



Penn Medicine
Department of Radiology

DIAGNOSIS IN THE NEURAXIS:

COMPREHENSIVE REVIEW OF CLINICAL NEURORADIOLOGY

Jointly provided by Postgraduate Institute for Medicine and Penn Medicine Department of Radiology.

SEPTEMBER 7-10

MEETING LOCATION

Perelman Center for Advanced Medicine

University of Pennsylvania

3400 Civic Center Boulevard | Philadelphia, PA 19104

ACCOMMODATIONS

The Study at University City

20 S 33rd Street | Philadelphia, PA 19104

CREDITS
33 | 25
CME | SAM

2019



DIAGNOSIS IN THE NEURAXIS:

COMPREHENSIVE REVIEW OF CLINICAL NEURORADIOLOGY

OVERVIEW

This course is specially designed for practicing radiologists interested in refreshing their neuroradiology skills, as well as radiologists-in-training preparing for certifying exams. Over four full days, Penn Radiology faculty and nationally recognized guest speakers will provide a comprehensive clinical review of neuroradiology.

"Highly focused review-key concepts solidified. The images and the audio-visual system was stellar." – K.P. (FLORIDA)

"The lectures were superb! I wish I could come every year!"
– R.W. (NEW JERSEY)

"I really liked the location and the efficiency. The format is compact and gets you through the content efficiently. Great for those wanting to keep up in private practice." – N.N. (OHIO)

COURSE OBJECTIVES

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

- ☐ Review the practical neuroanatomy of the brain, head, neck, and spine
- ☐ Discuss the fundamentals of interpretation of adult and pediatric neuroimaging in the emergency department
- ☐ Summarize state-of-the-art concepts of stroke imaging and review common stroke mimics
- ☐ Recognize missed diagnoses and imaging pearls in the head and neck
- ☐ Discuss pertinent differential diagnoses of common neuro-radiologic disease processes
- ☐ Review important nuclear imaging techniques relevant to the practice of neuroradiology
- ☐ Extend your skills beyond image interpretation

SPEAKERS

PROGRAM DIRECTORS

SUYASH MOHAN, MD

COURSE DIRECTOR

Associate Professor of Radiology & Neurosurgery
Director, Neuroradiology Clinical Research Division

J. ERIC SCHMITT, MD, PhD

ASSOCIATE COURSE DIRECTOR

Assistant Professor of Radiology & Psychiatry

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA

All faculty are affiliated with the Perelman School of Medicine at the University of Pennsylvania, Philadelphia PA

Linda J. Bagley MD

Associate Professor of Radiology

Alvand Hassankhani, MD

Assistant Professor of Clinical Radiology

Michael J. Hoch, MD

Assistant Professor of Clinical Radiology

Steven C. Horii, MD

Professor of Radiology
Director, Medical Informatics
Division of Abdominal Radiology

Robert W. Hurst, MD

Professor of Radiology
Professor of Neurosurgery

Robert M. Kurtz, MD

Assistant Professor of Clinical Radiology

Jillian W. Lazor, MD

Assistant Professor of Clinical Radiology

Laurie A. Loevner, MD

Professor of Radiology, Neurosurgery,
Otorhinolaryngology & Ophthalmology
Chief, Division of Neuroradiology

Alexander C. Mamourian, MD

Professor Emeritus of Radiology

Seyed Ali Nabavizadeh

Assistant Professor of Radiology

Ilya M. Nasrallah, MD, PhD

Assistant Professor of Radiology

Bryan A. Pukenas, MD

Assistant Professor of Radiology
Assistant Professor of Neurosurgery

Deepak M. Sampathu, MD, PhD

Assistant Professor of Clinical Radiology

Janet R. Reid, MD, FRCPC

Associate Professor of Clinical Radiology
Children's Hospital of Philadelphia & Penn Medicine
Chief of Radiology Education

Piya V. Saraiya, MD

Associate Professor of Clinical Radiology

Mary H. Scanlon, MD, FACP

Professor of Clinical Radiology
Vice Chair of Education
Residency Program Director

Erin Schwartz, MD, FACP

Associate Professor of Radiology
Children's Hospital of Philadelphia & Penn Medicine
Clinical Director of Magnetoencephalography

Neda Sedora-Roman, MD

Assistant Professor of Clinical Radiology

Karuna Shekdar, MD

Assistant Professor of Clinical Radiology
Children's Hospital of Philadelphia & Penn Medicine

Jae W. Song, MD, MS

Assistant Professor of Radiology

Joel M. Stein, MD, PhD

Assistant Professor of Radiology

Arastoo Vossough MD, PhD

Associate Professor of Radiology
Children's Hospital of Philadelphia & Penn Medicine
Director, Neuroradiology Medical Image Analysis
Laboratory

Jeffrey B. Ware, MD

Assistant Professor of Radiology

Ronald L. Wolf MD, PhD

Associate Professor of Radiology

John H. Woo, MD, PhD

Associate Professor of Radiology

GUEST SPEAKER

Hugh D. Curtin, MD, FACP

Professor of Radiology
Harvard Medical School
Chief of Radiology
Massachusetts Eye and Ear
Boston, Massachusetts



MEETING LOCATION

Perelman Center for Advanced Medicine
3400 Civic Center Boulevard
Philadelphia, PA 19104

All lectures will be given in the Rubenstein Auditorium in the Smilow Center for Translational Research. Participants will find it easiest to enter through the Perelman Center for Advanced Medicine (PCAM) located at 3400 Civic Center Boulevard. Our meeting space is unique and offers attendees access to a dual-learning environment not typically available at most traditional CME courses. Attendees may choose to listen to lectures in the auditorium for a more traditional experience or sit in the lounge directly outside the auditorium where lectures will be broadcasted live on the monitor. We want our attendees to be comfortable and learn in the way that fits best for their needs. This space allows us to do that.

CONFERENCE HOTEL TRANSPORTATION & PARKING

The Study at University City is eight miles from Philadelphia International Airport (PHL) serviced by Uber, Lyft, taxi, or rail. If you are taking the Amtrak or Philadelphia Regional Rails, 30th Street Station is just one mile from the hotel. Overnight valet parking is available for \$25/night for registered hotel guests.

We encourage you to look at the online course website outlining several transportation and parking options whether you are commuting daily or looking for alternative options moving between The Study and course each day.

SCHEDULE

SEPTEMBER 7, 2019

- 6:45 Registration/Continental Breakfast
- 7:20 Opening Remarks
Laurie A. Loevner, MD
- 7:25 Course Overview
Suyash Mohan, MD
J. Eric Schmitt, MD, PhD

ANATOMY OF THE NEURAXIS

- 7:30 Basic Neuroanatomy: Where is the Central Sulcus? (CT, MR)
Suyash Mohan, MD
- 8:00 Cerebrovascular Anatomy (Arterial and Venous) (CT, MR)
Robert W. Hurst, MD
- 8:30 Practical Anatomy of the Spine and Spinal Cord (CT, MR)
Bryan A. Pukenas, MD
- 9:00 Imaging of the Brachial and Lumbosacral Plexus: A Painless Review (CT, MR)
Alvand Hassankhani, MD
- 9:30 Coffee Break

SPINE

- 9:45 Degenerative Disease of the Spine (CT, MR)
John H. Woo, MD, PhD
- 10:15 Spine Infections (XR, CT, MR)
Bryan A. Pukenas, MD
- 10:45 Post-Operative Spinal Imaging (CT, MR)
John H. Woo, MD, PhD
- 11:15 Bone Radiology for the Brain Radiologist (CT, MR)
Robert M. Kurtz, MD
- 11:45 Vascular Disorders of the Spine (A, CT, MR)
Neda Sedora-Roman, MD
- 12:15 SAM/ Q&A
- 12:30 Lunch (provided)

VASCULAR

- 1:15 Cerebral Aneurysms: Concepts and Controversies (A, CT, MR)
Linda J. Bagley, MD
- 1:45 Vascular Malformations of the Brain (A, CT, MR)
Seyed Ali Nabavizadeh, MD

- 2:15 Vascular Lesions of the Skull Base (A, CT, MR)
Neda Sedora-Roman, MD
- 2:45 Getting It Right: Imaging Diagnosis and Classification (Extracranial Vascular Abnormalities)
Janet R. Reid, MD, FRCPC
- 3:15 Break

STROKE/VASCULOPATHY

- 3:30 Imaging of Acute Stroke: An Evolving Landscape (CT, MR)
Piya V. Saraiya, MD
- 4:00 Endovascular Stroke Therapy (A, CT, MR)
Robert W. Hurst, MD
- 4:30 Imaging of Vasculopathies: RCVS, PRES, and Beyond (XR, US, CT, MR)
Jae W. Song, MD, MS
- 5:00 SAM/ Q&A
- 5:15 Adjourn

SEPTEMBER 8, 2019

- 7:00 Continental Breakfast

BRAIN I

- 7:30 An Approach to Adult Brain Tumors (CT, MR)
Jeffrey B. Ware, MD
- 8:00 Post-Therapy Imaging of Adult Brain Neoplasms (CT, MR)
Ronald L. Wolf, MD, PhD
- 8:30 Brain Tumor Mimics (CT, MR)
John H. Woo, MD
- 9:00 Advanced Surgical Planning: DTI tractography and fMRI (MR)
Ronald L. Wolf, MD, PhD
- 9:30 Break

BRAIN II

- 9:45 Toxic and Metabolic Encephalopathies (MR, CT)
Suyash Mohan, MD
- 10:15 An Approach to Imaging of Corpus Callosum and Its Varied Pathology (MR)
Alexander C. Mamourian, MD
- 10:45 Imaging in Epilepsy (MR, NM)
Joel M. Stein, MD, PhD
- 11:15 Basics of Neurodegenerative Diseases (CT, MR)
Ilya M. Nasrallah, MD, PhD

- 11:45 Infections of the CNS (CT, MR)
Suyash Mohan, MD
- 12:15 SAM/ Q&A
- 12:30 Lunch (provided)

TRAUMA

- 1:15 Imaging of Head Trauma (CT, MR, NM)
Joel M. Stein, MD, PhD
- 1:45 Maxillo-Facial Trauma (CT, MR)
Suyash Mohan, MD
- 2:15 Imaging of Cervical Spine Trauma (CT, MR)
J. Eric Schmitt, MD, PhD
- 2:45 Neuroimaging of Abusive Trauma (CT, MR, R)
Karuna Shekdar, MD
- 3:15 Break

EMERGENCY

- 3:30 Non-Traumatic Neurologic Emergencies (CT, MR)
Ronald L. Wolf, MD, PhD
- 4:00 Acute Neck: Infections and Inflammation (XR, US, CT, MR)
Karuna Shekdar, MD
- 4:30 SAM/Q&A
- 4:45 Recess

MCQ

- 5:15 MCQ Session Part 1
Suyash Mohan, MD
- 6:30 Adjourn

SEPTEMBER 9, 2019

- 7:00 Continental Breakfast

HEAD & NECK I

- 7:30 Orbital Imaging (MR, CT)
Laurie A. Loevner, MD
- 8:00 Basic Anatomy of the Temporal Bone (CT, MR)
Arastoo Vossough, MD, PhD
- 8:30 Disorders of the Temporal Bone (XR, CT, MR)
Arastoo Vossough, MD, PhD
- 9:00 Imaging of the Paranasal Sinuses (CT, MR)
Hugh D. Curtin, MD, FACR
- 9:30 Break

HEAD & NECK II

- 9:45 Spaces of the Head and Neck (XR, CT, MR)
Hugh D. Curtin, MD, FACR
- 10:15 Cervical Lymph Node Stations (MR, CT)
Jillian W. Lazor, MD
- 10:45 Larynx and Hypopharynx: Anatomy and Pathology (MR, CT)
Laurie A. Loevner, MD
- 11:15 Cystic Lesions of the Head and Neck (CT, MR)
Deepak M. Sampathu, MD, PhD
- 11:45 Viral-Induced Neoplasia of the Head and Neck (MR, CT)
Laurie A. Loevner, MD
- 12:15 SAM/ Q&A
- 12:30 Lunch (provided)

HEAD & NECK III

- 1:15 Pituitary and Parasellar Pathology: Pearls and Pitfalls (CT, MR)
Laurie A. Loevner, MD
- 1:45 Imaging of the Thyroid and Parathyroid Glands (MR, CT, NM, US)
Jillian W. Lazor, MD
- 2:15 Imaging of the Salivary Glands (CT, MR)
Mary H. Scanlon, MD, FACR
- 2:45 The Pineal Region (CT, MR)
Jeffrey B. Ware, MD
- 3:15 Break

HEAD & NECK IV

- 3:30 Imaging of the TMJ (XR, CT, MR)
Michael J. Hoch, MD
- 4:00 Head & Neck Top Five: Important Anatomy, Missed Diagnoses, and Imaging Pearls (CT, MR)
Hugh D. Curtin, MD, FACR
- 4:30 SAM/Q&A
- 4:45 Recess

MCQ II

- 5:15 MCQ Session Part 2
J. Eric Schmitt, MD, PhD
- 6:30 Adjourn

SEPTEMBER 10, 2019

- 7:00 Continental Breakfast

PEDIATRICS

- 7:30 Prenatal US Diagnosis of CNS Anomalies (US)
Steven C. Horii, MD
- 8:00 Congenital CNS Anomalies (MR)
Erin Schwartz, MD, FACR
- 8:30 Pediatric White Matter Disorders (MR, CT)
Arastoo Vossough, MD, PhD
- 9:00 Pediatric Brain Tumors (MR, CT)
Erin Schwartz, MD, FACR
- 9:30 Break

BRAIN & BODY

- 9:45 Pediatric Spine Tumors (CT, MR)
Karuna Shekdar, MD
- 10:15 Phakomatoses (MR, CT)
Arastoo Vossough, MD, PhD
- 10:45 Normal Variants — Don't Touch Lesions (MR, CT)
Seyed Ali Nabavizadeh, MD
- 11:15 Systemic Disease and their Effects on the Brain (MR, CT)
Ilya M. Nasrallah, MD, PhD
- 11:45 Imaging of Hydrocephalus: Old Questions, New Answers (CT, MR)
John H. Woo, MD, PhD
- 12:15 SAM/ Q&A
- 12:30 Lunch (provided)

BEYOND NEURORADIOLOGY

- 1:15 MR Artifacts (MR)
Alexander C. Mamourian, MD
- 1:45 CT Artifacts (CT)
Alexander C. Mamourian, MD
- 2:15 The New Milestones: Image-Guided Procedures (XR, CT)
Robert M. Kurtz, MD
- 2:45 Skills Beyond Image Interpretation
J. Eric Schmitt, MD, PhD
- 3:15 SAM/Q&A
- 3:30 Adjourn

ACCREDITATION STATEMENT



JOINTLY ACCREDITED PROVIDER
ACCREDITED BY THE ACCREDITATION COUNCIL FOR CONTINUING MEDICAL EDUCATION

In support of improving patient care, this activity has been planned and implemented by the Postgraduate

Institute for Medicine and Penn Medicine Department of Radiology. Postgraduate Institute for Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

PHYSICIAN CONTINUING MEDICAL EDUCATION

The Postgraduate Institute for Medicine designates this live activity for a maximum of 33 AMA PRA Category 1 Credit(s)[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Credit breakdown by day:

Day 1: 8.5
Day 2: 8.75
Day 3: 8.75
Day 4: 7.0

The total hours covered in each modality include:

MR: 27.5 | CT: 26.5 | XRay: 4.5 | US: 2.5
Angiography: 2.5 | Nuclear Medicine: 1.5

SELF-ASSESSMENT MODULES (SAMS)

Participants in this activity may earn up to 25 SAM credits, enough to meet the 3-year MOC requirement. SAM modules are completed through our meeting app using a Smart phone, tablet or laptop. Upon completion of a module, instant feedback and references for each question are automatically sent to the participant. A certificate stating the number of SAM credits earned is sent two weeks after the course.

QUESTIONS?

Call: 215-662-6982 | Email: cme@rad.upenn.edu

► DISCLOSURE OF CONFLICTS OF INTEREST

Postgraduate Institute for Medicine (PIM) requires instructors, planners, managers and other individuals who are in a position to control the content of this activity to disclose any real or apparent conflict of interest (COI) they may have as related to the content of this activity. All identified COI are thoroughly vetted and resolved according to PIM policy. PIM is committed to providing its learners with high quality activities and related materials that promote improvements or quality in healthcare and not a specific proprietary business interest of a commercial interest.

► DISCLOSURE OF UNLABELED USE

This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the FDA. The planners of this activity do not recommend the use of any agent outside of the labeled indications.

The opinions expressed in the educational activity are those of the faculty and do not necessarily represent the views of the planners. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications, and warnings.

► DISCLAIMER

Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this activity is not meant to serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed or suggested in this activity should not be used by clinicians without evaluation of their patient's conditions and possible contraindications and/or dangers in use, review of any applicable manufacturer's product information, and comparison with recommendations of other authorities.

► AMERICANS WITH DISABILITIES ACT

Event staff will be glad to assist you with any special needs (i.e. physical, dietary, etc.). Please contact Angela Scott at least two weeks prior to the live event at 215-662-6982 or via email at cme@rad.upenn.edu.

► MEETING MATERIALS

A link to download the course lecture PDFs will be sent to registered participants in the week leading up to the course. Participants are encouraged to download the PDFs to their phone, tablet or laptop prior to arrival.

Meeting App:

All other course materials are provided via our meeting app, **Penn Radiology**, available for download in the App Store and Google Play.

On the app, attendees can:

- View the course schedule
- Submit lecture questions in real-time using Live Q&A
- Complete self-assessment modules to earn SAM credits
- Access information about the meeting location, including activities and dining options.

In addition to the download link with all lecture slides, upon check-in, course registrants may request a flash drive with PDFs of the lecture slides. NOTE: a paper syllabus will not be available.

► COURSE CANCELLATION POLICY & TUITION REFUNDS

A full refund for the enrollment fee, less a \$100 administrative cost will be made upon receipt of a written request (via fax or email) if received by 5:00 pm on Friday, August 23, 2019. Refunds will not be made after this date.

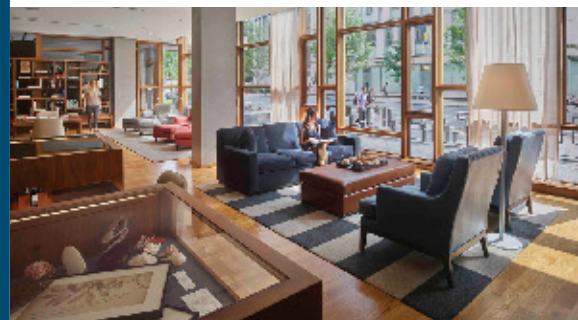
Penn Medicine's Department of Radiology reserves the right to cancel or postpone any activity due to unforeseen circumstances. In the unlikely event of cancellation or postponement, Penn Radiology will refund registration fees but will not be responsible for related costs or expenses to participants,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

► CME CERTIFICATES

Upon registering and completing the activity evaluation, you will be able to download your certificate from cmeuniversity.com. An email with instructions is sent on the last day of the course.



ACCOMMODA



THE STUDY AT UNIVERSITY CITY

www.thestudyatuniversitycity.com

20 S 33rd Street
Philadelphia, PA 19104
Hotel Direct: 215.387.1400

CUT-OFF DATE:

August 16, 2019

CHECK IN: 4:00 PM

CHECK OUT: 12:00 PM

HOTEL ROOM RESERVATIONS:

<http://bit.ly/TheStudy2019>

Group Code 5627768



REGISTRATION



ATIONS

The Study at University City is the newest of the University City hotels joining our area in late 2016. The hotel is located at the corner of 33rd and Chestnut Streets, and about a half mile walk to the meeting location. Penn Radiology has a limited block of traditional guest rooms at \$184 per night, single or double occupancy. Group rates will be offered three days before and three days after our meeting dates based on availability at the time of booking. Guests booking these rooms must be registered for the course. This rate does not include city and hotel occupancy taxes, currently 15.5%.

The hotel has a 24-hour fitness center with state-of-the-art Life Fitness equipment, 50" flat screen televisions with satellite TV channels and complimentary wireless high-speed internet in all guest rooms. The lobby offers complimentary wireless internet, newspapers and morning coffee daily.

Reservations may be made by phone, fax, or online at <http://bit.ly/TheStudy2019>. Be sure to use Group Code: 5627768 when booking online.

HOTEL CANCELLATION POLICY

All reservations must be guaranteed for the first night's room and tax. Individual attendees will be charged for one night's room and tax if they cancel within 24 hours of arrival. Cancellations made prior to 24 hours will not be penalized.



EXPLORE PHILADELPHIA

After a day of learning, take in the sites of Philadelphia as you explore our "City of Brotherly Love." Philadelphia offers art, culture, great restaurants and all around fun. Enjoy a September evening dining al fresco at one of the many BYOB's that call Philadelphia home.

Feel like you were sitting all day? There's nothing like running the steps of the Philadelphia Art Museum to see the Rocky statue or taking a jog along the Schuylkill River. Our city's bike sharing program, Indego, also offers another great way to see the city. Cyclists can walk up to any Indego station and check out a bike for quick trips around the city 24-hours a day. After your ride is complete, return your bike to the nearest station.

Early enrollment deadline: July 12, 2019 (11:59pm)

To register for this conference:

► **ONLINE:** Visit PennMedicine.org/RadiologyCME

► **MAIL:** (USD only)

Penn Radiology CME
3400 Spruce St/1 Silverstein, Suite 130
Philadelphia, PA 19104-4238

Upon receipt of payment, an email confirmation is sent. Be sure to include your preferred email address when registering. Your email is used to send instructions for downloading meeting materials, the meeting app, logging on and completing SAMs.

Name: _____

Affiliation: _____

Address: _____

City, State, Zip: _____

☐ This is my home address ☐ This is my business address

Phone: _____ Fax: _____

Email: _____

Conference Fees (Fees listed in USD)

FULL COURSE REGISTRATION

- | | |
|---|------------|
| ☐ Early Registration until 7/12/2019 | \$925.00 |
| ☐ Registration after 7/12/2019 | \$1,000.00 |

SPECIAL RATE

- | | |
|---|----------|
| ☐ Early Registration until 7/12/2019 | \$825.00 |
| ☐ Registration after 7/12/2019 | \$900.00 |

NON-PENN MEDICINE RESIDENTS & FELLOWS RATE

- | | |
|---|----------|
| ☐ Early Registration until 7/12/2019 | \$625.00 |
| ☐ Registration after 7/12/2019 | \$700.00 |

WEEKEND RATE (SATURDAY AND SUNDAY ONLY)

- ☐ \$600.00

Special Rate

The Special Rate is available to VA/Active Military, Physicians outside the continental USA, Penn Medicine Network Providers, and Retired physicians.

Residents/Fellows/PA-C/NP/RN

This rate is available to current residents & fellows in training. A letter from your institution's program director, confirming your status, must be emailed to cme@rad.upenn.edu by Friday, August 23, 2019. Penn Medicine Residents and Fellows, please contact the Radiology CME Office at cme@rad.upenn.edu with any registration questions. Daily sign-ins will be required at the course. Additional promotional discounts may not be applied to this rate.

2-Day Weekend Rate (Back to Basics & Emergency Neuroradiology)

For physicians unable to attend the full program, a special two-day weekend rate (Saturday and Sunday only) will allow you to brush up on your basic neuroanatomy and review key concepts in emergency neuroradiology, vascular imaging, stroke, and common disorders of the brain and spine. Additional promotional discounts may not be applied to this rate.

Loyalty Reward

A \$100 discount off the Physician fee is available to anyone who attended a UPENN CME course in 2018 and paid the full Physician Rate. To obtain this discount enter **REPEAT18** (case sensitive) when prompted for the CME Code. (Registrations will be verified.)

PENN RADIOLOGY CME

2019

- ▶ **JULY 8-12**
**41st Annual Diagnostic Imaging:
On Cape Cod**
Chatham Bars Inn
Chatham, Massachusetts
- ▶ **JULY 29-AUGUST 2**
Around the Clock Imaging
Fairmont Pacific Rim
Vancouver, British Columbia, Canada
- ▶ **SEPTEMBER 7-10**
**Diagnosis in the Neuraxis:
Comprehensive Review of Clinical
Neuroradiology**
Perelman Center for Advanced Medicine
Philadelphia, PA
- ▶ **OCTOBER 14-17**
**Oncologic Imaging: What the
Radiologist Needs to Know**
Fairmont Hamilton Princess &
Beach Club
Hamilton, Bermuda

2020

- ▶ **JANUARY 5-10**
**Breast and Body Imaging
at the Beach**
Andaz Costa Rica Resort at
Peninsula Papagayo
Guanacaste, Costa Rica
- ▶ **MARCH 23-27**
**Pearls, Pitfalls & Protocols:
Spring Imaging Update**
Disney's Grand Floridian Resort & Spa
Lake Buena Vista, Florida
- ▶ **JULY 6-10**
**Diagnostic Imaging:
Back to the Vineyard**
The Harbor View Hotel
Edgartown, Massachusetts
- ▶ **SEPTEMBER 18-21**
**Diagnosis in the Neuraxis:
Comprehensive Review of Clinical
Neuroradiology**
Perelman Center for Advanced Medicine
Philadelphia, PA

To see more Penn Radiology courses, visit our calendar

PennMedicine.org/RadiologyCME



Penn Medicine
Department of Radiology

Continuing Medical Education
3400 Spruce Street, 1 Silverstein
Philadelphia, PA 19104-4238

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Bellmawr, NJ 08031

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