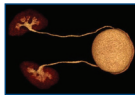
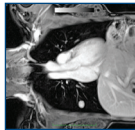




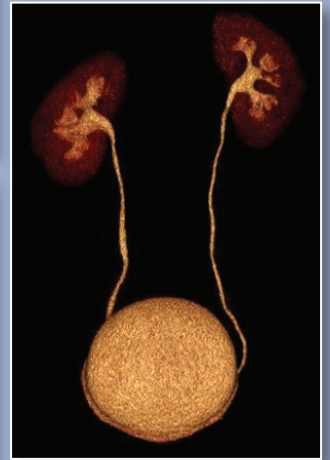
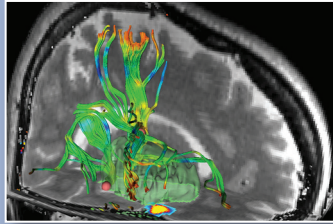
Harvard Medical School  
 Department of Continuing Education  
 PO Box 825  
 Boston, MA 02117-0825  
[www.cme.hms.harvard.edu](http://www.cme.hms.harvard.edu)



MRI/CT Update  
 October 17-21, 2011

[www.radcme.harvard.edu](http://www.radcme.harvard.edu)

# MRI / CT UPDATE



## October 17-21, 2011

The Fairmont Copley Plaza  
 Boston, Massachusetts

### COURSE DIRECTORS

Hiroto Hatabu, MD, PhD  
 Srini Mukundan, PhD, MD  
 Stuart G Silverman, MD



Harvard Medical School  
 Department of Continuing Education



Brigham and Women's Hospital  
 Department of Radiology

## COURSE DESCRIPTION

This is the 34th offering of our highly acclaimed annual, postgraduate course that emphasizes clinical MRI and CT of the entire body, including neuroradiology. It is designed for practitioners using MRI and multi-detector CT, and those who wish to learn the latest applications from experts. The basic format of the course is didactic lecture style. The first two and a half days of the course (Monday, Tuesday, and Wednesday morning) cover Body, including, chest, abdomen, pelvis, cardiovascular, breast and musculoskeletal imaging; second two days (Wednesday afternoon, Thursday and Friday morning) cover Neuro Imaging. The Neuro Imaging curriculum spans the complete spectrum from spine, to brain, to head and neck/ENT. The Neuro Imaging curriculum is directed toward the practicing radiologist, with emphasis on the translation of advanced techniques and technologies to the clinical domain. Each morning session (Tuesday-Friday) will begin with a case conference during the continental breakfast. One can register for the entire five-day course (including the Body and Neuro sections) or only for the Body or Neuro Imaging components.

## OBJECTIVES

At the conclusion of this course, participants will be provided with

- Up-to-date information on the latest MRI and CT techniques for both body and neuroradiologic applications, many of which will be directly applicable in the clinic.
- Sufficient background to manage an MRI or CT facility and gain insight into the way experienced radiologists perform and interpret these examinations.
- Focus-sessions on Spine and ENT imaging will cover major clinical gamuts in these disciplines

## COURSE DIRECTORS

**Hiroto Hatabu, MD, PhD:** Associate Professor of Radiology, Harvard Medical School; Clinical Director, MRI Program, Medical Director, Center for Pulmonary Functional Imaging, Director, MRI Clinical Fellowship, Department of Radiology, Brigham and Women's Hospital

**Srinivasan Mukundan, Jr, PhD, MD:** Associate Professor of Radiology, Harvard Medical School; Section Head of Neuroradiology, Brigham and Women's Hospital

**Stuart G Silverman, MD, FACR:** Professor of Radiology, Harvard Medical School; Director, Division of Abdominal Imaging and Intervention, Director, CT Scan, Brigham and Women's Hospital

## GUEST FACULTY

**Warren B Gefter, MD:** Professor of Radiology, Chief, Thoracic Imaging Section, Associate Chair, Department of Radiology, Hospital of the University of Pennsylvania, Philadelphia, PA

**Anwar Padhani, MB, BS, FRCP, FRCR:** Consultant Radiologist and Head of Imaging Research, Paul Strickland Scanner Centre, Mount Vernon Cancer Centre, Middlesex, United Kingdom

**Caroline Reinhold, MD, MSc, FRCPC:** Professor of Radiology, Gynecology and Gastroenterology, McGill University Health Center; Director of the Magnetic Resonance Unit, Research Director, Radiology Department, McGill University, Montreal, Canada, Medical Director, Oncology, Synarc Inc

## HARVARD MEDICAL SCHOOL FACULTY

**Michael A Blake, MD:** Assistant Professor of Radiology; Division of Abdominal Imaging, Massachusetts General Hospital

**Charles H Cho, MD, MBA:** Instructor in Radiology; Neuroradiology Section, Brigham and Women's Hospital

**Mary E Cunnane, MD:** Instructor in Radiology; Assistant in Radiology, Massachusetts Eye and Ear Infirmary; Assistant in Radiology, Division of Neuroradiology, Massachusetts General Hospital

**Hugh D Curtin, MD:** Professor of Radiology; Chief of Radiology, Massachusetts Eye and Ear Infirmary

**Marco Ferrone, MD:** Instructor in Orthopedic Surgery; Division of Orthopedics, Brigham and Women's Hospital and Dana-Farber Cancer Institute

**Glenn C Gaviola, MD:** Instructor in Radiology; Division of Musculoskeletal Imaging and Intervention, Brigham and Women's Hospital

**Victor H Gerbaudo, PhD:** Lecturer on Radiology; Director, Nuclear Medicine and Molecular Imaging Program; Senior Administrative Director, Noninvasive Cardiovascular Imaging and Cardiac Stress Programs, Brigham and Women's Hospital

**Ritu R Gill, MD:** Instructor in Radiology; Division of Thoracic Radiology, Brigham and Women's Hospital

**Leena M Hamberg, PhD:** Associate Professor of Radiology; Radiologic Physicist, Brigham and Women's Hospital

**Roger Han, MD:** Instructor in Radiology; Division of Musculoskeletal Imaging, Brigham and Women's Hospital

**Mukesh G Harisinghani, MD:** Associate Professor of Radiology; Division of Abdominal Imaging, Massachusetts General Hospital

**Galen V Henderson, MD:** Assistant Professor of Neurology; Director of Critical Care and Emergency Neurology, Brigham and Women's Hospital

**Liangge Hsu, MD:** Assistant Professor of Radiology; Neuroradiology Section, Brigham and Women's Hospital

**Andetta R Hunsaker, MD:** Assistant Professor of Radiology; Director, Division of Thoracic Radiology, Brigham and Women's Hospital

**Francine L Jacobson, MD:** Assistant Professor of Radiology; Division of Thoracic Radiology, Brigham and Women's Hospital

**Roman A Klufas, MD:** Instructor in Radiology; Neuroradiology Section, Brigham and Women's Hospital

**Raymond Y Kwong, MD, MPH:** Assistant Professor of Medicine; Director of Cardiac Magnetic Resonance Imaging; Brigham and Women's Hospital

**Thomas C Lee, MD:** Instructor in Radiology; Neuroradiology Section, Brigham and Women's Hospital

**Theresa C McLoud, MD:** Professor of Radiology; Director of Education; Associate Radiologist-in-Chief, Division of Thoracic Imaging, Massachusetts General Hospital

**Koenraad J Morteale, MD:** Associate Professor of Radiology; Associate Director, Division of Abdominal Imaging and Intervention, Director, Abdominal and Pelvic MRI, Medical Director, CME, Brigham and Women's Hospital

**Mizuki Nishino, MD:** Assistant Professor of Radiology; Brigham and Women's Hospital and Dana-Farber Cancer Institute

**Sughra Raza, MD:** Assistant Professor of Radiology; Associate Director Breast Imaging, Director, Women's Imaging Program, Director, Clinical Breast MRI, Brigham and Women's Hospital

**Cheryl A Sadow, MD:** Instructor in Radiology; Division of Abdominal Imaging and Intervention, Brigham and Women's Hospital

**Dushyant Sahani, MD:** Associate Professor of Radiology; Director of CT, Massachusetts General Hospital

**Nehal Shah, MD:** Instructor in Radiology; Division of Musculoskeletal Radiology, Brigham and Women's Hospital

**Kirstin M Small, MD:** Instructor in Radiology; Division of Musculoskeletal Imaging, Brigham and Women's Hospital

**Stacy E Smith, MD:** Assistant Professor of Radiology; Section Head and Barbara Weissman Chair, Musculoskeletal Imaging, Brigham and Women's Hospital

**Aaron Sodickson, MD, PhD:** Assistant Professor of Radiology; Director of Emergency Radiology, Brigham and Women's Hospital

**Clare M C Tempany, MD:** Professor of Radiology; Ferenc Jolesz, Chair of Radiology Research, Vice Chair, Radiology Research, Director, Clinical Focused Ultrasound, Department of Radiology, Brigham and Women's Hospital

**Barbara N Weissman, MD:** Professor of Radiology; Vice Chair of Radiology, Radiology Residency Program Director, Brigham and Women's Hospital

**Geoffrey S Young, MD:** Assistant Professor of Radiology; Neuroradiology Section, Brigham and Women's Hospital

**Amir A Zamani, MD:** Associate Professor of Radiology; Neuroradiology Section, Brigham and Women's Hospital

## MONDAY, OCTOBER 17

7:00 Registration/Continental Breakfast

### BODY IMAGING

#### THORACIC IMAGING (INCLUDING BREAST AND HEART)

*Moderator: Dr Hatabu*

7:55 Morning Announcements

8:00 Radiation Dose Reduction

*Sodickson*

8:30 PET/CT Imaging of Lung Cancer  
Aggressiveness

*Gerbaudo*

9:00 Pulmonary Embolism

*Hunsaker*

9:30 COPD

*Jacobson*

10:00 Questions and Answers

10:10 Coffee Break

10:30 Thoracic MRI: Promises, Problems,  
and Prospects

*Gefter*

11:00 Cardiac MRI

*Kwong*

11:30 Breast MRI

*Raza*

12:00 Questions and Answers

12:15 Lunch Recess

1:30 HRCT in Diffuse Lung Disease:

From the Brain to the Computer

*Gefter*

2:00 Smoking Related Lung Disease

*Hatabu*

2:30 The Troublesome GGO:

Bringing Clarity to these Hazy Lesions

*Gefter*

3:00 Questions and Answers

3:10 Break

3:30 Response Evaluation of Lung Cancer

*Nishino*

4:00 Lung Biopsy and Tissue Sampling for  
Targeted Therapy

*Gill*

4:30 Lung Cancer Screening: An Update

*McLoud*

5:10 Questions and Answers

5:15 Adjourn

## TUESDAY, OCTOBER 18

7:00 Continental Breakfast

7:25 Welcome and Introduction

### PELVIS I

*Moderator: Dr Silverman*

7:30 Cases

*Sadow*

8:00 Practical MRI Protocols for the  
Abdomen and Pelvis

*Harisinghani*

8:30 MRI of the Adnexa, Making a More  
Specific Diagnosis

*Reinhold*

9:00 MRI of Anorectal Fistulae

*Harisinghani*

9:30 MRI of Uterine Anomalies

*Reinhold*

10:00 Questions and Answers

10:10 Coffee Break

## PELVIS II

10:30	MRI of Uterine Malignancies	Reinhold
11:00	CT of Bowel Ischemia	Mortelet
11:30	MRI of the Prostate Gland	Tempany
12:00	Questions and Answers	
12:15	Lunch Recess	

## ABDOMEN I

1:30	MRI of the Biliary Tree	Reinhold
2:00	CT/MRI of the Cystic Pancreatic Masses	Mortelet
2:30	CT/MRI of Focal Liver Lesions: Detection Characterization and Surgical Planning	Sahani
3:00	Questions and Answers	
3:10	Coffee Break	

## ABDOMEN II

3:30	Management of the Incidental Renal Mass	Silverman
4:00	CT/MRI of the Adrenal Gland	Blake
4:30	CT Urography	Silverman
5:00	Questions and Answers	
5:10	Adjourn	

## WEDNESDAY, OCTOBER 19

7:00 Continental Breakfast

### MUSCULOSKELETAL IMAGING

7:10 Morning Announcements *Mukundan*

*Moderator: Dr Weissman*

7:15 Morning Cases - Bone *Han*

### Lower Extremity

7:45 Foot and Ankle *Smith*

8:30 Knee *Gaviola*

9:15 MRI Technical Considerations and Protocols *Shah*

10:00 Coffee Break

### Upper Extremity

10:15 Shoulder *Small*

11:00 Elbow *Smith*

11:30 CT/MRI of Arthritis *Weissman*

12:00 Questions and Answers

12:15 Lunch Recess

**1:00 Registration for Neuro Imaging Portion Only**

### SPINE IMAGING

*Moderator: Dr Mukundan*

1:30 Lumbar Spine Lexicon *Mukundan*

2:15 CT Guided Spine Intervention *Cho*

3:00 Coffee Break

3:15 Surgical Correlation: Malignant Spinal Disease

Surgery, How Imaging Helps Me *Ferrone*

Spine *Klufas*

4:30 Bloodpatches and Biopsies *Lee*

5:00 Questions and Answers

5:10 Adjourn

## THURSDAY, OCTOBER 20

7:00 Continental Breakfast

### NEURORADIOLOGY GAMUTS

7:10 Morning Announcements

*Moderator: Dr Mukundan*

7:15 Morning Cases - Neuro *Lee*

8:00 Demyelinating Diseases *Zamani*

8:45 Imaging of Head Trauma *Klufas*

9:30 Coffee Break

9:45 Dementia *Zamani*

10:30 CNS Infections *Hsu*

11:15 Clinical Correlation: Acute Stroke,  
How Imaging Helps *Henderson*

12:00 Questions and Answers

12:15 Lunch Recess

### ADVANCED MRI TECHNIQUES

*Moderator: Dr Young*

1:30 Basics of Advanced Brain Tumor Imaging *Young*

2:00 Whole Body DWI - How I do it and  
What it Tells Me *Padhani*

2:45 Radiation Dose in CT Brain Perfusion Imaging *Hamberg*

3:15 Coffee Break

3:30 Multiparametric Functional Imaging Assessment of  
Therapy Response *Padhani*

4:15 Gadolinium Based Contrast Agents 2011 *Mukundan*

5:00 Adjourn

## FRIDAY, OCTOBER 21

7:00 Continental Breakfast

### ENT IMAGING

7:25 Morning Announcements *Mukundan*

*Moderator: Dr Lee*

7:30 Morning Cases - Head and Neck *Cunnane*

8:15 Landmarks in Head and Neck Cancer *Curtin*

9:00 Incidentalomas of the Thyroid and  
Parotid Glands *Cunnane*

9:30 Parapharyngeal and Masticator Spaces *Curtin*

10:15 Coffee Break

10:30 Temporal Bones *Lee*

11:15 Larynx *Curtin*

11:45 Questions and Answers

12:00 Adjourn

Please note: Program changes/substitutions may be made without notice.

## REGISTRATION INFORMATION

For specific tuition fees, see the registration form. All foreign payments must be made by a draft on a United States Bank or by Visa or Mastercard. If paying by check, please make payable to Harvard Medical School and mail with completed registration form to **Harvard Medical School Department of Continuing Education, PO Box 825, Boston, MA 02117-0825**. If paying by credit card, please register online at [www.cme.hms.harvard.edu/courses/mrict](http://www.cme.hms.harvard.edu/courses/mrict). **Telephone, fax or mail-in registration with credit card payment is not accepted.** Inquiries should be directed to the above address, made by phone: (617) 384-8600, Monday Friday, 10 AM to 4 PM (EST), or by email: [hms-cme@hms.harvard.edu](mailto:hms-cme@hms.harvard.edu). Upon receipt of registration a confirmation will be mailed to the address listed on the form. Upon receipt of your registration form an email confirmation from the HMS-DCE office will be sent to you. Therefore, be sure to include an email address that you check daily/frequently. Your email address is used for critical information about the course including; registration confirmation, course evaluation and certificate.

## ACCREDITATION

Harvard Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Harvard Medical School designates this activity for a maximum of the following *AMA PRA Category 1 Credits™*.

- Full Course - 36
- Body Imaging - 19.75
- Neuro Imaging - 16

Physicians should only claim credit commensurate with the extent of their participation in the activity.

## REFUND POLICY

A handling fee of \$60 is deducted for cancellation. Refund requests must be received by mail or fax one week prior to the course. No refunds will be made thereafter.

## ONLINE INFORMATION

To register or view course information online, visit Harvard Medical School Department of Continuing Education's home page:

[www.cme.hms.harvard.edu/courses/mrict](http://www.cme.hms.harvard.edu/courses/mrict)

To ensure proper registration, please add the first three characters of the source code found at the bottom of the registration form.

## ACCOMMODATIONS / COURSE LOCATION

Hotel rooms in Boston are limited. You are urged to make your reservations early. A limited number of rooms have been reserved at the **Fairmont Copley Plaza**, (800) 441-1414 or (617) 267-5300 until **September 25, 2011**. Please specify that you are enrolled in the **MRI/CT Update** course to receive a reduced room rate. You may also reserve your hotel reservations online via the dedicated booking website: <https://resweb.passkey.com/go/mrictupdate>

**MRI/CT Update**  
October 17-21, 2011

**Class # 311050**

### Full Course

Physicians \$895 (USD)  
Residents\*/Fellows in Training\*/Technologists;  
Allied Health Professionals: \$550 (USD)

### Body Imaging

Physicians \$695 (USD)  
Residents\*/Fellows in Training\*/Technologists;  
Allied Health Professionals: \$450 (USD)

### Neuro Imaging

Physicians \$675 (USD)  
Residents\*/Fellows in Training\*/Technologists;  
Allied Health Professionals: \$425 (USD)

*\*A letter of verification from Department Chair must accompany registration form for a reduced fee.*

### CHECK IS ENCLOSED

Please make your check payable to *Harvard Medical School* and mail it with this registration form to: **HMS-DCE, PO Box 825, Boston, MA 02117-0825**

**PLEASE PRINT CLEARLY - All Fields Required**

First Middle Initial Last

Degree

Street

City State Zip Code

Daytime Phone Fax Number

PLEASE NOTE: Your email address is used for critical information about the course including; registration confirmation, course evaluation and certificate. Please be sure to include an email address you check daily or frequently.

Email Address  Please check if you wish to be excluded from receiving email notices of future HMS-DCE programs

Professional School Attended Year of Graduation

Profession

Primary Specialty (Physicians Only) Board Certified: Yes \_\_\_ No \_\_\_

Organization Affiliation

Registrations paid by credit card may be made online at:  
**[www.cme.hms.harvard.edu/courses/mrict](http://www.cme.hms.harvard.edu/courses/mrict)**

**Online Registrants** - to ensure proper registration, please add the first three characters of the source code found here: **Source Code: X Z Z**