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# 2005

September 26 - September 30, 2005  
The Royal Sonesta Hotel, Cambridge, Massachusetts

## NEURORADIOLOGY

CLINICAL FUNCTIONAL MRI AND SPECTROSCOPY

**Program Directors**

R. Gilberto Gonzalez, MD

Joshua A. Hirsch, MD

Michael Lev, MD

Pamela Schaefer, MD

*September 26 - September 28, 2005*

## HEAD AND NECK RADIOLOGY

*September 29 - September 30, 2005*

**Program Directors**

Hugh Curtin, MD

Alfred Weber, MD



Harvard Medical School  
Department of Continuing Education



Massachusetts General Hospital  
Department of Radiology

## Course Description

The educational objective of this intensive five-day course is to provide a comprehensive review of basic and advanced principles in the management, acquisition and interpretation of structural and functional imaging studies of the brain, spine, and extra-cranial head and neck. This year's highlights include symposia on pediatric neuroradiology, spinal disease, trauma, acute stroke and MR spectroscopy.

- At the conclusion of the program, the participant will be able to:
- select the most appropriate and cost effective imaging studies for specific clinical problems of the central nervous system and head and neck
  - provide a full range of diagnostic possibilities for simple and complex imaging problems of the CNS and head and neck
  - integrate the most current pathophysiological and pathological concepts into the interpretation of these imaging studies

New concepts and recent development in the diagnostic approach to clinical problems using basic and advanced Magnetic Resonance Imaging (MRI), Computed Tomography (CT), angiography, fMRI, MRS, PET, and neurovascular sonography will be discussed by leaders in the field. The course is designed for beginning and experienced radiologists and neuroradiologists in clinical practice.

This course should be of special interest to those who plan to take the examination for the Certificate of Added Qualification (CAQ) in neuroradiology which is sponsored by the American Board of Radiology. It will also be of interest to neurosurgeons, neurologists, otolaryngologists, osteopaths, neuroscience clinicians, residents, technologists, technical representatives, health planners, and residents preparing for Board examinations in radiology, neurology or neurosurgery.

This will be a unique opportunity for the participants to enhance their skills and evaluate some of the latest advances in the field of radiology. A renowned guest faculty, well known for their extensive contributions in neuroradiology, head and neck radiology, functional MRI and MR spectroscopy will join distinguished faculty from Harvard Medical School at the Massachusetts General Hospital, the Massachusetts Eye and Ear Infirmary and Children's Hospital in presenting this year's up to date overview. A comprehensive syllabus will be provided as a permanent record of the course.

### ACCREDITATION

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

Harvard Medical School designates the Combined Course for a maximum of 39 category 1 credits, Neuroradiology for a maximum of 28 category 1 credits, and Head and Neck Radiology for a maximum of 15.5 category 1 credits towards the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the educational activity.

The American Medical Association has determined that physicians not licensed in the US who participate in this CME course are eligible for AMA PRA category 1 credits.

## Registration Information

For specific tuition fees, see the registration form. All foreign payments must be made by a draft from a United States bank or by Visa or MasterCard. If paying by check, make it payable to Harvard Medical School and mail with the completed registration form to **Harvard Medical School, Department of Continuing Education, P.O. Box 825, Boston, MA 02117-0825**. If paying by credit card, fax the completed registration form to (617) 384-8686, register online at [www.cme.hms.harvard.edu](http://www.cme.hms.harvard.edu) or mail it to the above address. **Telephone registrations are not accepted.** Inquiries should be directed to the above address; made by phone to 617-384-8600, Monday-Friday 10 am to 4 pm EST; or by email to: [hms-cme@hms.harvard.edu](mailto:hms-cme@hms.harvard.edu). Upon receipt of registration a confirmation letter will be mailed to the address listed on the form.

### ONLINE INFORMATION

To register or view course information online, visit our home page: [www.cme.hms.harvard.edu](http://www.cme.hms.harvard.edu)

### REFUND POLICY

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

### COURSE LOCATION

All sessions will be held at **The Royal Sonesta Hotel**, 5 Cambridge Parkway, Cambridge, MA 02142. Telephone: 617-806-4200

### ACCOMMODATIONS

Hotel rooms in Boston and Cambridge are limited. You are urged to make reservations early. A limited number of rooms have been reserved at **The Royal Sonesta Hotel** until **September 5, 2005**. Please specify that you are enrolled in the course to receive a reduced room rate. A map of Boston and Cambridge, listing local hotels, will be sent with your confirmation of enrollment.

### TRAVEL

For information on reduced airfare, call Harvard Medical School, Department of Continuing Education at 617-384-8600, Monday-Friday, 10am to 4pm EST.

# Course Schedule

## NEURORADIOLOGY, CLINICAL fMRI AND SPECTROSCOPY PROGRAM DIRECTORS:

R. GILBERTO GONZALEZ, JOSHUA A. HIRSCH, MICHAEL LEV, PAMELA SCHAEFER

SEPTEMBER, SUNDAY, 25, 2005 5:00pm-7:30pm Evening Registration The Royal Sonesta

### MONDAY, SEPTEMBER 26, 2005

Registration 7:00 a.m. - 8:15 a.m. - 2nd floor - West Towers Continental Breakfast

#### PARTICIPATING WORKSHOPS AND MINI REFRESHER COURSE

7:30-8:15AM	Workshops a. Carotid Ultrasound-Clinical Basics b. Parallel MRI c. Head MDCT - Pearls	Romero Wald Lev
8:15-9:00	MRI Brain Anatomy	Naidich
<i>SYMPOSIUM ON CEREBROVASCULAR DISEASE</i>		
9:00-9:30	Stroke Basics & Conventional Neuroimaging	Schaefer
9:30-10:00	Advanced Imaging of Acute Stroke	Lev
10:00-10:30	Emerging Stroke Therapy Imaging: CT vs MRI	Gonzalez
10:30-10:45	Questions	
10:45-11:00	Coffee Break	
11:00-11:30	Carotid Imaging – Ultrasound, CT, and MR	Lev
<i>MINI-SYMPOSIUM ON NEUROTRAUMA</i>		
11:30-12:00	Trauma 1	Gean
12:00-12:30	Trauma 2	Gean
12:30-12:45	Questions	
12:45-2:00	LUNCH BREAK	
<i>TOPICS IN NEUROIMAGING</i>		
2:00-2:45	Aging Brain and Dementias	Huckman
2:45-3:15	Intracranial Infection	Schaefer
3:15-3:45	Questions	
3:45-4:00	Break	
4:00-4:30	Pediatric Emergencies	Grant
4:30-5:00	Seizure Imaging	Mullins
5:00-5:15	Questions	
5:15-5:45	Case Review - Brain 1	Gonzalez

### TUESDAY, SEPTEMBER 27, 2005

Continental Breakfast

7:30-8:15AM	Workshops a. High resolution MRI b. Head MDCT- Pearls c. Practical Spine Imaging: Multidetector CT and MRI	Naidich Lev Mullins
8:15-8:45	Anatomy	Naidich
<i>SYMPOSIUM ON BRAIN TUMORS</i>		
8:45-9:15	Radiologic Classification of Astrocytomas <i>JUAN M. TAVERAS ANNUAL LECTURE</i>	Smirniotopoulos
9:15-9:45	Biologic Behavior of Brain Tumors	Castillo
9:45-10:15	Meningeal Neoplasms	Smirniotopoulos
10:15-10:30	Questions	
10:30-10:45	Break	
10:45-11:15	Nonglial Neoplasms	Smirniotopoulos
11:15-11:45	Neuroimaging and the Neuro-oncologist	Henson
11:45-12:00	Questions	
12:00-1:30	LUNCH BREAK	

1:30-2:00 Pediatric Brain Tumors *Young-Poussaint*

*TOPICS IN NEUROIMAGING*

2:00-2:30 Clinical Brain Activation/DTI *Buchbinder*  
2:30-2:45 Questions  
2:45-3:00 Break

*MINISYMPOSIUM ON HEMORRHAGE*

3:00-3:30 Intracranial Hemorrhage *Castillo*  
3:30-4:00 Cerebral Aneurysms and AVM's *Rabinov*  
4:00-4:30 Typical and atypical developmental venous anomalies *Castillo*  
4:30-4:40 Questions  
4:40-5:30 Case Presentations, Brain 2 *Lev*

**WEDNESDAY, SEPTEMBER 28, 2005**

Continental Breakfast

*PARTICIPATING WORKSHOPS AND MINI REFRESHER COURSES*

7:30-8:15AM Workshops  
a. Practical Spine Imaging: Multidetector CT and MRI *Mullins*  
b. MR Spectroscopy – Case Discussion *Castillo*  
c. The Intervertebral Disc *Pomerantz*

*SYMPOSIUM ON SPINE IMAGING*

8:30-9:00 The Spine: Congenital and Developmental Abnormalities *Young-Poussaint*  
9:00-9:30 Inflammatory Disease of the Spine *Donovan-Post*  
9:30-10:00 Vertebral Body Marrow: Tumor, Infection, Trauma *Modic*  
10:00-10:15 QUESTIONS  
10:15-10:30 COFFEE BREAK  
10:30-11:00 Differential Diagnosis of Spinal Cord Lesions, Tumor and Pseudotumor *Donovan-Post*  
11:00-11:30 The Brachial Plexus *Castillo*  
11:30-11:45 QUESTIONS  
11:45-1:15 LUNCH BREAK  
1:15-1:45 The Impact of Imaging in Classic Radiculopathy and Low Back Pain *Modic*  
1:45-1:50 QUESTIONS  
1:50-2:20 Lumbar Post-Operative Imaging and Instrumentation *Modic*  
2:20-2:25 QUESTIONS  
2:55-3:10 COFFEE BREAK

*SYMPOSIUM ON THE SPINE INTERVENTIONS*

3:10-3:40 Image-guided Lumbo-Sacral Spinal Injections *Carrino*  
3:40-3:45 Questions  
3:45-4:15 Discography and Percutaneous Intradiscal Therapies *Pomerantz*  
4:15-4:20 Questions  
4:20-4:50 Minimally Invasive Spine Surgery for the 21st century: Compression Fractures *Hirsch*  
4:50-5:20 QUESTIONS & PANEL DISCUSSION

## HEAD AND NECK RADIOLOGY

PROGRAM DIRECTORS: HUGH D. CURTIN, MD and ALFRED L. WEBER, MD

### THURSDAY, SEPTEMBER 29, 2005

7:00-8:15	Registration and Continental Breakfast		
	Morning Session	Moderator	<i>Dr. Curtin</i>
	<i>PARTICIPATING WORKSHOPS</i>		
7:30-8:15AM	Interesting Head and Neck Cases		<i>Cumane</i>
8:15-9:15	Imaging of the Sinonasal Cavities		<i>Som</i>
9:15-10:00	Imaging of the Larynx		<i>Curtin</i>
10:00-10:15	COFFEE BREAK		
10:15-11:15	Imaging of the Cervical Lymph Nodes		<i>Som</i>
11:15-12:00	Post treatment neck		<i>Som</i>
	<i>NEURORADIOLOGY REGISTRANTS ADJOURN HERE</i>		
12:00-1:15	LUNCH BREAK		
	Afternoon Session	Moderator	<i>Dr. Weber</i>
1:15 -2:00	CT and MRI of the Parapharyngeal Spaces		<i>Curtin</i>
2:00- 2:45	Imaging of salivary glands		<i>Curtin</i>
2:45- 3:00	COFFEE BREAK		
3:00 - 3:45	Lesions of the Jaw		<i>Weber</i>
3:45 - 4:30	Temporomandibular Joint		<i>Sweriduk</i>
4:30 - 5:00	QUESTIONS		
5:05	Adjourn		

### FRIDAY, SEPTEMBER 30, 2005

Continental Breakfast			
	Morning session	Moderator	<i>Dr. Curtin</i>
	<i>PARTICIPATING WORKSHOPS</i>		
7:30-8:15AM	Interesting Head and Neck Cases		<i>Caruso</i>
8:15-9:00	CT and MRI of the Temporal Bone – Part I	Normal Anatomy	<i>Mafee</i>
9:00-10:00	CT and MRI of the Temporal Bone – Part II	Inflammatory Disease and Cholesteatoma	<i>Mafee</i>
10:00-10:15	COFFEE BREAK		
10:15-11:15	CT and MRI of the Temporal Bone – Part III	Tumors, Vascular Lesions, Trauma	<i>Mafee</i>
11:15-12:00	CT and MRI of the Neck (Cysts, Tumors and Inflammatory Disease)		<i>Reede</i>
12:00-1:15	LUNCH BREAK		
	Afternoon Session	Moderator	<i>Dr. Caruso</i>
1:15-2:00	MRI Evaluation of the Globe		<i>Mafee</i>
2:00-2:45	CT and MRI of the Pharynx and Oral Cavity		<i>Reede</i>
2:45-3:15	Congenital anomalies of the ear		<i>Caruso</i>
3:15-3:30	COFFEE BREAK		
3:30-4:15	Orbital Imaging (Globe to Chiasm)		<i>Caruso</i>
4:15-4:45	Horner's syndrome- imaging		<i>Reede</i>
4:45-5:00	QUESTIONS		
5:05	Adjourn		

# Faculty

## HARVARD

**BRADLEY R. BUCHBINDER, M.D.**  
Instructor in Radiology, Harvard Medical School;  
Assistant in Radiology and Staff Neuroradiologist, Massachusetts General Hospital

**JOHN A. CARRINO, M.D., M.P.H.**  
Assistant Professor of Radiology, Harvard Medical School;  
Clinical Director, Magnetic Resonance Therapy Program,  
Co-Director, Spine, Intervention Service, Brigham and Women's Hospital

**PAUL CARUSO, M.D.**  
Instructor in Radiology, Harvard Medical School;  
Assistant in Radiology, Massachusetts Eye and Ear Infirmary

**MARYBETH CUNNANE, M.D.**  
Instructor in Radiology, Harvard Medical School, Assistant in Radiology, Massachusetts  
Eye and Ear Infirmary, Staff Neuroradiologist, Massachusetts General Hospital

**HUGH CURTIN, M.D.**  
Professor of Radiology, Harvard Medical School;  
Chief of Radiology, Massachusetts Eye & Ear Infirmary

**R. GILBERTO GONZALEZ, M.D., Ph.D.**  
Associate Professor of Radiology, Harvard Medical School;  
Director of Neuroradiology, Massachusetts General Hospital

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Assistant Professor of Radiology, Harvard Medical School;  
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**JOHN HENSON, M.D.**  
Associate Professor of Neurology (Radiology), Harvard Medical School;  
Associate Neurologist (Radiologist), Massachusetts General Hospital

**JOSHUA A. HIRSCH, M.D.**  
Assistant Professor of Radiology, Harvard Medical School;  
Director, Interventional Neuroradiology/Endovascular Neurosurgery,  
Chief, Minimally Invasive Spine Surgery, Massachusetts General Hospital

**MICHAEL LEV, M.D.**  
Associate Professor of Radiology, Harvard Medical School;  
Director of Emergency Neuroradiology and Neurovascular Laboratory,  
Massachusetts General Hospital;  
Staff Radiologist, Massachusetts Eye & Ear Infirmary

**MARK E. MULLINS, M.D., Ph.D.**  
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Staff Neuroradiologist,  
Associate Director of Medical Student Radiology Education,  
Massachusetts General Hospital

**STUART POMERANTZ, M.D.**  
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Staff Neuroradiologist, Massachusetts General Hospital

**JAMES RABINOV, M.D.**  
Assistant Professor of Radiology, Harvard Medical School;  
Staff Interventional Neuroradiologist, Program Director of the Neuro-Interventional  
Fellowship, Massachusetts General Hospital

**JAVIER ROMERO, M.D.**  
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Staff Neuroradiologist, Massachusetts General Hospital

**PAMELA SCHAEFER, M.D.**  
Associate Professor in Radiology, Harvard Medical School;  
Associate Director of Neuroradiology, Clinical Director of MRI and  
Director of Neuroradiology Fellowship Program, Massachusetts General Hospital

**STEPHEN T. SWERIDUK, JR., M.D.**  
Medical Director, Shields Healthcare Group, Brockton, MA

**LAWRENCE WALD, Ph.D.**  
Assistant Professor, Harvard Medical School;  
Assistant Biophysicist,  
Director of NMR Core at NMR Center-Charlestown,  
Massachusetts General Hospital

**ALFRED WEBER, M.D.**  
Professor of Radiology, Harvard Medical School

**TINA YOUNG-POUSSAINT, M.D.**  
Associate Professor of Radiology, Harvard Medical School;  
Director, Neuroimaging Center, Pediatric Brain Tumor Consortium,  
Children's Hospital Boston, Boston, MA

## GUEST

**MAURICIO CASTILLO, M.D., F.A.C.R.**  
Professor of Radiology, University of North Carolina, School of Medicine;  
Chief, Neuroradiology Section, University of North Carolina Hospital, Chapel Hill, NC

**M. JUDITH DONOVAN-POST, M.D.**  
Professor of Radiology, Neurological Surgery and Ophthalmology,  
University of Miami, School of Medicine;  
Section Chief, Neuroradiology, Jackson Memorial Hospital Medical Center, Miami, FL

**ALISA D. GEAN, M.D.**  
Professor of Radiology, Neurology, Neurological Surgery, UCSF;  
Founder and Executive Director, "SFGH Spirit!" Foundation,  
San Francisco General Hospital, San Francisco, CA

**MICHAEL S. HUCKMAN, M.D.**  
Professor of Radiology, Rush Medical College;  
Director of Neuroradiology, Rush University Medical Center, Chicago, IL

**MAHMOOD MAFEE, M.D.**  
Professor of Radiology, University of Illinois at Chicago, Chicago, IL

**MICHAEL MODIC, M.D.**  
Chairman, Division of Radiology, Cleveland Clinic Foundation, Cleveland, OH

**THOMAS P. NAIDICH, M.D.**  
Professor of Radiology, Neurosurgery, Mount Sinai School of Medicine;  
Director of Neuroradiology, Vice Chairman of Academic Affairs,  
Irving and Dorothy Regenstreif Research Professor of Neuroscience (Neuroimaging),  
Mount Sinai Hospital, New York, NY

**DEBORAH REEDE, M.D.**  
Associate Professor of Clinical Radiology, SUNY Health Science Center,  
Associate Chair Person of Radiology/Site Director,  
The Long Island College Hospital, Brooklyn, NY

**JAMES G. SMIRNIOTOPOULOS, M.D.**  
Professor of Radiology, Neurology, and Biomedical Informatics,  
Chair, Department of Radiology and Radiological Sciences  
Uniformed Services University, Bethesda, MD

**PETER SOM, M.D.**  
Professor of Radiology, Otolaryngology and Radiation Oncology,  
Chief of Head and Neck Radiology, The Mount Sinai School of Medicine  
of the City University of New York, New York, NY

## NEURORADIOLOGY

CLINICAL FUNCTIONAL MRI AND SPECTROSCOPY

## HEAD AND NECK RADIOLOGY

September 26 - September 30, 2005

The Royal Sonesta Hotel, Cambridge, MA

# Registration Form

TUITION FEES: (check one below)

Course # 251135

- \$900 (USD) Full Course (Sept 26 - Sept 30, 2005)
- \$700 (USD) Residents\* and Fellows in Training\* (Sept 26 - Sept 30, 2005)  
\* A letter of verification from Department Chairman must accompany applications for a reduced fee
- \$750 (USD) Neuroradiology (Sept 26 - 29 until noon, 2005)
- \$700 (USD) Head and Neck (Sept 29 - Sept 30, 2005)

Please Print Clearly

Full Name \_\_\_\_\_  
Last First Middle Initial

Degree \_\_\_\_\_

Mailing Address \_\_\_\_\_  
Street City State Zip Code

Daytime Phone (\_\_\_\_) \_\_\_\_\_ Fax Number (\_\_\_\_) \_\_\_\_\_

E-Mail \_\_\_\_\_  
 Please check if you wish to be **excluded** from receiving email notices of future Harvard MED-CME programs.

Professional School Attended \_\_\_\_\_ Yr. of Grad. \_\_\_\_\_

Profession \_\_\_\_\_ Specialty \_\_\_\_\_  
Board Certified:  Yes  No

Organization Affiliation \_\_\_\_\_

Form of Payment (Please check one)

Check is enclosed: Please make your check payable to Harvard Medical School and mail it with this registration form to:  
Harvard Medical School, Department of Continuing Education, P.O. Box 825, Boston, MA 02117-0825

Bill my credit card:

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Print Name As It Appears On Card

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Signature

Registrations paid by credit card may be faxed to 617-384-8686 or mailed to the above address.

Tuition Fee \$ \_\_\_\_\_

Source Code: XXX



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Department of Continuing Education  
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