A CME Teaching Activity

# 2021 Magnetic Resonance Imaging:

# National Symposium

### Release Date: January 1, 2021 | 26.0 AMA PRA Category 1 Credit(s)™

MRI of the Head & Spine Subset 1 - 6 Musculoskeletal MRI Subset 5 - 10 MRI of the Body & Heart Subset 11 - 15

#### **About This CME Teaching Activity**

This CME teaching activity offers a practical teaching course for those who order, perform or interpret magnetic resonance imaging studies. Three focused segments provide a comprehensive yet practical review and update on the clinical applications of MRI. Topics focus on neuroradiology, head & neck, spine, the musculoskeletal system, cardiovascular and body applications.

#### **Target Audience**

This CME activity is designed to educate diagnostic imaging physicians who supervise and interpret MRI/MRA studies. It should also be useful for referring physicians who order these studies so that they might gain a greater appreciation of the strengths and limitations of clinically relevant MRI exams.

#### Scientific Sponsor

Educational Symposia

### Accreditation

**Physicians:** Educational Symposia is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Educational Symposia designates this enduring material for a maximum of 26.0 AMA PRA Category 1 Credit(s)<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**SA-CME:** Credits awarded for this enduring activity are designated "SA-CME" by the American Board of Radiology (ABR) and qualify toward fulfilling requirements for Maintenance of Certification (MOC) Part II: Lifelong Learning and Self-assessment.

All activity participants are required to take a written or online test in order to be awarded credit. (Exam materials, if ordered, will be sent with your order.) All course participants will also have the opportunity to critically evaluate the program as it relates to practice relevance and educational objectives.

AMA PRA Category 1 Credit(s)<sup>™</sup>
for this activity may be claimed until December 31, 2023.

This CME activity was planned and produced by Educational Symposia, a leader in continuing medical education since 1975.

This activity was planned and produced in accordance with the ACCME Essential Areas and Elements.

#### **Educational Objectives**

At the completion of this CME teaching activity, you should be able to:

- Discuss the expanding role of MR in medical imaging.
- Implement state-of-the-art MR protocols.
- Describe the principles and general applications of perfusion and diffusion imaging techniques.
- Utilize MRI to evaluate neurological, musculoskeletal, body and breast pathology.
- · Optimize MR protocols and techniques.

No special educational preparation is required for this CME activity.

### **Faculty**

#### Robert R. Edelman, M.D.

Professor of Radiology
Feinberg School of Medicine, Northwestern
University
Chairman of Radiology
NorthShore University Health System

### John F. Feller, M.D.

Evanston, IL

Chief Medical Officer
Halo Dx
Menlo Park, CA
Assistant Clinical Professor of Radiology
Loma Linda University School of Medicine
Loma Linda, CA

#### Wende N. Gibbs, M.D.

Division of Neuroradiology Senior Associate Consultant, Mayo Clinic Mayo Clinic College of Medicine Phoenix, AZ

#### Garry E. Gold, M.D.

Professor of Radiology
Courtesy Professor Bioengineering and
Orthopaedic Surgery
Vice Chair for Research and Organization
Department of Radiology
Stanford University Medical Center
Stanford, CA

#### Blake A. Johnson, M.D., FACR

National Medical Director Director of Regenerative Medicine Center for Diagnostic Imaging Minneapolis, MN

#### Russell N. Low, M.D.

Medical Director Sharp and Children's MRI Center San Diego, CA

#### Marin A. McDonald, M.D., Ph.D.

Assistant Clinical Professor University of California, San Diego San Diego, CA

#### Courtney C. Moreno, M.D.

Associate Professor of Radiology Emory University School of Medicine Atlanta, GA

#### Colleen H. Neal, M.D.

Director, Division of Breast Imaging Clinical Associate Professor Department of Radiology University of Michigan Ann Arbor, MI

#### John D. Reeder, M.D., FACR

Director of Imaging Proscan Imaging Maryland Columbia, MD

#### Donald L. Resnick, M.D.

Professor Emeritus of Radiology University of California, San Diego San Diego, CA

#### Jeffrey S. Ross, M.D.

Consultant, Mayo Clinic Arizona
Neuroradiology Division
Department of Radiology
Professor of Radiology, Mayo Clinic College
of Medicine
Editor-in-Chief, American Journal of Neuroradiology
Phoenix, AZ

#### Lawrence N. Tanenbaum, M.D., FACR

Vice President and Chief Technology Officer Director of CT, MR and Advanced Imaging Medical Director East Region RadNet, Inc. New York, NY

# **Program**

Artificial Intelligence (AI): 1.0 Hour • Neuroradiology (N): 5.0 Hours • Head & Neck (H&N): 1.0 Hour Spine (SP): 3.5 Hours • MSK: 6.75 Hours • Body (B): 6.5 Hours • MRA: 4.25 Hours • Safety (S): 1.25 Hours

**Breast (BR):** 1.5 Hours • Cardiac (C): 0.5 Hours

	MRI of the Head & Spine Subset 1 - 6		Musculoskeletal MRI Subset 5 - 10			
Session 1		Session	5			
AI/N	Al in Neuroimaging  Lawrence N. Tanenbaum, M.D., FACR	AI/S	Al and Spine Imaging  Lawrence N. Tanenbaum, M.D., FACR			
Ν	Imaging Evaluation of Head and Neck Pathology Blake A. Johnson, M.D., FACR	S	<ul> <li>S Spontaneous Intracranial Hypotension: Diagnosis and Treatment of Spinal Leaks         <i>Jeffrey S. Ross, M.D.</i></li> <li>S Spine Infections and Mimics         <i>Wende N. Gibbs, M.D.</i></li> </ul>			
Ν	Imaging of Neurodegenerative Disorders Wende N. Gibbs, M.D.	S				
Session 2		0				
Ν	Imaging in Headache Jeffrey S. Ross, M.D.	S	Spine Tumors: Intradural Jeffrey S. Ross, M.D.			
N/H&N	The Perineural Highway: MR Imaging of the Skull Base Foramina and Cranial Nerves  Marin A. McDonald, M.D., Ph.D.	Session	Session 6			
		S	Spine Emergencies Wende N. Gibbs, M.D.			
Ν	MR of Skull Base Tumors Blake A. Johnson, M.D., FACR	S	Cervical Spine Trauma  John F. Feller, M.D.			
Session 3		Session	7			
S	MR Contrast Agents Safety Update  Lawrence N. Tanenbaum, M.D., FACR	MSK	Musculoskeletal MRI: Technical Considerations <i>Garry E. Gold, M.D.</i>			
Ν	Differential Diagnosis of Basal Ganglia Abnormalities Blake A. Johnson, M.D., FACR	MSK	MRI of the Knee: Update  John F. Feller, M.D.			
Ν	MR Imaging of CNS Infection Marin A. McDonald, M.D., Ph.D.	MSK	MRI of the Knee: Menisci and Cartilage Garry E. Gold, M.D.			
Session 4		Session	8			
	Quality, Efficiency and Survival with Patient Centric Imaging	MSK	MRI of the Ankle: Update  John F. Feller, M.D.			
N	Lawrence N. Tanenbaum, M.D., FACR White Matter Diseases	MSK	MRI of the Hip: Labrum and Femoroacetabular Impingement			
	Jeffrey S. Ross, M.D.		Garry E. Gold, M.D.			
H&N	What's Up Your Nose? Complimentary Role of MR and CT in the Evaluation of Sinonasal Malignancy	MSK	MRI Following Total Hip Replacement <i>John F. Feller, M.D.</i>			
	Marin A. McDonald, M.D., Ph.D.	Session	9			
		MSK	Instability of the Glenohumeral Joint Donald L. Resnick, M.D.			
		MSK	MRI of the Shoulder: Cysts and Fluid Collections <i>John D. Reeder, M.D., FACR</i>			
		MSK	Superior Labrum of the Glenohumeral Joint: Normal Variants Versus SLAP Lesions			

Donald L. Resnick, M.D.

Sports Injuries of the Elbow John D. Reeder, M.D., FACR

MSK

## **Program (Continued)**

#### Session 10

MSK Sports Injuries of the Wrist

John D. Reeder, M.D., FACR

MSK Articular Disorders of Synovium Lined Joints:

Role of MR Imaging Donald L. Resnick, M.D.

MSK MRI of Osseous and Soft Tissue Neoplasm:

Imaging Pitfalls

John D. Reeder, M.D., FACR

#### MRI of the Body & Heart Subset 11 - 15

#### Session 11

B, MRA Primary and Metastatic Liver Tumors:

Monitoring Treatment with MRI

Russell N. Low, M.D.

B, MRA MRCP and Imaging of Biliary Disease

Courtney C. Moreno, M.D.

B, MRA Advanced Imaging Techniques for the Body:

Pearls and Pitfalls Robert R. Edelman, M.D.

#### Session 12

BR Auditing Your Breast MRI Practice

Colleen H. Neal, M.D.

B MRI of the Gastrointestinal Tract

Russell N. Low, M.D.

#### Session 13

B MR Staging of Rectal Cancer

Courtney C. Moreno, M.D.

C Cardiac MRI

Robert R. Edelman, M.D.

BR MRI Evaluation of the Augmented and

Postsurgical Breast *Colleen H. Neal, M.D.* 

#### Session 14

B, MRA MR Screening for Hepatocellular Carcinoma

Courtney C. Moreno, M.D.

B MRI of the Acute Abdomen

Russell N. Low, M.D.

BR Breast MRI Challenging Cases

Colleen H. Neal, M.D.

#### Session 15

MRA, S MR Angiography With and Without Contrast Agents

Robert R. Edelman, M.D.

B Malignant Uterine and Adnexal Masses:

Staging and Management

Russell N. Low, M.D.

B, MRA Unusual Body MRI Cases

Robert R. Edelman, M.D.

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