

# PRELIMINARY PROGRAM

*Monday, April 14*

7:00 AM

## Registration & Breakfast

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### 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

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	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

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## Improving Patient Throughput: Novel Workflows and Tools in MRgRT

*Moderator(s): Kathryn Mittauer, PhD*

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| 2:00 PM | <ul style="list-style-type: none"><li>• Optimizing MRgRT: Efficiency Gains with MRIdian A3i and Unmet QA Needs from a Multicenter Adaptive Trial<br/>Kathryn Mittauer PhD<br/><i>Miami Cancer Institute, Miami, FL, United States</i></li><li>• Feasibility of Alternative Workflow and Third-Party Tools for MRgRT on Unity<br/>Eric Paulson, PhD<br/><i>Medical College of Wisconsin, Milwaukee, WI, United States</i></li><li>• Impact of AI automation on MRgRT workflow<br/>Harini Veeraraghavan, PhD<br/><i>Memorial Sloan Kettering Cancer Center, New York, NY, United States</i></li></ul> |
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3:00 PM	<b>Coffee Break</b>
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3:30 PM	<b><i>Young Investigator Award Finalist Presentations</i></b>
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*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*

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## **Reception - Docs Oyster Bar**

6:30 PM

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

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# PRELIMINARY PROGRAM

*Tuesday, April 15*

7:30 AM

**Breakfast**

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## **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

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	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

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

Moderator(s): Siamak Davarni, 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

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5:00 PM

**User Insights and Partner Innovations**

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6:30 PM

**Poster Viewing & Reception**

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# 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 T1ρ 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

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
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

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10:50 PM

**Coffee Break**

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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 Varaart, PhD  
*NYU Grossman School of Medicine, New York, NY, United States*
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12:20 PM

**Awards & Closing Remarks**

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12:30 PM

**Boxed Lunch & Adjourn**

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