

Magnetic Resonance Imaging

PADIOLOGICAL SOCIETY OF NORTH AMERICA

105[™] Scientific Assembly and Annual Meeting

Meeting.RSNA.org #RSNA19

Meeting.RSNA.org Magnetic Resonance Imaging

Accreditation and Designation Statements

The Radiological Society of North America (RSNA®) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The RSNA designates this live activity for a maximum of 94.00 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The Commission on Accreditation of Medical Physics Education Program (CAMPEP) has approved the direct transfer of *AMA PRA Category 1 Credit*™ to MPCEC on a credit-for-credit basis for medical physicists.

Corporate Symposium

Please refer to each course description in the online program to determine if CME credit is offered for the session. Instructions on claiming credit will be provided during the course. CME credit for the Corporate Symposiums will be provided through a third-party provider and not through RSNA.

Program information is subject to change. For the most up-to-date information, please use your Meeting App or visit Meeting.RSNA.org.

Walk Through the Week

Sunday, Dec. 1, 2019

10:30 AM-12:00 PM Educational Courses RSNA AI Deep Learning Lab: Beginner Class: Classification Task (Intro) Session SPAI11 AI Showcase North Building Level 2
10:45 AM-12:15 PM Educational Courses Best Clinical Trials @ RSNA 2019 Session SPCT10
10:45 AM-12:15 PM Scientific Papers Sessions Breast Imaging (MRI Diagnostics) Session SSA02S402AB
Cardiac (Myocardial Ischemia and Viability (MRI)) Session SSA04
Gastrointestinal (LIRADS) Session SSA07
Gastrointestinal (Radiomics) Session SSA08S104A
Gastrointestinal (Rectal Cancer) Session SSA09S103CD
Science Session with Keynote: Genitourinary (Benign Gynecologic Disease) Session SSA10
Science Session with Keynote: Molecular Imaging (Neuroimaging) Session SSA13
Neuroradiology (Brain Tumors 1) Session SSA18
Physics (MRI - New Techniques and Image Quality) Session SSA22
1·00_2·30 PM

Educational Courses

RSNA Al Deep Learning Lab: Segmentation

Session SPAI12.... Al Showcase North Building Level 2

1:00–1:20 PM Showcase Presentations RSNA AI Theater: Comparing Advanced MRI Acquisition Acceleration Methods: Compressed Sensing versus Al-based Iterative Image Reconstruction: Presented by Medic Vision Session Al16 AI Showcase North Building Level 2	
1:05–2:15 PM Vendor Workshops A Practical Approach to Breast Magnetic Resonance Imaging (MRI) Interpretation: Presented by Siemens Healthineers Session VW14	
2:00-3:30 PM Educational Courses Advanced Muscle Imaging: State of the Art Course RC104	
Abbreviated/Faster MRI Abdominal Pelvic Protocols Course RC109	
Peripheral Artery Disease: CTA and MRA (Interactive Session) Course RC112	
Advanced MRI Applications Course RC115	
Emerging Technology: Imaging of Dementias and Movement Disorders Update 2019 Course RC117	
Interactive Game: Cases in Body Oncologic Imaging that I Have Learned the Most From (Interactive Session) Course RC118	
Innovations in Hybrid Imaging Course RC121	
MRI O-RADS (Interactive Session) Course RC129	
MR Imaging-guided Breast Biopsy (Hands-on) Course RC150	
Monday, Dec. 2, 2019	
8:30-9:30 AM Corporate Symposium Density "Inform" and Insurance Legislation Update: Presented by Bayer Session CS23	
8:30–10:00 AM Educational Courses Molecular Imaging Symposium: Basics of Molecular Imaging Course MSMI21	

Body Imaging Expert Panel: CTA or MRA? Course RC212
Emerging Technology: 3D Joint MR Imaging Course RC217
Whole Body MRI for Precision Oncology in Malignant Bone Disease
Course RC218
Abbreviated Liver MRI Course RC229
B:30 AM-12:00 PM Educational Courses Musculoskeletal Series: MRI of Ankle and Foot Course RC204
Breast Series: MRI Course RC215 Arie Crown Theate
9:00–10:30 AM Corporate Symposium Hot Topics in Contrast-Enhanced MRI: Presented by Northwest Imaging Forums, educational grant provided by Bracco Diagnostics, Inc. Session CS21
10:30 AM-12:00 PM Educational Courses Molecular Imaging Symposium: Oncologic MI Applications Course MSMI22
RSNA AI Deep Learning Lab: Beginner Class: Classification Task (Intro)
Session SPAI21 AI Showcase North Building Level 2
10:30 AM-12:00 PM Scientific Papers Sessions Cardiac (Nonischemic Cardiomyopathies) Session SSC02S401CI
Gastrointestinal (Hepatocellular Carcinoma) Session SSC05
Science Session with Keynote: Genitourinary (Prostate MRI in Biopsy, Therapy, and Surveillance) Session SSC07
Neuroradiology (Diffusion/Perfusion) Session SSC10

11:30-11:50 AM	Musculoskeletal (Arthritis and Cartilage)
Showcase Presentations	Session SSE16
3D + AV Theater: Overcoming Common Challenges to Scale 3DP at the Point-of-Care. Lessons from an Innovation Lab:	Neuroradiology (Epilepsy/Metabolism/Infection) Session SSE18
Presented by Formlabs	
Session 3D22	Neuroradiology (Structural Imaging) Session SSE20
1:05-2:15 PM	4:30-6:00 PM
Vendor Workshops	Educational Courses
A Practical Approach to Breast Magnetic Resonance Imaging	Special Interest Session: Value MR Imaging-Paradigm Shift
(MRI) Interpretation: An Interactive Session: Presented by	from Generic to Targeted-Why and How
Siemens Healthineers	Session SPSI23
Session VW19 North Building, Booth 8563	
1:30-3:30 PM	Tuesday, Dec. 3, 2019
Educational Courses	
Contrastes y Trazadores: Estado del Art-Sesion del Colegio	7:15-8:15 AM
Interamaricano de Radiologia (CIR) en Espanol/Contrast	Educational Courses
Agents and Radiopharmaceuticals: State of the Art-Session of	Controversy Session: MR Elastography versus US
Interamerican College of Radiology (CIR) in Spanish Session SPSP21	Elastography of Liver Session SPSC30
Session SFSF21	Session SPSC30E350
1:30-5:45 PM	8:30-10:00 AM
Educational Courses	Educational Courses
Physics Symposium: Highlights of AAPM Clinical	How Do I Image That? Tips for Improving Challenging Head
Brachytherapy Physics Summer School	and Neck Protocols
Session SPPH22S503AB	Course RC306 E353C
2:00-3:00 PM	Body MR Angiography: 2019 Update Course RC312
Corporate Symposium	
Advances in MR & CT Imaging: Emphasis on Artificial	Emerging Technologies: Prostate Cancer Imaging &
Intelligence: Presented by the Institute for Advanced Medical Education (IAME), educational grant provided by Canon	Management - Update 2019 Course RC317
Medical Systems USA, Inc.	
Session CS24	Innovations in MR
	Course RC321
3:00-4:30 PM	Liver MRI Essentials (Interactive Session)
Educational Courses	Course RC329
RSNA Al Deep Learning Lab: Generative Adversarial	8:30 AM-12:00 PM
Networks (GANs)	Educational Courses
Session SPAI23 AI Showcase North Building Level 2	Cardiac Series: Emerging Cardiovascular MR and CT Imaging
3:00-4:00 PM	Course RC303 E350
Scientific Papers Sessions	40.20 AM 40.00 DM
Science Session with Keynote: Cardiac (Congenital and	10:30 AM-12:00 PM
Pediatric Imaging)	Educational Courses
Session SSE03	RSNA AI Deep Learning Lab: Generative Adversarial Networks (GANs)
Musculoskeletal (Accelerated Imaging)	Session SPAI31 AI Showcase North Building Level 2
Session SSE15	230000 017401 74 Onowood North Building Level 2

10:30 AM-12:00 PM Scientific Papers Sessions Cardiac (CT, MRI, and Nuclear Medicine: General Topics) Session SSG02
Gastrointestinal (Liver Fibrosis) Session SSG04
Gastrointestinal (MR Diagnosis) Session SSG05E351
Neuroradiology (Stroke 2) Session SSG10
Physics (MRI - Clinical Applications) Session SSG14
11:00–11:20 AM Showcase Presentations RSNA AI Theater: AI in Clinical Cardiac MRI: Presented by Circle Cardiovascular Imaging Session AI32 AI Showcase North Building Level 2
12:00–12:20 PM Showcase Presentations 3D + AV Theater: Next Generation of Advanced Visualization for Surgical Planning and Optimizing Analysis Utilizing Immersive Reality with Haptic Feedback and Air Models: Presented by ImmersiveTouch, Inc. Session 3D33
RSNA AI Theater: ScanDiags-AI-driven Decision Support from Musculoskeletal MRI: Presented by Balzano AI Engineers Session AI34 AI Showcase North Building Level 2
1:00-2:30 PM Educational Courses RSNA AI Deep Learning Lab: Segmentation Session SPAI32 AI Showcase North Building Level 2
3:00-4:30 PM Educational Courses RSNA AI Deep Learning Lab: Beginner Class: Classification Task (Intro) Session SPAI33 AI Showcase North Building Level 2
3:00-4:00 PM Scientific Papers Sessions Cardiac (MRI: General Topics) Session SSJ04
Gastrointestinal (CT Dose and Abbreviated MR Screening Techniques) Session SSJ08

Science Session with Keynote: Genitourinary (Quantitative Prostate MRI)	
Session SSJ10	
Musculoskeletal (Knee) Session SSJ16 E353A	
3:30-5:00 PM Al Hands-on Workshop Deep Learning for MRI Interpretation on the Microsoft Azure ML Platform: Presented by Balzano Al Engineers Session HW33	
3:50-5:00 PM Al Hands-on Workshop A Practical Approach to Breast Magnetic Resonance Imaging (MRI) Interpretation: An Interactive Session: Presented by Siemens Healthineers Session VW26	
4:30–6:00 PM Educational Courses Articular Discs, Menisci, and Labra: Structure, Function, and Dysfunction Using MRI with Emphasis on the Knee Meniscus, Triangular Fibrocartilage, and Glenoid and Acetabular Labrum Course RC404	
Chronic Pelvic Pain: Added Value of MRI in Endometriosis, Fibroids, and Pelvic Floor Relaxation Course RC407	
The Newly Diagnosed Cancer: Different Viewpoints Course RC415	
Anatomical MR Imaging for Radiotherapy Planning and Guidance	
Course RC422S501ABC	
MRI Safety Course (Gadolinium and Pacemakers) (Interactive Session) (The In-Person Session is Supported in part by an Unrestricted Educational Grant from Bayer) Course RC429	
Wednesday, Dec. 4, 2019	
8:00-10:00 AM Educational Courses PI-RADS Hands-on Workshop (Interactive Session) Course RC507	

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8:30-10:00 AM	1:00-2:30 PM
Educational Courses BI-RADS Interactive Challenge (Interactive Session) Course RC515	Educational Courses RSNA AI Deep Learning Lab: Generative Adversarial Networks (GANs)
Metabolic Tumor Imaging: Current and Beyond	Session SPAI42 Al Showcase North Building Level 2
Course RC518	3:00-4:15 PM Educational Courses
Course RC520 E353A	BOOST: Advanced Techniques in Image-guided Therapy
Practical Aspects of MR Course RC521	(Interactive Session) Course MSR044
Protocol Optimization and Artifacts in MRI (Interactive Session)	3:00-4:30 PM
Course RC529	Educational Courses RSNA AI Deep Learning Lab: Beginner Class: Classification
8:30 AM-12:00 PM	Task (Intro) Session SPAI43 AI Showcase North Building Level 2
Educational Courses Musculoskeletal Series: MRI of Elbow, Wrist, and Hand Course RC504S406A	3:00-4:00 PM Scientific Papers Sessions
Vascular Series: MR Angiography-New Techniques and Their Application	Cardiac (Myocardial Disease) Session SSM03S401CD
Course RC512	Cardiac (Anatomy and Function)
10:15-11:25 AM	Session SSM04S404AB Genitourinary (Bi-Parametric versus Multi-Parametric
Vendor Workshops A Practical Approach to Breast Magnetic Resonance Imaging (MRI) Interpretation: An Interactive Session: Presented by	Prostate MRI) Session SSM12
Siemens Healthineers Session VW27 North Building, Booth 8563	3:30-5:00 PM Educational Courses
10:30 AM-12:00 PM Educational Courses	RSNA/ESR Sports Imaging Symposium: Postoperative Imaging of Sports Injuries (Interactive Session) Session MSSR44
BOOST: Lymphoma-Case-based Multidisciplinary Review (Interactive Session) Course MSR042	4:30-6:00 PM
RSNA AI Deep Learning Lab: Segmentation Session SPAI41 AI Showcase North Building Level 2	Educational Courses Controversy Session: Hepatocellular Carcinoma: Should We Use CT, MR, or US?
10:30 AM-12:00 PM Scientific Papers Sessions	Session SPSC42N227B
Neuroradiology (Movement Disorders) Session SSK16	Thursday, Dec. 5, 2019
11:30–11:50 AM Showcase Presentations RSNA AI Theater: Hitting the Bull's AI in Neuroradiology: Unlocking Value from Workflow to Patient: Presented by	8:30-10:00 AM Educational Courses Case-based Review of Magnetic Resonance (Interactive Session) Course MSCM51
icometrix Session Al43 Al Showcase North Building Level 2	Pulmonary Vascular Imaging Course RC601S103CD

11:45 AM-12:45 PM **Educational Courses** ASRT@RSNA 2019: Quantitative Liver MR Imaging 1:00-2:30 PM **Educational Courses** RSNA Al Deep Learning Lab: Segmentation Session SPAI52 . . . AI Showcase North Building Level 2 1:30-1:50 PM Showcase Presentations RSNA Al Theater: Al for Diagnosis, Al for the World: Presented by LPIXEL, Inc. Session Al57..... Al Showcase North Building Level 2 4:30-6:00 PM **Educational Courses** Advanced Imaging of Arthritis Course RC704......S402AB What's in the Pipeline for Neuro MRI? Course RC705......E451B Emerging Technology: PET/MRI Update 2019 Innovations in MR and CT Perfusion Functional MR Imaging for Normal Tissue Response Assessment in Radiotherapy Course RC722......S503AB Rectal MRI (Interactive Session) MR Imaging-guided Breast Biopsy (Hands-on) Course RC750..... E260 Friday, Dec. 6, 2019 8:30-10:00 AM **Educational Courses** Practical MR Imaging Avulsion Injuries of the Upper and Lower Extremities The Neoadiuvant Patient Abdominal/Pelvic MRI in the Emergent Setting Course RC829..... E263

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Posters and Exhibits Discussions

(CME is available when the author is present for discussion during the lunch period)

Sunday, Dec. 1, 2019

Juliuay, Dec. 1, 2013
12:30–1:00 PM Scientific Posters An Experimental Study of MRI - Induced Heating in Conductive Loops PH236-SD-SUA2
Association of the Kaiser Score with Invasiveness of Breast Cancer: Could it Provide Actionable Information? BR258-SD-SUA5
Markers of Myocardial Injury Based on 3.0T MRI in Predicting the Recovery of Segmental Recovery After Acute Myocardial Infarction
CA238-SD-SUA4 Station #4
1:00-1:30 PM Scientific Posters Comparing 3D MSK-View with 2D Standard Scans: Shortening Imaging Time of the Shoulder MRI Study - A Clinical Quality Feasibility Study PH240-SD-SUB4
Deep-Learning-Based Technology for Eliminating Gadolinium Contrast Agents in Myocardial Infarction MR Imaging CA203-SD-SUB1
Modification of Left Ventricle Myocardial Perfusion Reserve After the Implantation of Coronary Sinus Stent: A Stress-Rest CMR Study
CA240-SD-SUB4 Station #4
Reproducibility of Cardiac Magnetic Resonance Imaging Methods in Patients With or Without Pacemakers and/or Implantable Cardioverter-Defibrillators in the CONCERT-HF Trial
CA204-SD-SUB2 Station #2
The Value of DWI Combined with DCE in the Differential Diagnosis of Orbital Lymphoma and Inflammatory Pseudotumor PH202-SD-SUB6
Unenhanced Breast Cancer Screening with Diffusion Weighted MRI: Increased Image Quality and Lesion Visibility Using Synthetic b-Values

BR260-SD-SUB5 Station #5

Monday, Dec. 2, 2019

12:15–12:45 PM Scientific Posters Predictors for Adequate Stress Response to Adenosine Triphosphate in Perfusion Cardiac Magnetic Resonance CA206-SD-MOA1
12:15-12:45 PM Education Exhibits False Negatives and Missed Opportunities on Breast MRI: How Can We Do Better? BR198-ED-MOA8. Station #8
12:45–1:15 PM Scientific Posters Shear Wave Elastography for Early Prediction of Response to Neoadjuvant Chemotherapy in Patients with Invasive Breast Cancer BR232-SD-MOB3
12:45 – 1:15 PM Education Exhibits RECIST Applied to Breast MRI: The Real Life BR202-ED-MOB9
Tuesday, Dec. 3, 2019
12:15-12:45 PM Scientific Posters Does the Change in Volumetric Functional MR Metrics
Post-TACE Predict Histopathologic Grading of Hepatocellular Carcinoma? GI392-SD-TUA5
Post-TACE Predict Histopathologic Grading of Hepatocellular Carcinoma?
Post-TACE Predict Histopathologic Grading of Hepatocellular Carcinoma? GI392-SD-TUA5 Station #5 Influence of Sequence Selection of MR Enterography Diagnostic Accuracy

Imaging Artifacts in Neuro-MRI for Clinical Trial Quality

PH254-SD-TUB3 Station #3

Assurance

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Abbreviated Screening Breast MR Program

BR214-ED-WEB10..... Station #10

Application of MT in Kidney: A Comparison Analysis with	Thursday, Dec. 5, 2019	
Physiological Features PH257-SD-TUB6	12:15-12:45 PM	
Impaired Glucose Tolerance: Relationship with Pancreatic Fibrosis Using T1 Mapping and Pancreatic Exocrine Function Estimated by Cine-Dynamic MRCP Using a Spatially Selective Inversion-Recovery Pulse Gl399-SD-TUB5	Scientific Posters Deep Learning Assisted MRI Prediction of Tumor Response to Chemotherapy for Patients with Colorectal Liver Metastases GI358-SD-THA1	
	Low-Dose Imaging Technique (LITE) MRI: Introduction of a Reduced-Dosage Dynamic Contrast-Enhanced MRI Technique in Breast Imaging BR246-SD-THA2	
	Reduction of Motion Artifact and Improvement of Lesion Visibility of the Left Lobe in the Liver: Usefulness of Velocity- Compensated Diffusion-Weighted MRI	
	GI387-SD-THA4 Station #4	
12:15-12:45 PM Scientific Posters	Value of MRI as A Screening Tool for Hepatocellular Carcinoma in a High-Risk Population GI359-SD-THA2	
Low Flow Continuous Oxygen Inhalation May Avoid the Incidence of "Transient Severe Motion" (TSM) after Administration of Gadoxetate Disodium GI405-SD-WEA6	12:15–12:45 PM Education Exhibits Abbreviated and Ultrafast Breast Magnetic Resonance Imaging (MRI) in Clinical Practice: What the Radiologist Needs to Know BR215-ED-THA6	
Education Exhibits Test Yourself! MR Evaluation of Response to Neoadjuvant Therapy	Self Help: Creating Research Opportunities in a Hybrid Training Setting HP128-ED-THA4Station #4	
BR211-ED-WEA10	12:45–1:15 PM Scientific Posters Comprehensive Morpho-Functional and Structural Characterization of the Left-Ventricle in a Mouse Model of Acute Ischemia/Reperfusion Injury with a Single CMR 3D Flash Intra-Gate Cine Sequence CA229-SD-THB3	
Quantitative Radiological Features Affecting 2HG Detection with MEGA-PRESS Sequence NR387-SD-WEB3		
Study of Cardiac Structure and Function in Patients with Chronic Kidney Disease by Cardiac MR PH265-SD-WEB5		
12:45 – 1:15 PM Education Exhibits Trials and Tribulations in the Early Implementation of an		

Education Exhibits

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Space No.	Ехнівіт Тітш	
BR101-ED-X	Demystifying Breast MRI: A Pictorial Review of the ACR BI-RADS MRI Lexicon and Reporting	
BR114-ED-X	MRI Features of Breast Implant- Associated Anaplastic Large Cell Lymphoma: A Pictorial Review	
BR121-ED-X	Problem Solving with Breast MRI	
BR130-ED-X	False Negative Lesions of Breast Cancer: The Variable Features in Previous MRI	
BR131-ED-X	Breast Edema Terminology: To Standardize the Language of T2WI Breast MRI	
BR132-ED-X	Contrast Enhanced Mammography versus Dynamic Contrast-Enhanced MRI: Which is Right for Who?	
BR141-ED-X	Will You Pass the Test? A Diagnostic Strategy for Breast MRI Interpretation	
BR142-ED-X	Assessment of Extent of Disease with Breast MRI Pitfalls for Residents	
BR143-ED-X	The New Era for Breast Cancer Screening: Abbreviated Breast Magnetic Resonance Imaging	
BR147-ED-X	To Scan or Not to Scan, That is the Question: Role of Breast MRI in Cancer Staging	
BR152-ED-X	Diffusion-Weighted Imaging (DWI) and ADC Features of Triple Negative Breast Cancer (TNBC) Pre and Post Neoadjuvant Chemotherapy	
BR154-ED-X	Clinical and Radiological Approach to Different Causes of Mastitis	
BR155-ED-X	Non-Contrast-Enhanced Breast MR Screening for Women with Dense Breasts	
BR160-ED-X	Dreadful Tuberculosis Affecting the Mammary Tissue	
BR180-ED-X	Breast MRI: Identification of Malignancy in the Lactating Patient	
BR187-ED-X	Not Blind Enough: What Radiologists Need to Know to Avoid Over-Reporting Implant	

Failures Magnetic Resonance Imaging

HP104-ED-X Mentorship, Sponsorship, and Coaching: Key Faculty and Resident Development Concepts and a Guide for Successful Implementation in the Radiology Department HP118-ED-X Optimizing the Mentor-Mentee Relationship: A Guide for Mentees VI107-ED-X Evaluation of Peripheral Vascular Disease Using CT and MR Angiography VI124-ED-X Comparison of Non-Contrast MR Angiography to CT Angiography to Evaluate the Access Route of Transfemoral Transcatheter Aortic Valve

Replacement

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