

# 2021 Magnetic Resonance Imaging: National Symposium

**Release Date: January 1, 2021** | 25.75 AMA PRA Category 1 Credit(s)<sup>TM</sup>

**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 25.75 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>TM</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  
Evanston, IL*

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

*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):** 6.25 Hours • **MRA:** 4.0 Hours • **Safety (S):** 1.25 Hours  
**Breast (BR):** 1.5 Hours • **Cardiac (C):** 0.5 Hours

## MRI of the Head & Spine Subset 1 - 6

### Session 1

- AI/N AI in Neuroimaging  
*Lawrence N. Tanenbaum, M.D., FACR*
- N Imaging Evaluation of Head and Neck Pathology  
*Blake A. Johnson, M.D., FACR*
- N Imaging of Neurodegenerative Disorders  
*Wende N. Gibbs, M.D.*

### Session 2

- N Imaging in Headache  
*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.*
- N MR of Skull Base Tumors  
*Blake A. Johnson, M.D., FACR*

### Session 3

- S MR Contrast Agents Safety Update  
*Lawrence N. Tanenbaum, M.D., FACR*
- N Differential Diagnosis of Basal Ganglia Abnormalities  
*Blake A. Johnson, M.D., FACR*
- N MR Imaging of CNS Infection  
*Marin A. McDonald, M.D., Ph.D.*

### Session 4

- Quality, Efficiency and Survival with Patient Centric Imaging  
*Lawrence N. Tanenbaum, M.D., FACR*
- N White Matter Diseases  
*Jeffrey S. Ross, M.D.*
- H&N What's Up Your Nose? Complimentary Role of MR and CT in the Evaluation of Sinonasal Malignancy  
*Marin A. McDonald, M.D., Ph.D.*

## Musculoskeletal MRI Subset 5 - 10

### Session 5

- AI/S AI and Spine Imaging  
*Lawrence N. Tanenbaum, M.D., FACR*
- S Spontaneous Intracranial Hypotension: Diagnosis and Treatment of Spinal Leaks  
*Jeffrey S. Ross, M.D.*
- S Spine Infections and Mimics  
*Wende N. Gibbs, M.D.*
- S Spine Tumors: Intradural  
*Jeffrey S. Ross, M.D.*

### Session 6

- S Spine Emergencies  
*Wende N. Gibbs, M.D.*
- S Cervical Spine Trauma  
*John F. Feller, M.D.*

### Session 7

- MSK Musculoskeletal MRI: Technical Considerations  
*Garry E. Gold, M.D.*
- MSK MRI of the Knee: Update  
*John F. Feller, M.D.*
- MSK MRI of the Knee: Menisci and Cartilage  
*Garry E. Gold, M.D.*

### Session 8

- MSK MRI of the Ankle: Update  
*John F. Feller, M.D.*
- MSK MRI of the Hip: Labrum and Femoroacetabular Impingement  
*Garry E. Gold, M.D.*
- MSK MRI Following Total Hip Replacement  
*John F. Feller, M.D.*

### Session 9

- MSK Instability of the Glenohumeral Joint  
*Donald L. Resnick, M.D.*
- MSK MRI of the Shoulder: Cysts and Fluid Collections  
*John D. Reeder, M.D., FACR*
- MSK Superior Labrum of the Glenohumeral Joint: Normal Variants Versus SLAP Lesions  
*Donald L. Resnick, M.D.*
- MSK Sports Injuries of the Elbow  
*John D. Reeder, M.D., FACR*

## 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.*

A CME Teaching Activity

# 2021 Magnetic Resonance Imaging: National Symposium

**ORDER ONLINE**  
Or Call (813) 806-1000  
To Purchase

## WATCH ON

AMA PRA Category 1 Credit(s)<sup>TM</sup>  
Available until December 31, 2023

ORDER ONLINE and Search by Order ID at:

ORDER ID

**ENTIRE SET** - 25.75 AMA PRA Category 1 Credit(s)<sup>TM</sup> ..... **MRV21**

**Head & Spine** - 10.0 AMA PRA Category 1 Credit(s)<sup>TM</sup> ..... **HSV21**

**Musculoskeletal** - 10.25 AMA PRA Category 1 Credit(s)<sup>TM</sup> ..... **MSKV21**

**Body & Heart** - 9.25 AMA PRA Category 1 Credit(s)<sup>TM</sup> ..... **BHV21**

☐ USB

☐ DVD

☐ ON-DEMAND

SUBTOTAL

☐ \$2,090

☐ \$2,090

☐ \$2,080

☐ \$850

☐ \$850

☐ \$800

☐ \$875

☐ \$875

☐ \$820

☐ \$785

☐ \$785

☐ \$740

**SYLLABUS:** USB **INCLUDED** with USB or DVD • Purchase Full Color Printed \$95.00 each

☐ ENTIRE SET ☐ Head & Spine ☐ Musculoskeletal ☐ Body & Heart

# \_\_\_\_\_

# \_\_\_\_\_

# \_\_\_\_\_

SUBTOTAL

For orders sent to a Florida address, please add 8.5% sales tax

### CME APPLICATION

1 application required per person

**ENTIRE SET**

☐ Online # \_\_\_\_\_ at \$95 each ☐ Paper # \_\_\_\_\_ at \$125 each

**Head & Spine**

☐ Online # \_\_\_\_\_ at \$95 each ☐ Paper # \_\_\_\_\_ at \$125 each

**Musculoskeletal**

☐ Online # \_\_\_\_\_ at \$95 each ☐ Paper # \_\_\_\_\_ at \$125 each

**Body & Heart**

☐ Online # \_\_\_\_\_ at \$95 each ☐ Paper # \_\_\_\_\_ at \$125 each

### CME ADD PACKS

Includes Video Series, Syllabus & CME Application after initial purchase for additional users.

**ENTIRE SET**

CME Type: ☐ Online # \_\_\_\_\_ ☐ Paper # \_\_\_\_\_

☐ \$295

☐ \$295

**Head & Spine**

CME Type: ☐ Online # \_\_\_\_\_ ☐ Paper # \_\_\_\_\_

☐ \$295

☐ \$295

**Musculoskeletal**

CME Type: ☐ Online # \_\_\_\_\_ ☐ Paper # \_\_\_\_\_

☐ \$295

☐ \$295

**Body & Heart**

CME Type: ☐ Online # \_\_\_\_\_ ☐ Paper # \_\_\_\_\_

☐ \$295

☐ \$295

### SHIPPING

\*Customer is solely responsible for the cost of duties, customs, tariffs, import fees and/or other costs associated with your order

**Domestic**

☐ Ground Shipping **INCLUDED**

☐ Overnight (\$75)

☐ 2nd Day (\$45)

☐ 3rd Day (\$30)

**International\***

☐ \$175 (excluding Canada or Mexico)

☐ \$75 Mexico & Canada

GRAND TOTAL

Name ☐ M.D. ☐ D.O. ☐ Ph.D. ☐ P.A. ☐ Other

Company / Hospital Specialty

Group Practice Name

Address • No P.O. Boxes. / We cannot be responsible for non-delivery when we receive an incorrect address. City / State / Zip / Country

Phone **Email - For Shipment Notification & Online Test**

Card Number Exp. Date Security Code

Billing Address (If different than above) City / State / Zip / Country

Cardholder Signature

## 4 Easy Ways To Order

We Accept



### INTERNET

On USB or DVD: [www.edusymp.com](http://www.edusymp.com)

On-Demand: [www.docmeded.com](http://www.docmeded.com)

### MAIL

Check payable to:  
Educational Symposia  
5620 West Sligh Avenue  
Tampa, Florida 33634-4490

### FAX

(813) 806-1001

### PHONE

(813) 806-1000

**USB & DVD Cancellation Policy:** Return within 15 days of receiving. No refunds after. \$125.00 processing fee for each series. Shipping non-refundable. Cancellations must be in writing. No CME credit on returned purchases. 2+ returns voids cancellation policy.

**On-Demand Cancellation Policy:** We offer a free trial period. Please use the evaluation period to ensure your online system meets the requirements necessary to view. If you are not satisfied, you may receive a refund within 90 days if you have watched less than 20% of your purchase.