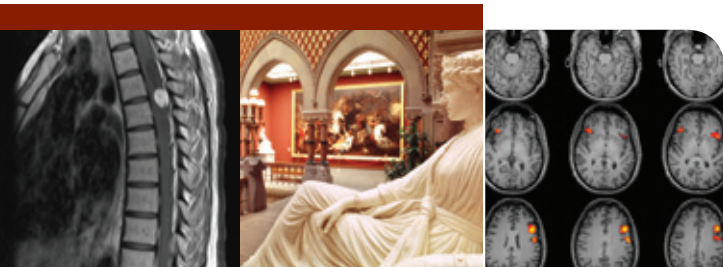


Continuing Medical Education



Perelman
School of Medicine
UNIVERSITY of PENNSYLVANIA



COMPREHENSIVE NEURORADIOLOGY REVIEW

The Rittenhouse | Philadelphia, PA
October 9-12, 2014



COURSE DIRECTOR: *Linda J. Bagley, MD*

2014

UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM

| *Department of Radiology*

OVERVIEW

This long-established program is designed to address the needs of practicing radiologists in the community, as well as radiologists, neurologists, and neurosurgeons who are preparing for their respective board exams, and special certification or re-certification in neuroradiology.

Based on feedback received from past course attendees, the program will include lectures on new imaging methods and interventional techniques. Topics will include:

- Endovascular and spinal interventions
- Multidetector CT and CT angiography
- PET/CT in head and neck oncology
- Molecular imaging
- Perfusion imaging
- Spectroscopy
- Diffusion tensor imaging
- Functional MRI

All of these are critical for the study of cerebrovascular disease, neurodegenerative disease, and neoplasms of the brain and head and neck. In addition, we have a dedicated section that will cover pediatric neuroradiology with increased coverage of fetal MR and ultrasound. There will also be lectures covering vascular disease, radiation dose reduction, non-neoplastic disease of the head and neck, brain and spine imaging and interventional neuroradiology.

Participants will have the opportunity to complete two self-assessment modules which meet the ABR's criteria for a self-assessment activity in the ABR Maintenance of Certification (MOC) program.



► **CANCELLATION/REFUNDS POLICY**

The University of Pennsylvania reserves the right to cancel or postpone any activity due to unforeseen circumstances. In the unlikely event of cancellation or postponement, the University will refund registration fees but will not be responsible for related costs or expenses to participants, including cancellation fees assessed by airlines, travel agencies and hotels.

If you need to cancel your enrollment, written notification must be received by the Department of Radiology/Continuing Medical Education office. Cancellations made 30 days prior to a course will be charged a service fee of \$75. Cancellations fewer than 30 days before a course will be subject to a \$150 service fee.

► **DISCLOSURES**

Perelman School of Medicine, Office of Continuing Medical Education, adheres to the ACCME Standards for Commercial Support. Faculty disclosure information will be made available in the course materials and syllabi. Faculty members are also expected to disclose to participants any discussion of off-label and/or investigational use of pharmaceutical products or devices within their presentation.

► **NON-DISCRIMINATION STATEMENT**

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability or status as a Vietnam Era Veteran or disabled veteran in the administration of educational policies, programs or activities; admission policies, scholarship and loan awards; athletic or other University-administered programs or employment.

Questions or complaints regarding this policy should be directed to: Executive Director, Office of Affirmative Action and Equal Opportunity Programs, 3600 Chestnut Street, Sansom Place East, Suite 228, Philadelphia, PA 19104-6106 or 215-898-6993 (Voice) or 215-898-7803 (TDD)

► **SPECIAL NEEDS**

If special accommodations are requested for an individual with a disability to attend this meeting, contact Angela Scott at least two weeks prior at 215-662-6982.



FACULTY & GUEST SPEAKERS

Hospital of the University of Pennsylvania

COURSE DIRECTOR

Linda J. Bagley, MD

Associate Professor of Radiology

Michel Bilello, MD, PhD

Assistant Professor of Radiology

Steven C. Horii, MD

Professor of Radiology

Robert W. Hurst, MD

Professor of Radiology & Neurosurgery & Neurology

Kim O. Learned, MD

Assistant Professor of Clinical Radiology

Laurie A. Loevner, MD

Professor of Radiology, Otorhinolaryngology: Head and Neck Surgery and Neurosurgery Chief, Division of Neuroradiology

Alexander C. Mamourian, MD

Professor of Radiology

Suyash Mohan, MD

Assistant Professor of Radiology

Ilya Nasrallah, MD, PhD

Assistant Professor of Radiology

Bryan A. Pukenas, MD

Assistant Professor of Radiology and Neurosurgery

Mary H. Scanlon, MD, FACP

Professor of Clinical Radiology

Michelle J. Smith, MD

Assistant Professor of Neurosurgery and Radiology

Ronald L. Wolf, MD, PhD

Associate Professor of Radiology

John H. Woo, MD

Assistant Professor of Radiology

The Children's Hospital of Philadelphia

Larissa T. Bilaniuk, MD

Professor of Radiology

Tamara Feygin, MD

Assistant Professor of Clinical Radiology

Erin Simon Schwartz, MD

Associate Professor of Radiology

Karuna Shekdar, MD

Assistant Professor of Clinical Radiology

Arastoo Vossough, MD, PhD

Assistant Professor of Radiology

Robert A. Zimmerman, MD

Professor of Radiology,
Chief, Neuroradiology Division/MRI

Guest Faculty

Adam E. Flanders, MD

Professor of Radiology and Professor of Rehabilitation Medicine
Thomas Jefferson University
Jefferson Medical College
Philadelphia, PA

David P. Friedman, MD

Associate Professor of Radiology,
Co-Director of Neuroradiology/
Head & Neck Radiology
Thomas Jefferson University
Jefferson Medical College
Philadelphia, PA

Sudhakar R. Satti, MD

Christiana Care Health System
Wilmington, DE

► MEETING MATERIALS

Penn Radiology will distribute syllabus presentations to registered attendees on a flash drive at the course. PDFs of the lectures received by the deadline, will be posted electronically the week prior to the course. You must provide your email address to receive electronic download instructions.

COMPREHENSIVE NEURORADIOLOGY REVIEW

The Rittenhouse | Philadelphia, PA

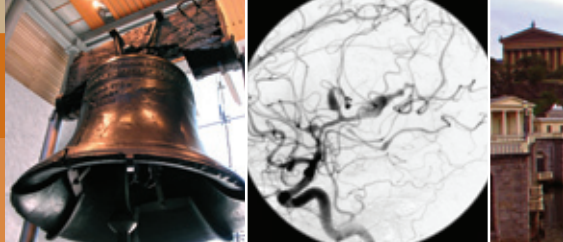


COURSE OBJECTIVES

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

- ☐ Differentiate between neoplastic and non-neoplastic mimics in the brain and spine in order to guide management
- ☐ Diagnose and distinguish between intramedullary, epidural and extramedullary intradural masses of the spine
- ☐ Identify complex neurovascular malformations of the CNS and appropriately refer for management
- ☐ Describe head and neck cancers in a manner that assists in their comprehensive treatment
- ☐ Explain the role of imaging in the diagnosis and management of epilepsy
- ☐ Diagnose complex CNS malformations in children
- ☐ Apply appropriate imaging strategies in the evaluation of thyroid and parathyroid disorders

SCHEDULE



THURSDAY OCTOBER 9, 2014

- 6:45a Registration/Continental Breakfast
 7:20 Opening Remarks/Pre-test
Linda J. Bagley, MD

VASCULAR DISEASE

- 7:30 Cerebrovascular Anatomy (Arterial and Venous) (A, CT, MR)
Robert W. Hurst, MD
 8:00 CT and MR Angiography of the Head and Neck (MR, CT)
Alexander C. Mamourian, MD
 8:45 Vascular Disorders of the Spine (MR, A)
Robert W. Hurst, MD
 9:30 Break/Refreshments
 9:45 Cerebral Aneurysms: Epidemiology, Imaging and Treatment (A, CT, MR)
Linda J. Bagley, MD
 10:15 Vascular Malformations of the Brain: A Review of Imaging Features and Risks (A, MR, CT)
Suddhakar Satti, MD
 11:00 State-of-the-Art Imaging of Stroke (MR, CT)
Ronald L. Wolf, MD, PhD
 11:30 Clinical Trials and Vascular Intervention (A)
Michelle J. Smith, MD, PhD
 12:15 Lunch (on own)

BRAIN NEOPLASMS

- 1:30 Adult Brain Neoplasms (MR)
Ronald L. Wolf, MD, PhD
 2:30 Mimics of Adult Brain Neoplasms (MR)
John H. Woo, MD
 3:00 Break/Refreshments
 3:15 Sellar and Parasellar Imaging (MR, CT)
Alexander C. Mamourian, MD
 4:15 Orbital Imaging (MR, CT)
Laurie A. Loevner, MD
 5:00 Adjourn

FRIDAY OCTOBER 10, 2014

- 7:00a Continental Breakfast

BRAIN

- 7:30 Infectious Diseases of the Brain and Meninges (MR)
David P. Friedman, MD
 8:00 Demyelinating Diseases of the Brain (MR)
Michel Bilello, MD, PhD
 8:30 Imaging of Head Trauma (CT, MR, NM)
Linda J. Bagley, MD
 9:00 Neurodegenerative Diseases (NM, MR)
Ilya Nasrallah, MD, PhD
 9:45 Break and Refreshments
 10:00 Imaging of the Epileptic Patient (MR, NM)
Linda J. Bagley, MD
 11:00 Questions and Answers
 11:15 Lunch (on own)

HEAD AND NECK

- 12:30 Head and Neck Cancer: Patterns of Tumor Spread in Base of Skull and Larynx (MR, CT)
Laurie A. Loevner, MD
 1:30 Temporal Bone Anatomy (CT)
Arastoo Vossough, MD, PhD
 2:00 Break/refreshments
 2:15 Disorders of the Temporal Bone (CT, MR)
Arastoo Vossough, MD, PhD
 3:00 PET-CT Applications in Oncology (NM, CT, MR)
Laurie A. Loevner, MD

- 3:45 SAM: Head and Neck Quiz

- 4:00 Adjourn

SATURDAY OCTOBER 11, 2014

- 7:00a Continental Breakfast

SPINE IMAGING

- 7:30 Degenerative Disease of the Spine (MR, CT)
John H. Woo, MD
 8:00 Spinal Interventions (CT, R)
Bryan A. Pukenas, MD



ACCREDITATION & CREDIT DESIGNATION

The Perelman School of Medicine at the University of Pennsylvania is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Perelman School of Medicine at the University of Pennsylvania designates this live activity for a maximum of 26.5 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The total credits include:

MRI – 21.25 | CT – 15.25 | US – 2.0

Angio – 3.25 | Nuc Med – 3.5

Radiography – .5

EARN SAM CREDIT

An opportunity for the completion of two Self-Assessment Modules will be offered. These modules meet the ABR's criteria for a self-assessment activity in the ABR Maintenance of Certification program. SAM credits are required for radiologists certified since 2002.

8:30 Post-operative Spinal Imaging (MR, CT)
Adam E. Flanders, MD

9:15 Spinal Trauma and Spinal Cord Injury (CT, MR)
Adam E. Flanders, MD

9:45 Break and Refreshments

10:00 Non—Neoplastic Disease of the Spine (MR)
John H. Woo, MD

10:30 Intradural Lesions of the Spine (MR)
John H. Woo, MD

ENT/SAM

11:00 Imaging of the Thyroid and Parathyroid Glands (CT, MR, NM, U)
Laurie A. Loevner, MD

12:00 Lunch (on own)

HEAD & NECK

1:15 Robotic Surgery of the Head and Neck: Pre- and Post-Operative Imaging (MR, CT)
Laurie A. Loevner, MD

2:00 Imaging of the Paranasal Sinuses (CT)
Kim O. Learned, MD

2:30 Imaging of the Salivary Glands (CT, MR)
Mary H. Scanlon, MD

3:00 Maxillo Facial Trauma (CT)
Suyesh Mohan, MD

3:30 SAM: Head and Neck Quiz

4:00 Adjourn

SUNDAY OCTOBER 12, 2014

7:00a Continental Breakfast

PEDIATRIC IMAGING

7:30 Prenatal US Diagnosis of CNS Anomalies (US)
Steven C. Horii, MD

8:00 Fetal MRI of CNS Anomalies (MR)
Robert A. Zimmerman, MD

8:30 Congenital CNS Anomalies (MR)
Erin Simon Schwartz, MD

9:15 Congenital Neck Lesions (MR, CT, US)
Tamara Feygin, MD

9:45 Break/Refreshments

10:00 Pediatric Brain Tumors (MR)
Robert A. Zimmerman, MD

10:30 Pediatric Spine Tumors (MR)
Karuna Shekdar, MD

11:00 Radiation Dose Reduction with Pediatric CT (CT)
Arastoo Vossough, MD, PhD

11:15 Imaging of ENT Disease in Children (MR, CT)
Larissa T. Bilaniuk, MD

12:00 White Matter Disorders in Children (MR)
Arastoo Vossough, MD, PhD

12:30 Post-test/Course Evaluation

12:45 Adjourn



The Rittenhouse

www.rittenhousehotel.com

210 W. Rittenhouse Square
Philadelphia, PA 19103

Hotel Telephone: 215.546.9000 or 800.635.1042

CUT-OFF DATE: September 8, 2014

ACCOMMODATIONS

PHILADELPHIA

www.visitphilly.com

The weather in the fall is typically a delightful time to visit Philadelphia. Our course location is The Rittenhouse, a AAA Five Diamond luxury hotel located on the west side of Rittenhouse Square. This premier location is surrounded numerous restaurants many offering outdoor dining, galleries, and shopping.

ROOM RATES:

Group rate.....\$250

Check in time: 3:00pm

Check out time: 12:00pm

Penn Radiology has reserved a limited number of guest rooms during the conference dates and the block typically sells out early. The guest rooms are spacious and very nicely appointed. Some of the amenities include: complimentary wireless and wired high-speed Internet access, private stocked bars with beverages and snacks, 24-hour in-room dining, overnight shoe shining service, twice daily housekeeping including evening turndown service.

Our group rate of \$250 per night is subject to sales and occupancy tax, currently 15.2%. Reservations must be made prior to **September 8, 2014**. After that time, rooms will be offered on a space and rate availability basis.

HOTEL CANCELLATION POLICY

Guests have 72 hours prior to check in time to cancel their reservation without penalty. Cancellations within 72 hours will be charged full room and tax for the duration of the existing reservation. Early departure fees may also apply and will be the responsibility of the individual.

TRAVEL OPTIONS

Philadelphia is served by Philadelphia International Airport (PHL) or conveniently reached via Amtrak, stopping at 30th Street Station.

For information, please visit www.phl.org or www.30thstreetstation.com.

If you are driving to the conference, the hotel offers a day rate for valet parking, currently, \$26.00 per day inclusive of taxes and overnight rate of \$49 inclusive of taxes. (Prices subject to increase.) Other nearby less expensive options will be made available on our website closer to the course dates.

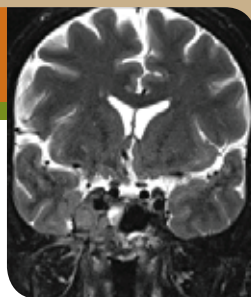
BOOK THE HOTEL ONLINE AT [HTTP://BIT.LY/RITTENHOUSEROOMS](http://bit.ly/rittenhouserrooms) OR CALL 800.635.1042.

Don't wait! Our block will fill early.

REGISTRATION INFORMATION

COMPREHENSIVE NEURORADIOLOGY REVIEW

The Rittenhouse | Philadelphia, PA ■ October 9-12, 2014



THERE ARE 4 WAYS TO REGISTER FOR THIS CONFERENCE:

- ▶ **ONLINE:** Visit <http://bit.ly/PennRadiologyCME>
- ▶ **MAIL:** Registration Form to:
Penn Radiology CME, 3400 Spruce Street / 1 Silverstein, Philadelphia, PA 19104-4283
- ▶ **FAX:** Registration Form to 215.349.5925
- ▶ **PHONE:** Call 215.662.6982 (Visa, Mastercard or Amex Accepted)
- ▶ **QUESTIONS:** Call 215.662.6982

Name: _____
First M.I. Last Degree

Affiliation: _____

Address: _____

City, State, Zip: _____

☐ This is my home address

☐ This is my business address

Phone: _____ Fax: _____

Email: _____
(course confirmation is sent by email only)

CONFERENCE FEES

- ☐ **Physician** \$925
- ☐ **Discount Fee*** \$825
- ☐ **Resident/Fellow** \$725

Fees will increase \$50 for those registering after September 12, 2014.

*The Discount Fee is available for Penn Radiology alumni, full-time active military, VA medical personnel, retired physicians and physicians living outside the Continental U.S.

Residents/Fellows registering online must fax a letter of verification from institution including attendee's full name and date registered to 215.349.5925.

PAYMENT METHOD

Amount due \$ _____

☐ Check enclosed payable to Penn Radiology CME (U.S. dollars only drawn on a U.S. bank)

☐ Charge my: ☐ Visa ☐ Mastercard ☐ American Express

Please complete if name or credit card billing address differs from information provided above.

Name on Card: _____

Billing Address: _____

City, State, Zip: _____

Account #: _____ CSC: _____ Expiration Date: _____

Signature: _____
(Your signature is your authorization to charge this credit card)

PENN RADIOLOGY CME

2014

2015

- ▶ **JAN 12-15**
Breast Imaging in the Caribbean
The Ritz Carlton Grand Cayman
Cayman Islands
- ▶ **MARCH 2-5**
**Practice Updates in Body,
Bone and Breast Imaging**
Half Moon Resort
Rose Hall, Jamaica
- ▶ **APRIL 28-MAY 2**
Radiology in the Redrocks
Enchantment Resort
Sedona, AZ
- ▶ **JULY 14-18**
Diagnostic Imaging on the Cape
Chatham Bars Inn
Chatham, MA
- ▶ **OCTOBER 9-12**
**Comprehensive
Neuroradiology Review**
The Rittenhouse
Philadelphia, PA
- ▶ **NOVEMBER 8-11**
**Oncologic Imaging: What the
Radiologist Needs to Know**
The Ritz-Carlton, Fort Lauderdale
Fort Lauderdale, FL
- ▶ **JANUARY 11-14**
**Breast Imaging in the
Caribbean**
The Ritz-Carlton, Aruba
Palm Beach, Aruba
- ▶ **MARCH 23-26**
**Radiology After Hours:
Acute Diagnoses on
Evenings and Weekends**
Atlantis Paradise Island
The Bahamas
- ▶ **JULY 6-10**
**Diagnostic Imaging:
Back to the Vineyard**
Harbor View Hotel
Martha's Vineyard, MA
- ▶ **FALL 2015**
**Oncologic Imaging:
From Head to Toe**
Philadelphia, PA



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