finalist Presentations***

Moderator(s): James Balter, PhD & Neelam Tyagi, PhD

Time	Title	Speaker
3:30 PM	Patient-specific imaging modality agnostic virtual digit twins modeling temporally varying digestive motion	Jorge Tapias Gomez
3:40 PM	Towards a clinically-relevant computational platform for systematically adapting radiation therapy for treating glioma	Hugo J Miniere
3:50 PM	Highly-Accelerated, Time-Resolved 4D Golden-Angle Radial MRI with Self-Supervised Learning	Haoyang Pei
4:00 PM	A Longitudinal Study of Functional Connectivity Changes of Patients with Diffuse Glioma After Chemoradiotherapy using Aberrancy Parcel Map Analysis of Resting-state Functional MRI	Zhihua Liu
4:10 PM	Correlation of histopathological cell density and hypoxic fraction with time-dependent diffusion MRI in glioblastoma	Minea Jokivuolle
4:20 PM	Deducing Cardiorespiratory Motion of Cardiac Substructures Using a Novel 5D-MRI Workflow for Radiotherapy	Chase Ruff
4:30 PM	Distortion-Free Diffusion-Weighted Imaging of the Prostate Using TGSE-Based Golden-Angle PROPELLER Acquisition and Deep Learning Denoising	Jingjia Chen
4:40 PM	Modality-AGnostic Image Cascade: Cross-Modality MAGIC for improved MR-Linac Cardiac Segmentation	Nicholas Summerfield
4:50 PM	Segmentation Regularized Registration Training Improves Multi-Domain Generalization of Deformable Image Registration for MR-Guided Prostate Radiotherapy	Sudharsan Madhavan

Novel Imaging Biomarkers: Leveraging Quantitative MRI for Image-Guided Adaptive Radiotherapy

Moderator(s): Victoria Yu, PhD

5:00 PM

- **Novel Approaches with Diffusion MRI**
Faisal Mahmood, PhD
Odense University Hospital, Odense, Denmark
- **Oxygen-Enhanced MRI for Imaging Tumour Hypoxia**
Michael Dubec, PhD
University of Manchester, Manchester, United Kingdom
- **Quantitative MRI Biomarkers for Response and Recurrence Prediction in GBM**
Angus Lau, PhD
Sunnybrook Health Sciences Centre, Toronto, Canada

Reception - Docs Oyster Bar

6:30 PM

Location: [Docks Oyster Bar, Midtown East, NYC](#)
Address: 633 3rd Ave, New York, NY 10017

PRELIMINARY PROGRAM

Tuesday, April 15

7:30 AM

Breakfast

Embracing Motion: Recent Innovations in 4D MRI

Moderator(s): Li Feng, PhD

8:30 AM

- A Primer on 4D-MRI in Radiotherapy
Martin Fast, PhD
University Medical Center Utrecht, Utrecht, The Netherlands
 - 4DMRI and Prospectives for Application in Particle Therapy
Chiara Paganelli, PhD
Polytechnic University of Milan, Milan, Italy
 - AI-Empowered 4D-MRI and Quantitative 4D-MRI with MR Fingerprinting
Jing Cai, PhD
The Hong Kong Polytechnic University, Hong Kong, China
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Proffered Papers 3 - MRI-Based Motion Management and Assessment

Moderator(s): Lauren Smith, PhD

9:30 AM

Time	Title	Speaker
9:30 AM	Optimizing Motion Management in Spine SBRT on the MR-Linac: Enhancing Delivery Efficiency with Real-Time Cine Imaging and Baseline Shift Corrections	Eun Young Han
9:40 AM	Characterization of a Cartesian Self-Gated 4D-MR Imaging Sequence for SBRT	Stefan Dorsch
9:50 AM	Longitudinal Acceleration of	Jingjia Chen

	Time-Resolved 4D MRI Exploiting Multi-Fraction Temporal Correlations	
10:00 AM	Optimizing gated MR-linac treatments using 4D-MRI for motion-compensated daily imaging	Katrinus Keijnemans
10:10 AM	Characterizing contractile motion along the stomach medial axis from dynamic MRI	Robert Jones
10:20 AM	Combination of Pseudo-Golden-Angle Radial Acquisition and Deep Learning Reconstruction for Motion-Resolved 4D MRI on a 1.5T MR-Linac	Can Wu

10:30 AM

Coffee Break

Proffered Papers 4 - Quantitative MRI Part 1

Moderator(s): Eric Aliotta, PhD

11:00 AM

Time	Title	Speaker
11:00 AM	A multi-centre investigation of longitudinal changes in the apparent diffusion coefficient during short-course radiotherapy for patients with rectal cancer	Faisal Mahmood
11:10 AM	MR Multitasking-driven Abdominal Integrated Imaging (MT-AI2)	Junzhou Chen
11:20 AM	Evaluation of a Novel Quantitative Multiparametric MR Sequence for Radiation Therapy Treatment Response Assessment	Yuhao Yan
11:30 AM	Longitudinal ADC changes in the prostate and dominant lesion during hypo-fractionated SBRT on a 1.5 T MR	Sarah Morris

	linac: correlation with PSA response	
11:40 AM	Multi-Center Diffusion-Weighted MRI Validation for 0.35T MR-Linac	Siamak Nejad-Davarani
11:50 AM	Quantitative modelling of oxygen delivery in patients with head and neck cancer using oxygen-enhanced MRI	Michael Dubec

12:00 PM

Lunch

Advancements in Imaging Sequences for MRgRT: New Techniques and Applications

Moderator(s): Ricardo Otazo, PhD

1:00 PM

- MR Multitasking for Image-Guided Abdominal External Beam Radiotherapy
Zhaoyang Fan, PhD
University of Southern California, Los Angeles, CA, United States
- Advancements in DWI Sequences for MRgRT
Marielle Philippens, PhD
University Medical Center Utrecht, Utrecht, The Netherlands
- Magnetic Resonance Fingerprinting (MRF) for Quantitative Cancer Imaging
Yong Chen, PhD
Case Western Reserve University, Cleveland, OH, United States

2:00 PM

Proffered Papers 5 - Advanced and Specific Topics Part 1

Moderator(s): Yading Yuan, PhD

Time	Title	Speaker
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2:00 PM	C-SegDeform: a novel alternative to image registration in MR-guided adaptive radiotherapy of pancreatic cancer	Mehdi Shojaei
2:10 PM	Need for Speed: Timegain of AI-based delineations for MR-guided online adaptive radiotherapy of prostate cancer	Maximilian Konrad
2:20 PM	Accelerate Diffusion-Weighted MRI with Extended b-values via Implicit Neural Representation Learning	Lianli Liu
2:30 PM	A software framework for automated commissioning of AI Segmentation models for radiation therapy workflows	Nico Cote
2:40 PM	The impact of deep learning organ delineation uncertainty for prostate cancer radiotherapy	Christian Jamtheim Gustafsson
2:50 PM	Radiomics Approaches for Survival Prediction and Risk Stratification in Glioma Using MRI	Walid Dandachly

3:00 PM

Coffee Break

3:30 PM

Dose Accumulation and Re-Irradiation: Tools, Guidelines, and Implementation

Moderator(s): Lando Bosma, PhD

- Tools and Guidelines for Dose Accumulation and Its Evaluation
Lando Bosma, PhD
University Medical Center Utrecht, Utrecht, the Netherlands
 - Dose Accumulation for Reirradiation: Practical Pitfalls and Clinical Decision-Making
Jonas Willmann
University Hospital Zürich, Zürich, Switzerland
 - Dose Accumulation: Uncertainties and Interpretation for Adaptive Radiotherapy
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Andreas Smolders
Paul Scherrer Institute, Villigen, Switzerland

Proffered Papers 6 - Clinical Studies and Applications in MRgRT Part 2

Moderator(s): Siamak Nejad-Davarani, PhD

4:30 PM

Time	Title	Speaker
10:00 AM	Low-field (0.55T) respiratory-resolved and pulmonary functional MRI for lung radiotherapy	Jessica Scholey
10:10 AM	Deliverability of biologically guided RT plans driven by quantitative MR imaging	Annette Haworth
10:20 AM	Evaluating T1 and T2-weighted MR images for improved liver GTV delineation and subsequent ITV generation using a novel 4D multitasking MR sequence	Theodore Geoghegan

5:00 PM

User Insights and Partner Innovations

6:30 PM

Poster Viewing & Reception

PRELIMINARY PROGRAM

Wednesday, April 16

7:30 AM

Breakfast

Proffered Papers 7 - Quantitative MRI Part 2

Moderator(s): Faisal Mahmood, PhD & Li Feng, PhD

8:30 AM

Time	Title	Speaker
8:30 AM	Repeatability of longitudinal apparent diffusion coefficient measurements in esophageal tumors on a 1.5 T MR-linac	Koen Kuijer
8:40 AM	Preliminary Results from Consensus Measurement Methods for Longitudinal relaxometry on the 1.5T Unity MR-linac: a multi-institution comparison	Mike van Rijssel
8:50 AM	Longitudinal Assessment of Diffusion-MRI Hypoxia Score in Patients with Prostate Cancer Receiving Definitive Radiotherapy	Ivan A. Rashid
9:00 AM	Early radiation induced changes to the microenvironment in cervical cancer patients	Tiril Hillestad
9:10 AM	Longitudinal Diffusion-Weighted MRI for Treatment Response Assessment in Locally Advanced Rectal Cancer Patients Undergoing Short-Course Radiotherapy	Jonathan Pham
9:20 AM	Monitoring Concurrent Chemoradiation Treatment Response in Cervical Cancer Using Quantitative 3D T1 ρ Mapping	Sandeep Panwar
9:30 AM	Assessment of treatment response	Hayley Reynolds

	after prostate Stereotactic Body Radiation Therapy using quantitative MRI and radiomics: the SBRT SI-BiRT trial	
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Proffered Papers 8 - Advanced and Special Topics Part 2

Moderator(s): Victoria Yu, PhD & Eric Aliotta, PhD

9:40 AM

Time	Title	Speaker
9:40 AM	Implementation of Quantitative MRI-Guided Adaptive Radiotherapy on MR-LINAC	Jie Deng
9:50 AM	Online adaptive MR-Guided radiotherapy on a 1.5 T MR-Linac: clinical experience and evaluation of the first 1000 patients in a monocentric analysis	Michele Rigo
10:00 AM	Bowel motion: Is it a concern for multi-isocenter treatments?	Saskia Damen
10:10 AM	Synthetic 3D MRI generation from CBCT for deep-inspiration breath-hold (DIBH) abdominal treatments	Paulo Quintero
10:20 AM	Toward Personalized Automation in MR-Linac Workflows: Transforming Adaptive Radiotherapy with Advanced Monaco TPS Scripting	Sean Domal
10:30 AM	Comparative Plan Quality and Dosimetric Analysis of Two Commercially Available MR-Linac Systems in Prostate and Pancreas Cancers	Huiming Dong
10:40 AM	Investigating the dosimetric impact of intrafractional motion in prostate cancer patients during MR-guided adaptive radiotherapy	Stella Xing

10:50 PM

Coffee Break

11:20 PM

Low Field vs. High Field MRI: A Comparative Perspective

Moderator(s): Tobias Block, PhD

- High-Field and Ultrahigh-Field MRI: Challenges and Opportunities
Priti Balchandani, PhD
Icahn School of Medicine at Mount Sinai, New York, NY, United States
 - Low-Field and Ultralow-Field MRI: Challenges and Opportunities
Jelle Veraart, PhD
NYU Grossman School of Medicine, New York, NY, United States
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12:20 PM

Awards & Closing Remarks

12:30 PM

Boxed Lunch & Adjourn
