Section on Radiology: MRI Essentials for the Spine Specialist
Webinar Series: Advanced MRI Techniques

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Presenters
A. Jay Khanna, MD (Chairman)
John A. Carrino, MD, MPH
Daniel M. Sciubba, MD

Although the ability to evaluate MRI studies is critical to the delivery of effective spine care, most spine specialists learn this skill in an informal fashion during training and in clinical practice. As a result, we may not have an understanding of the science and physics behind MR imaging and the various pulse sequences that are available for obtaining the scans. Many of us prefer to read our patients' MR imaging studies ourselves rather than rely solely on the "official" radiologist's report. We learn to make preoperative, intraoperative, and postoperative decisions based on those readings. However, unlike radiologists who are trained to evaluate MRI studies in a systematic fashion, we may be more likely to evaluate the images in a less organized manner and to rely on our anatomic expertise and experience, which may not be the most effective method.

This webinar series will help teach spine specialists how to systematically evaluate and interpret MR imaging studies of the spine. Although there are many courses that focus on MR imaging of the spine, this series is distinctive in that it is given by spine surgeons and radiologists specifically for spine specialists. As such, it is more clinically oriented than other educational opportunities. It also provides an excellent reference for radiologists and others such as physical medicine and rehabilitation clinicians, rheumatology physicians, and medical musculoskeletal care specialists who evaluate MR images of the spine and who would like to gain a better appreciation of the associated clinical aspects.

Appropriate Audience
Target audience includes: Spine surgeons, orthopedic surgeons, neurosurgeons, physiatrists, interventional pain specialists, fellows, residents, orthopedists, PA/NPs, nurses, physical therapists and other professionals with an interest in spine care.

Credits
This activity has been planned and implemented in accordance with the Essential Areas and Standards of the Accreditation Council for Continuing Medical Education (ACCME). The North American Spine Society is accredited by the ACCME to provide continuing medical education for physicians and takes responsibility for the content, quality and scientific integrity of this CME activity.

The North American Spine Society designates this enduring material for a maximum of 1.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Medical Association has determined that physicians not licensed in the US to participate in this CME activity are eligible for AMA PRA Category 1 Credits™.

This course was released on 7/26/2013, and is available for purchase through 7/25/2016.
**Learning Objectives**

*Upon completion of this activity, participants should be able to:*

- Define and recognize the normal MRI anatomy of the cervical, thoracic and lumbar spine.
- Cite and apply the rationale for use of the most common MRI pulse sequences used in the spine.
- Describe the most commonly seen pathologic findings in the cervical, thoracic and lumbar spine.
- Utilize a systematic approach to evaluate MR imaging studies.
- Correlate the imaging findings on spine MRI with those on other imaging modalities.

**Agenda**

- Welcome & Introduction – Khanna (5 minutes)
- MRI of Spinal Tumors – Sciubba (25 minutes)
- Advanced Techniques in Spinal Imaging – Carrino (25 minutes)
- Case Reviews – All Faculty (25 minutes)
- Discussion/Q&A – All faculty (10 minutes)

**Conflict of Interest Disclosure**

All faculty members provided estimated dollar amounts per the NASS Disclosure Policy through the NASS online disclosure module. NASS staff then translated that information into dollar ranges for purposes of this index, as well as for presentation at the live course. These ranges are as follows:

None: Existing relationship but no remuneration in prior calendar year  
Level A: $100 to $1000  
Level B: $1,001 to $10,000  
Level C: $10,001 to $25,000  
Level D: $25,001 to $50,000  
Level E: $50,001 to $100,000  
Level F: $100,001 to $500,000  
Level G: $500,001 to $1M  
Level H: $1,000,001 to $2.5M  
Level I: Greater than $2.5M

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Carrino, John A.: Consulting: Abbott (B), Medtronic (A), Best Doctors (A); Grants: Siemens Medical Systems (E, Paid directly to institution/employer), Integra (D, Paid directly to institution/employer), Toshiba Medical Systems (D, Paid directly to institution/employer).

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Reed, Michael L.: Nothing to Disclose.

Rittenberg, Joshua D.: Nothing to Disclose.

Sciubba, Daniel M.: Consulting: NuVasive (C, Paid directly to institution/employer).

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Disclosures are current as of July 19, 2013.

Technical Requirements

The following hardware/software specifications must be met or exceeded to complete this course:

- Web browser and internet connection
- Computer equipped with audio output (speakers or headphones)
- Printer (to print PDF handout)
- Internet Explorer 7 or higher or Firefox equivalent
- Adobe reader 7 or higher
- Windows Media Player
- Disable pop-ups

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