

RSNA *News*

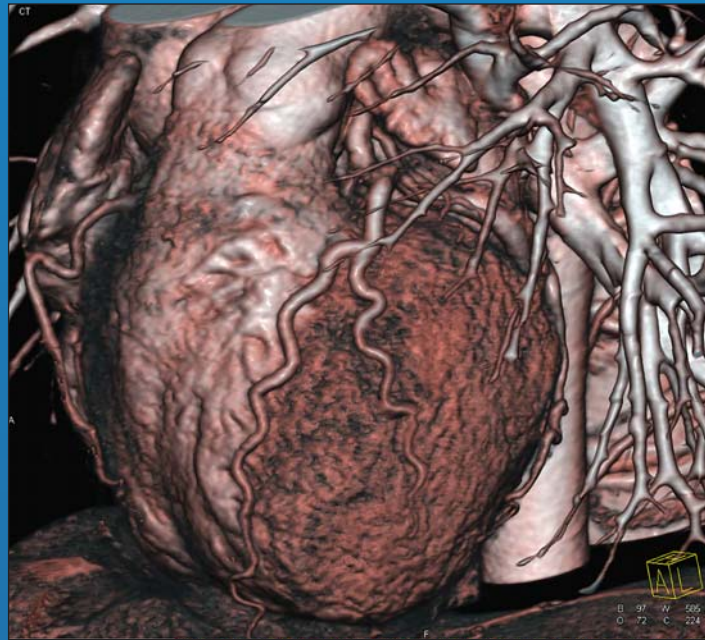


Image courtesy of Elliot K. Fishman, M.D.

Multidetector CT Angiography Shows Promise in Detection of Coronary Artery Disease

Also Inside:

- RSNA Launches SAMs to Help Members Meet MOC Requirements
- Video Replay Helps Radiology Residents Improve Performance
- RSNA Grant Recipient Sees Bright Future for MR Colonography
- Chicago Events and Attractions Enhance the Cultural Experience During RSNA 2005

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RSNA News

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Central American Federation of Radiology

THE PRESIDENTS of seven Central American radiology societies have agreed to form the Central American Federation of Radiology. The official launch will be in October.

The society presidents met in early June at the International Society of Radiology (ISR) executive committee meeting in Guatemala.

RSNA sent educational materials to

the meeting for distribution to radiologists in Central America. The packets included CD-ROMs of educational programs and information describing RSNA's mission and programs.



International Society of Radiology meeting in Guatemala.

(seated, from left) Norma Brooks, M.D. (Honduras), Josethy Solorzano, M.D. (El Salvador), Lilli Weng de Espino, M.D. (Panama), Francisco Arredondo, M.D. (Guatemala; ISR president), Ines Carrasco, M.D. (Honduras), Cristina de Gomez, M.D. (El Salvador), Mirna Tellez, M.D. (Nicaragua) (standing, from left) Armando Zamora, M.D. (Guatemala), Miguel E. Stoopan, M.D. (Mexico; InterAmerican College of Radiology president), Faylan Esquivel, M.D. (Costa Rica), and Julio Diaz R., M.D. (Belize)

Radiology Receives High Mark for Diagnostic Accuracy

Several peer-reviewed journals were following strict standards for reporting of diagnostic accuracy studies prior to the 2003 release of the Standards for Reporting of Diagnostic Accuracy (STARD) guidelines.

A study published in the May issue of *Radiology*, by Nynke Smidt, Ph.D., VU University Medical Center in Amsterdam, and colleagues evaluated the quality of reporting in English-language articles relating to diagnostic accuracy. These articles were published in 2000 in peer-reviewed journals with an impact factor of at least 4.0.

Out of 25 possible points, the five journals with the highest mean STARD scores were:

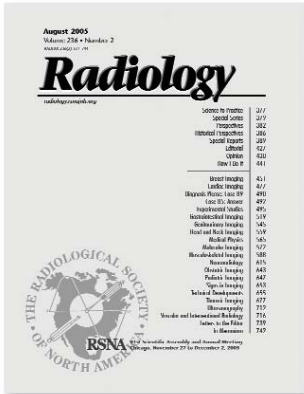
<i>Journal of the American Medical Association</i>	15.5 points
<i>New England Journal of Medicine</i>	14.3 points
<i>Radiology</i>	13.2 points
<i>Annals of Internal Medicine</i>	13.2 points
<i>Gut</i>	12.7 points

A special report on the STARD initiative was included in the January 2003 issue of *Radiology*. In the Public Information for Authors section, *Radiology* authors are asked to follow the STARD guidelines, as well as other guidelines. Authors of diagnostic accuracy studies are sent, for their convenience, a copy of the STARD guidelines when revision 1 is requested for a manuscript accepted for publication in *Radiology*.

The Smidt study can be accessed online at radiology.rsnaajnl.org/cgi/content/full/235/2/347#F1.

Medical Imaging Company News:

- **Royal Philips Electronics** will acquire **Stentor**, a leading provider of picture archiving and communication systems. Stentor will be incorporated into the Healthcare IT business of Philips Medical Systems.
- **Siemens Medical Solutions Ultrasound Division** has signed an agreement to acquire **Sensant Corp.** of San Leandro, Calif. The acquisition will allow Siemens to develop advanced capacitive microfabricated ultrasound transducer (CMUT) technology, and commercialize next-generation transducers based on this technology.
- **Merge eFilm** has changed its name to **Merge Healthcare** following its recent merger with **Cedara Software Corp** and its subsidiary **eMed Technologies**.



RSNA 2005 Abstracts by Specialty

A RECORD 9,515 abstracts were submitted for consideration for presentation at RSNA 2005.

That's 243 more than were submitted for RSNA 2004.

This year's abstracts include 6,218 scientific paper or poster abstracts, 3,026 education exhibit abstracts and 271 *infoRAD* abstracts.



Abstracts Accepted

The final selections for scientific presentations were made in mid-July. Notices have been sent to individuals about the status of their submitted abstracts for scientific papers and poster presentations; 1,623 scientific papers and 480 posters were accepted. Notices for education exhibits were sent in mid-June; 1,229 were accepted including five sets of 13 cases of the day. 271 *infoRAD* abstracts were accepted.

ABSTRACT SUBMISSIONS BY SPECIALTY

Scientific Presentation (paper or poster)	Education Exhibit
Breast Imaging 426	Breast Imaging 160
Cardiac 534	Cardiac 191
Chest 432	Chest 254
Emergency 36	Gastrointestinal 496
Gastrointestinal 865	Multisystem/Special Interest 187
Genitourinary 396	Musculoskeletal 342
Health Services, Policy and Research 112	Neuroradiology 386
Musculoskeletal 532	Nuclear Medicine 59
Neuroradiology/Head and Neck 812	Obstetrics/Gynecology 92
Nuclear Medicine 281	Pediatric Radiology 122
Pediatric Radiology 243	Physics and Other Basic Sciences 125
Physics 431	Policy and Practice 31
+ 70 from ASTRO	Radiation Oncology 9
Radiation Oncology and Radiobiology 49	Radiology Informatics 57
+ 227 from ASTRO	Uroradiology (Genitourinary) 159
Radiology Informatics 182	Vascular/Interventional 266
Ultrasound 146	Withdrawals 90
Vascular and Interventional 741	TOTAL: 3,026
TOTAL: 6,218	

PEOPLE IN THE NEWS

Jadvar Receives \$3.3 Million NIH/NCI Grant

Hossein Jadvar, M.D., Ph.D., M.P.H., assistant professor of radiology and biomedical engineering at the Keck School of Medicine at the University of Southern California, has received a five-year, \$3.3 million grant for his research project, "FDG PET-CT evaluation of metastatic prostate cancer."

The grant, from the National Institutes of Health (NIH) and the National Cancer Institute (NCI), received a priority ranking.

Dr. Jadvar is a former RSNA R&E Foundation grant

recipient. "The RSNA Research Seed Grant was instrumental in helping me perform relevant translational animal experiments and collect the preliminary data that I needed to support the motivation for my research proposal," he said. "My advice to young investigators is to hold on to their dreams, focus, be patient, actively improve their skills, and continue expecting the very best products from themselves while always striving to lead a balanced family and work life."



Hossein Jadvar, M.D., Ph.D., M.P.H.

ASTRO Announces Gold Medal Recipients

THE American Society for Therapeutic Radiology and Oncology (ASTRO) will present two gold medals at its annual meeting in October.

The recipients will be **C. Norman Coleman, M.D.**, director of the Radiation Oncology Sciences Program and associate director of the Radiation Research Program at the National Cancer Institute; and **Allen S. Lichter, M.D.**, dean of the University of Michigan Medical School in Ann Arbor.



C. Norman Coleman, M.D.



Allen S. Lichter, M.D.

Larson Earns Pioneer Award

Steven M. Larson, M.D., one of the world's foremost experts in targeted radiotherapy and molecular imaging, was awarded the 2005 Georg Charles de Hevesy Nuclear Pioneer Award from the Society of Nuclear Medicine.



Steven M. Larson, M.D.

Dr. Larson holds positions at Memorial Sloan-Kettering Cancer Center and Cornell University's Weill Medical College in New York City. He was named RSNA Outstanding Researcher in 2004.

Forbes New Mayo Chair

Glenn S. Forbes, M.D., from the Department of Diagnostic Radiology at the Mayo Clinic College of Medicine, has been selected as chairman of the Mayo Clinic Rochester Board of Governors, effective January 1, 2006.

Dr. Forbes, who will succeed **Hugh Smith, M.D.**, will serve as the chief executive officer of Mayo Clinic Rochester. Dr. Forbes has been a member and vice-chair of the board of governors since 2004. He was the RSNA first vice-president in 2001.

Hacein-Bey Earns Director Post at Loyola

Lotfi Hacein-Bey, M.D., is the new director of neuroradiology and interventional neuroradiology at Loyola University Health System in Maywood, Ill. He is also a professor of radiology, neurosurgery and neurology at the Loyola University Stritch School of Medicine.



Lotfi Hacein-Bey, M.D.

Previously Dr. Hacein-Bey was a professor at the Medical College of Wisconsin.

IN MEMORIAM:

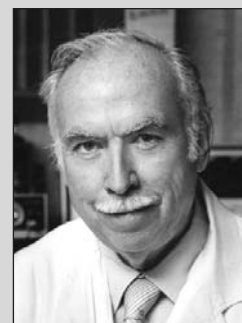
Seymour F. Ochsner, M.D.

1966 RSNA First Vice-President **Seymour F. Ochsner, M.D.**, died in May at the age of 89.

An RSNA member since 1954, Dr. Ochsner founded the Department of Radiation Oncology and established a residency in the specialty at the Ochsner Clinic in New Orleans. His cousin was one of five founders of the institution now known as Ochsner

Clinic Foundation, and his father founded the American College of Surgeons.

Dr. Ochsner was a past-president of the American Roentgen Ray Society and the American College of Radiology.



Seymour F. Ochsner, M.D.



Send your submissions for *People in the News* to rsnanews@rsna.org, (630) 571-7837 fax, or *RSNA News*, 820 Jorie Blvd., Oak Brook, IL 60523. Please include your full name and telephone number. You may also include a non-returnable color photo, 3x5 or larger, or electronic photo in high-resolution (300 dpi or higher) TIFF or JPEG format (not embedded in a document). *RSNA News* maintains the right to accept information for print based on membership status, newsworthiness and available print space.

RSNA Board of Directors Report

THE RSNA 2005-2006 budget was presented and approved at the June meeting of the RSNA Board of Directors. The operating plan includes several new projects and further refines existing programs to make them more meaningful and efficient for our members' evolving professional needs.

The Board also continued discussion toward a five-year vision that focuses on maintenance of certification (MOC), education programs and resources, international outreach and developing an annual education conference that would be held separately from the annual meeting. Details will be included in future issues of *RSNA News*.

New Project

The Public Information Committee recommended, and the Board approved, a suite of activities designed to help radiologists enhance their interaction with patients and to help improve the public's perception of radiologists.

This multifaceted program will make radiologists more visible to the public and will increase the public's understanding of medical imaging in healthcare.

Expanded Projects

In 2002, RSNA launched the **Exploring Your Future in Radiology** program to provide public high school students in Chicago with the opportunity to learn more about radiology and related career opportunities. Each year at the RSNA annual meeting, 30–40 students attend lectures, hands-on workshops, career presentations and tours of the technical exhibits. The students then have the opportunity to com-

pete for \$1,000 scholarships from RSNA.

At RSNA 2005, the program will be videotaped and distributed to high schools across the country to be used by guidance counselors and at job fairs. The videotape will also be offered to radiologists and radiology organizations.

Last fall, RSNA began distributing quarterly **public service announcements** (PSAs) to radio stations in the United States to increase awareness about radiology's role in the healthcare community. These PSAs are in the form of printed scripts tied to a health awareness event, such as breast cancer awareness month or stroke awareness month.

The Board has approved a plan to expand this program to include pre-recorded health messages and printed scripts in Spanish. The expanded program will help increase distribution and utilization. Similarly, the Board has authorized an expanded package of **background video** to be offered to television stations for use during medical news segments.

RSNA 2005

A **digital mammography training and self-assessment workshop** will be offered at the

RSNA annual meeting. It is important that radiologists and radiology residents receive hands-on experience in reading and manipulating digital mammography cases on diagnostic and screening workstations, as well as the ability to assess their skills in that area.



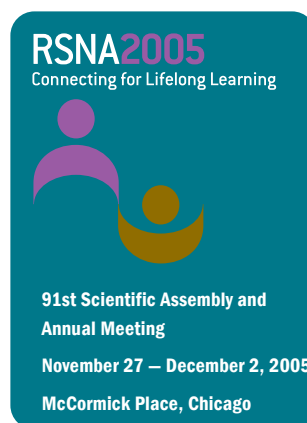
R. Gilbert Jost, M.D.
Chairman, 2005 RSNA Board of Directors

The workshop will be held in the Lakeside Center of McCormick Place. More information will be available in a future edition of *RSNA News*.

To make it easier for annual meeting attendees to view **electronic scientific posters and education exhibits**, the Board has approved using 300 dedicated computers and 22 theaters that will be located throughout the exhibit hall. In response to feedback from last year's attendees, guidelines for authors have been developed to make the electronic posters and exhibits more uni-

form in size and general structure. These changes, along with improvements in the navigation features of the system, should make viewing the exhibits easier and more intuitive.

All scientific posters will be in digital format this year while education





The 2005 Exploring Your Future in Radiology program will be videotaped and distributed to guidance counselors at high schools across the United States.



Three-hundred dedicated computers and 22 theaters will be available to view the electronic scientific posters and education exhibits at RSNA 2005.

exhibits in five subspecialties—cardiac radiology, chest radiology, genitourinary radiology, neuroradiology and vascular/interventional radiology—will all be electronic.

In an effort to make *RSNA.org* more user-friendly, RSNA will conduct hands-on user-feedback sessions at the annual meeting to observe how members use the Web site, and to take note of which pages are easily accessed and which pages are more difficult to find or use.

Medical Professionalism

RSNA has endorsed “Medical Professionalism in the New Millennium: A Physician Charter.”

The charter was developed by the Medical Professionalism Project, which is jointly sponsored by the American Board of Internal Medicine Foundation, American College of Physicians Foundation and European Federation of Internal Medicine.

Endorsing the charter supports RSNA’s goals and objectives, especially professionalism, integrity and service to the patient. To view the charter, go to www.abimfoundation.org/pdf/ABIM_charter_Ins.pdf.

Molecular Imaging

In collaboration with the Society for Molecular Imaging (SMI) and the Society of Nuclear Medicine (SNM), RSNA will sponsor a one-day clinically oriented educational workshop on molecular imaging. The workshop will be held immediately preceding the SMI annual meeting in September 2006 in Hawaii. SNM co-sponsored with RSNA the recent Molecular Imaging Summit held in Oak Brook, Ill. (See the July issue of *RSNA News*.)

Planning and implementing the workshop will fall under the charge of RSNA’s newly formed Committee on Molecular Imaging. The chair is Ralph Weissleder M.D., Ph.D., from Massachusetts General Hospital.

Bylaws Amendments

Several bylaws amendments and updates have been proposed to establish new membership categories, to discontinue one committee and to revise the language of the text for consistency, style and clarity.

The changes will be published in the October issue of *Radiology* and will be presented for a vote by RSNA members attending the business session at the annual meeting.

Other Board Action

- RSNA will participate in the fourth Biomedical Imaging Research Opportunities Workshop to be held in February 2006 in Bethesda, Md. The American Association of Physicists in Medicine will be the lead organizer this year.
- RSNA will host an annual conference of RSNA committee chairs in an effort to enhance communication between the chairs and board members.
- The Trainee Research Prize and Medical Student Award will each be renamed the Research Trainee Prize.
- RSNA has endorsed a campaign to make Chicago a smoke-free city. (See page 20.)



**Biomedical
Imaging
Research
Opportunities
WORKSHOP 4**

R. GILBERT JOST, M.D.

CHAIRMAN, 2005 RSNA BOARD OF DIRECTORS

Note: In our continuing efforts to keep RSNA members informed, the chair of the RSNA Board of Directors will provide a brief report in RSNA News following each board meeting. The next RSNA Board Meeting is in September.

Multidetector CT Angiography Shows Promise in Detection of Coronary Artery Disease

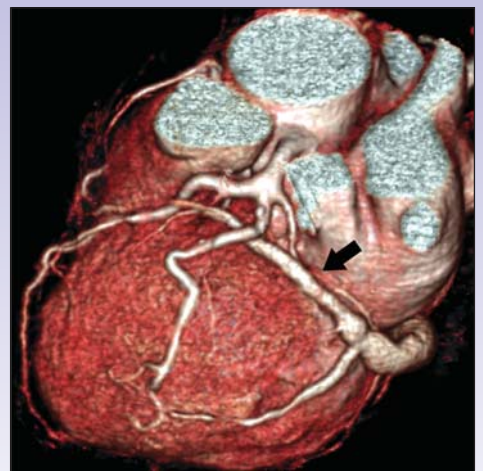
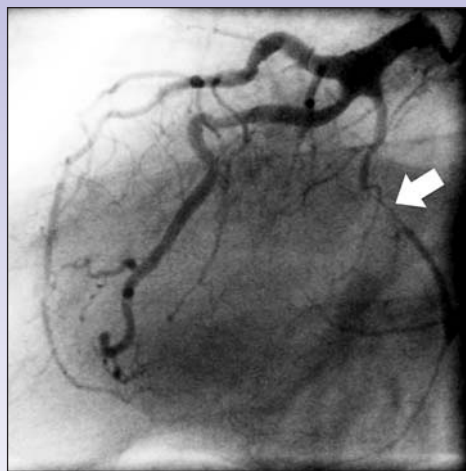
TWO EUROPEAN studies find multidetector computed tomography (MDCT) is highly accurate in the noninvasive detection of suspected obstructive coronary artery disease (CAD).

16-Slice CT

In the first study, published in the May 25 issue of the *Journal of the American Medical Association (JAMA)*, researchers evaluated MDCT with both subjective and quantitative measures derived from center-line placements and a true cross-sectional evaluation of a reference point of highest stenosis.

“So what you see in this study for the first time is a receiver operating characteristic, or ROC, analysis,” according to lead author Martin H.K. Hoffmann, M.D., a cardiac radiologist in the Department of Diagnostic Radiology at the University Hospital in Ulm, Germany. “The discriminative power of this method is consistent over a wide range of stenosis gradings.”

The Hoffmann study was conducted in a referral center setting from November 2003 to August 2004. Enrollment included 103 consecutive patients (mean age 61.5 years) who



Patient with a high grade stenosis of the left circumflex branch in the atrioventricular groove. The stenosis is shown both on a conventional invasive angiogram (left) and a volume rendering of the MDCT scan (right) oriented along corresponding viewing angles. Venous overlay is apparent on the MDCT image but did not interfere with stenosis detection.

Images courtesy of Martin H.K. Hoffmann, M.D.

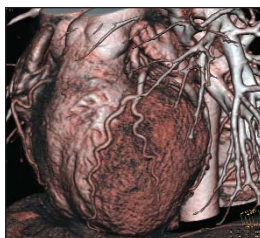
were undergoing both invasive coronary angiography and MDCT using a 16-slice scanner.

Ninety-eight percent of patients had intermediate or high probability of disease. Invasive coronary angiography identified 1,384 vascular segments 1.5 mm in diameter or larger. MDCT was non-diagnostic due to image quality in 6.4 percent of these segments, mainly due to fast heart rates that could not be reduced sufficiently with β -blockers.

Compared with invasive angiography for detection of significant lesions

(defined as greater than 50 percent stenosis), the segment-based sensitivity of MDCT was 95 percent, specificity was 98 percent, the positive-predictive value was 87 and the negative-predictive value was 99 percent. “In this patient-based analysis, the area under the ROC curve was 0.97, indicating high discriminative power to identify patients who might be candidates for revascularization,” said Dr. Hoffmann.

He added that his study had some disadvantages. “We still have 27 percent of our patients with incomplete coronary coverage,” he explained.



On the cover:

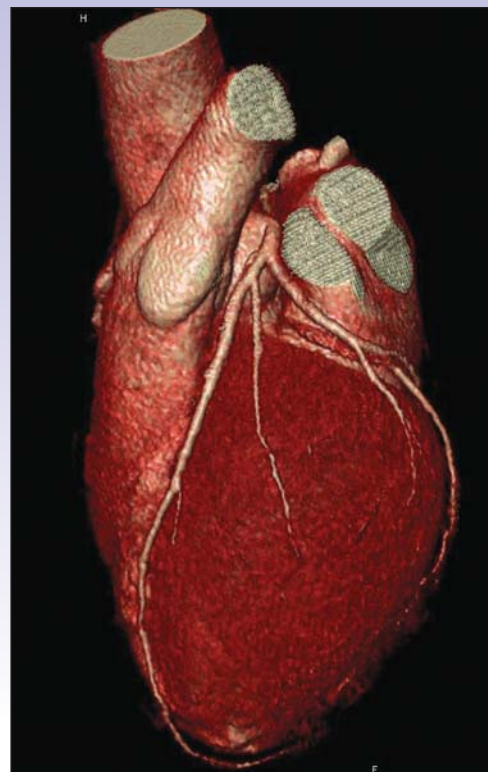
Coronary CT angiogram performed on a 64-slice CT scanner demonstrates detailed visualization of the normal left anterior descending coronary artery, as well as defining the normal right coronary artery.

Image courtesy of Elliot K. Fishman M.D.

Case: 49-year-old female patient with functional heart symptoms referred for CT coronary angiography. SPECT under adenosine stimulation in myocardial imaging perfusion showed no evidence of coronary ischemia or infarction. ECG showed pathologic ST-segment depression. Patient was not given any medications (β -blockers or nitroglycerine) before the CT examination.

CT Findings: Small eccentric calcification in the proximal left anterior descending artery (left = maximum intensity projection, right = volume rendering), otherwise no significant coronary atherosclerosis or stenosis lesions. Proper coronary anatomy with right dominant circulation.

Case courtesy of Sebastian Leschka, M.D., and Lotus Desbiolles, M.D.



“They have certain branches—even main branches—that show up with residual motion artifacts, and these artifacts impeded adequate reading of certain segments. Of course, to rule out coronary artery disease, you have to have excellent image quality in every segment.”

Despite the study’s limitation, cardiac imaging experts in the United States are encouraged by this research. “These are about the best results I’ve seen anywhere with 16-slice technology,” said Elliot K. Fishman, M.D., professor of radiology and oncology at Johns Hopkins Hospital and director of diagnostic imaging and body CT at The Johns Hopkins University School of Medicine in Baltimore.

64-Slice CT

“Sixteen-slice CT really showed that cardiac CT is doable; 64 slice makes it a reality,” Dr. Fishman added, pointing to a study in the August 2005 issue of the *European Heart Journal*. Sebastian Leschka, M.D., and colleagues in the Department of Medical Radiology at the University Hospital in Zurich, Switzerland, compared 64-slice CT with invasive angiography for assessing significant coronary stenoses in 67 patients (mean age 60.1 years).

Overall sensitivity for classifying stenoses with 64-slice CT was 94 percent, specificity was 97 percent, positive-predictive value was 87 percent and negative-predictive value was 99 percent. Dr. Leschka and his colleagues have now performed CT angiography

using 64-slice technology on more than 200 patients with suspected coronary artery disease (CAD).

“The most surprising finding of our study is that no coronary artery segment had to be excluded from analysis, even with higher heart rates and massive arterial wall calcification,” Dr. Leschka said. “For all of our patients, the exclusion rate for coronary segments is less than one percent, mostly affecting segments with diameters of little more than 1.5 mm and in patients with variations in heart rate during scan acquisition. Although our study investigated the accuracy for stenosis detection in a high prevalence for CAD

Continued on next page

Advantages of 64-slice CT angiography as compared to invasive angiography

- Better depiction of coronary anomalies
- True 3D imaging
- Non-invasive—no complications, CT scan of the entire heart is performed in 10 to 12 seconds, examination room time is less than 15 minutes and there’s no need for a hospital stay
- More cost-effective
- Clear visualization of calcium deposits and plaque morphology, though CT is still inferior to intravascular ultrasound
- Better delineation of stenoses at the origin of the right and left coronary artery
- “One-stop shop” analysis—coronary arteries, valves, ventricular analysis, myocardial mass, plaque morphology, lung parenchyma

Disadvantages of MDCT

- No direct assessment of flow through the vessels
- Massive calcifications and stents cause beam hardening artifacts, causing false-positives
- Need for β -blocking medication when heart rates are elevated
- No interventions are possible during the examination

Source: Sebastian Leschka, M.D.

Continued from previous page

group, the high negative-predictive value indicates additional potential for 64-slice CT coronary angiography to exclude coronary artery stenosis.”

Dr. Fishman said that 64-slice is definitely the way to go. “If you want to do coronary angiography in your group, you have to have a 64-slice scanner,” he said. “Thirty percent of invasive coronary catheterizations are negative. That means that if you could do a CT and exclude disease, a patient may potentially not have to be catheterized. However, catheterization will always have a central role in cardiac treatment

Sixteen-slice CT really showed that cardiac CT is doable; 64 slice makes it a reality.

Elliot K. Fishman, M.D.

Jill Jacobs, M.D., associate professor of radiology and chief of cardiac imaging at NYU Medical Center, agrees that the new 64-slice scanners add considerable accuracy to coronary CT. “We’re using a 64-slice scanner on all of our dedicated cardiac CT angiography patients. Most of the time we see patients because they have strong personal risk factors for CAD, because they have atypical chest pain or because they have had prior abnormal stress tests and don’t have clear-cut anginal syndromes. We also scan patients who are referred for evaluation of coronary artery anomalies,” she explained. “If the scans raise suspicion for significant cardiac disease, the patients have angiography.”

Patients also tend to like CT angiography compared to traditional, invasive procedures. “Patients are unbelievably happy to have the option of having a test that’s non-invasive, that is fast and allows them to leave the hospital and go right to work,” said Dr. Jacobs.

Radiation Risk with MDCT Angiography

While radiation exposure is always a concern with CT, Dr. Hoffmann said most patients are aware that the benefits outweigh the risks.

He estimates that in non-obese patients, radiation exposure is approximately 1.5 to 2.0 times higher than with invasive angiography. “We are looking at dose limitation in terms of spatial resolution, and what we’ve got is even higher spatial resolution available from the scanner than we’re actually using in a daily routine,” he explained. “We’re restricting ourselves to a Z axis slice thickness of 0.8 to 0.9 mm because we want to use a lower radiation dose.” □

because it allows you to do therapeutic intervention. If a patient comes in with chest pain and classic EKG changes, you go right to angiography because you can perform a variety of therapeutic interventions, including inserting a stent.”

Cardiac Radiology Refresher Courses at RSNA 2005

RSNA2005
Connecting for Lifelong Learning



The following include information on Cardiac CT:

Essentials of Cardiovascular Imaging

- A. CT Angiography of the Coronary Arteries: What You Need to Know
- B. Cardiac MR Imaging: What You Need to Know
- C. Cardiac CT: Beyond the Coronary Arteries

■ RC103

Cardiac MR and CT: Read Cases with the Experts (An Interactive Session)

■ RC303

Coronary Artery CT and CT Angiography

- A. Calcified Coronary Atherosclerotic Plaque: Epidemiology and Screening
- B. Coronary CT Angiography: Techniques
- C. Cardiac CT Angiography: Normals, Variants, and Pathology

■ RC432

Categorical Course in Diagnostic Radiology Physics: Multi-dimensional Image Processing, Analysis, and Display—Computer-aided Diagnosis in Cardiothoracic Imaging

- A. Understanding the Heart: Methods for Display and Analysis of Cardiac Multidetector CT
- B. Image Processing and Computer-aided Detection in Lung Cancer: Detection, Diagnosis, and Treatment Evaluation
- C. Normative Atlas of Lung Structure and Function for the Detection and Quantitation of Lung Pathology

■ RC708

Update Course in Diagnostic Radiology: Emergency Radiology—Imaging of Nontraumatic Cardiovascular Emergencies

- A. CT of Aortic and Vascular Emergencies
- B. CT for Thromboembolic Disease: Protocols, Interpretation, and Pitfalls
- C. Cardiac Applications for Multislice CT in the Emergency Room

■ To view the abstract for the Hoffmann study in *JAMA*, "Noninvasive Coronary Angiography With Multislice Computed Tomography," go to jama.ama-assn.org/cgi/content/abstract/293/20/2471.

■ To view the abstract for the Leschka study in *EHJ*, "Accuracy of MSCT coronary angiography with 64-slice technology: first experience," go to eurheartj.oxfordjournals.org/cgi/content/abstract/26/15/1482.

RSNA Launches SAMs to Help Members Meet MOC Requirements

IN EARLY JULY, RSNA unveiled its first set of self-assessment modules (SAMs). These SAMs, plus others that will be available later this year, will help members meet a key component of the American Board of Radiology's (ABR) new maintenance of certification (MOC) requirements.

Public demand for medical accountability prompted the American Board of Medical Specialties (ABMS) to require that each medical specialty credentialing body, including ABR, mandate proof of lifelong learning.

Radiologists certified in 2002 and after, and those who received time-limited certification are now required to complete the MOC process in 10-year cycles. To make the process easier, RSNA is creating a variety of tools to help radiologists.

"As the premier education society in radiology, RSNA has produced a SAMs initiative to encourage everyone in radiology to build on their own knowledge and stay up-to-date, not just those certified in 2002 and after," said RSNA Board Liaison-designate for Education George S. Bisset III, M.D. "RSNA is way ahead of the game in creating SAMs."

Dr. Bisset said RSNA has two types of SAMs:

- Online SAMs using materials from InteractED and *RadioGraphics*
- In-person, course-based modules to be offered at educational meetings, including RSNA 2005

As part of the ABR MOC program, radiologists are required to complete, on average, two SAMs each year for 10 years. RSNA Assistant Executive

Director for Research and Education Linda Bresolin, Ph.D., M.B.A., C.A.E., said physicians should choose SAMs in their area of medical interest or in general subjects such as patient safety, radiation safety, professionalism/ethics.

How SAMs Work

RSNA's online SAMs allow physicians to review articles from *RadioGraphics* and then answer 10–15 questions based on the articles. The questions are similar to those offered for continuing medical education (CME) credit.

Once they complete the questions, physicians receive test scores that include feedback on the items they

answered correctly and incorrectly, and information about how their score compares with those of others who have completed the module. A physician can then assess his or her level of knowledge.

"If you are weak in a subcomponent, you can find learning material, such as references and links to additional information," Dr. Bresolin explained. If the score is good, the physician may be able to claim CME credit. If it is too low, the physician may not receive CME credit. Either way, the physician receives credit for having completed the SAM.

Each online SAM will take about 2.5 hours to complete. The estimated time includes reading and studying the text, answering the questions, and looking up the appropriate literature provided for references.

SAMs offered at educational meetings will take about 1.5 hours to complete. The in-person SAM will entail

answering questions during the course through electronic audience response system technology. At the end of the course, the physician will also receive an individual score, learn how his or her score compares to peers' scores and receive a list of additional references and links.

SAMs to be offered at RSNA 2005 will involve the case-based review courses jointly developed with the Society of Interventional Radiology, Society of Pediatric Radiology and American Society of Neuroradiology.

Mellie Pouwels, M.A., managing director of RSNA's Education Center, said it is important for radiologists, interventional radiologists and radiation oncologists to realize that all physicians will be completing self-assessment activity in their area of clinical practice. "The recertification process represents a continuation of learning throughout a physician's career. In the past, CME credits may not have been directly applicable to your medical practice. Now, your re-certification will emphasize your clinical practice, your research, your core knowledge of radiology, your CME credits and your SAMs," she said.

RSNA Online SAMs

A tutorial on how to access RSNA SAMs is on page 29.

Programs include:

- Post-Operative Breast
- Acute Imaging of the Upper Abdomen
- Imaging of the Middle & Inner Ear
- Bone & Joint Masses
- Head, Neck & Intracerebral Malignancy

These SAMs are "qualified by the American Board of Radiology in meeting the criteria for self-assessment toward the purpose of fulfilling requirements in the ABR Maintenance of Certification Program."

Each SAM qualifies for 1 SAM credit, in addition to CME credits. Each SAM consists of articles from *RadioGraphics*, a comprehensive test and a list of additional available resources.

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Four Components of MOC:



Six Competencies Within These Components:

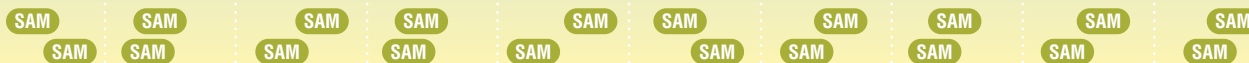
- MEDICAL
KNOWLEDGE
- INTERPERSONAL &
COMMUNICATION
SKILLS
- PATIENT
CARE
- PRACTICE-BASED
LEARNING &
IMPROVEMENT
- SYSTEMS-BASED
PRACTICE
- PROFESSIONALISM

Requirements for individual diplomates will vary, depending on the type and number of time-limited primary and subspecialty certificates held, and will include a combination of approved continuing medical education (CME) and self-assessment activities.

CME* Diagnostic Radiology—500 approved CME credit hours (at least 250 hours in category 1) are required over a 10-year cycle, of which at least 70 percent must be in specialty-specific or related areas.

CME Credit Hours

SAM Self-assessment will be accomplished through completion of a minimum of 20 self-assessment modules (SAMs) over the 10-year MOC cycle, ideally two SAMs per year.



10-year MOC Cycle

*Requirements differ slightly for radiation oncologists and medical physicists.

Source: American Board of Radiology

Continued from previous page

Betty Rohr, director of RSNA Program Services, said SAMs prove you are maintaining your professional knowledge and learning throughout your professional life. “For those who are board certified for life, we encourage you to participate in SAMs. It says something to the public about the quality of the medical care they receive when they know their physicians want to continue to learn throughout their careers,” she said.

Three Years in the Making

RSNA Board Liaison for Education Theresa C. McLoud, M.D., said RSNA has been preparing for the MOC requirements since 2002 and received the specific ABR criteria for SAMs earlier this year. When SAMs went “live” on *RSNA.org* in July, five online SAMs were available. Additional SAMs are being added as they complete the peer-review process and receive ABR qualification for SAMs credit. To date, about 25 SAMs are in various stages of development.

To develop SAMs, member volunteers and RSNA staff review articles

from *RadioGraphics* from 2002 to the present, along with the CME questions included at the end of the articles. The SAMs are drafted, reviewed by *RadioGraphics* Editorial Board, and then are sent to the ABR for final approval.

Customized Program for RSNA Members

In July, more than 700 RSNA members were sent a letter from Dr. McLoud offering assistance to help them fulfill their MOC requirements. Members were asked a few questions about their clinical practice and were urged to return their responses in an enclosed postage-paid envelope.

Based on individual physician responses, RSNA will notify these members twice a year about where they are in the MOC process, what they should have completed to date and what they should be doing in the coming months. There will be information on topics such as finding the right SAMs and making the most of the

RSNA annual meeting for MOC. In addition, RSNA will provide a secure, online place to store MOC records in a special section that is being developed on the RSNA’s CME Credit Repository (*RSNA.org/cme*) Web site.

The SAMs offered at RSNA will be included in the interactive, case-based review courses. “Adults learn best through interactive learning,” said Dr. McLoud. “It will be an engaging process.”

Just as SAMs give feedback on a physician’s strengths and weaknesses, Pouwels said RSNA is interested in getting feedback from physicians, “We want to know if we are meeting members’ needs in this important area.” (See below for contact information.)

Free SAMs for RSNA Members

RSNA is providing SAMs for free to members. Non-members will pay \$50 for each SAM. □

■ For more information on RSNA SAMs contact the RSNA Education Center at (800) 381-6660 x 3733 or at ed_ctr@rsna.org. If you have a time-limited certificate and have not received your MOC letter, contact the RSNA Membership Department at (800) RSNA-MEM (776-2636) or at membership@rsna.org. For more information on the ABR MOC program, go to theabr.org/MOCtree.htm.

Video Replay Helps Radiology Residents Improve Performance

LET'S GO TO the videotape." Sports fans hear those words when there is exciting, controversial or important action on the field or in the stadium. Thanks to technology, replay is available within seconds after a play is completed.

That ability for instant analysis provides fodder for a unique new study in the field of radiology education that's drawing attention from around the world. During a recent six-week experiment called "ACTION!", six radiology residents at McGill University Hospital Center in Montreal were videotaped while discussing cases at teaching rounds.

The residents' performances were reviewed and critiqued by an academic radiology "coach," Jeffrey Chankowsky, M.D., and then the residents were taped a second time to see if they improved. At the end of the six weeks, the residents' communication skills ranked higher as did their case-based knowledge.

The experiment was the brainchild of Marie-Therese Nguyen, M.D., who was a second-year radiology resident when the experiment started. "At the time, I was taking some tennis and ski lessons. My coach said, 'Let me videotape you to see if we can improve your serve or slalom.' So we did that and I had videotaped feedback and I thought 'Why don't we use this in radiology?' In radiology you have to have knowledge within the content but you also have to have presentation skills," she explained.

Dr. Chankowsky, an assistant pro-



Resident Christopher Sidden, M.D. (left), sits in the "hot seat" at McGill University. He's surrounded by fellow students and academic and research supervisor Benoit Mesurole, M.D. (seated, right).

fessor of radiology at McGill University, said he was intrigued with the idea as it applied to medical education. "We used a digital video camera from the audio-visual department, set it up on a tripod and put it on one side of the room during formal radiology rounds at one institution," he explained.

During those rounds, residents were assigned random medical cases. The residents were asked to present, give a diagnosis and a plan of action in an examination format. The academic staff members then provided feedback. "We videotaped everybody at each session. We showed the tapes to the teacher, the residents and two independent, non-involved radiologists," said Dr. Chankowsky. "By the end of the taping sessions, each of the participants was

judged on six, 10-minute sessions."

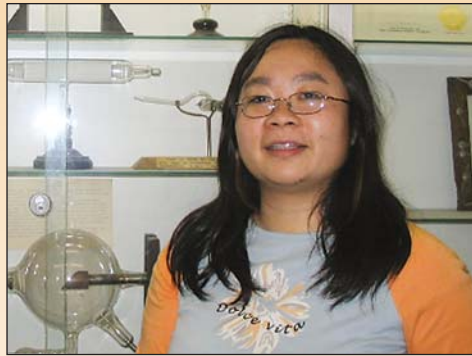
Because there was so little information in the academic literature on radiological examination criteria, Dr. Nguyen developed a survey of her own and worked with a statistician to create a scoring system. "There were criteria from different categories, such as knowledge (content) versus style (communication skills)," she said. "For each criterion, I asked, 'How important do you think this is in evaluating case discussion?' We then put that data in a graph to see which criteria were more important than the other."

Christopher Sidden, M.D., a fifth-year resident at McGill University, was one of the study participants. He has also used videotape to improve performance while swimming competitively in high school and college, but it was the first time he'd been videotaped during rounds. "The biggest thing is

Continued on next page

Almost universally, all the residents expressed a new feeling of comfort when they were presenting.

Jeffrey Chankowsky, M.D.



(above) Resident Marie-Therese Nguyen, M.D., stands in front of an exhibit of early x-ray tubes on display at Royal Victoria Hospital. (right) Academic and research supervisor Benoit Mesurolle, M.D., works in the reading room at the Cedar Breast Imaging Center at Royal Victoria Hospital.



Continued from previous page

that you think you're being very clear. In your head it all is very clear, but then you see you're not as clear as you thought you were," he said. "I sounded disjointed and more disorganized than I thought I was."

Following the first session of videotaping (pre-feedback), residents met one-on-one with Dr. Chankowsky to see themselves and get feedback. Dr. Sidden said the meetings prompted some changes. "I obviously improved," he said laughing. "I'm glad we did this, otherwise I don't know how long it would have taken me to realize I needed improvement."

Dr. Nguyen admits one of the biggest benefits to the video feedback may be simply in helping residents overcome testing anxiety for board examinations. "When you take your boards, you sit in the hot seat and you're presented an unknown case. You have to put everything together and discuss it. To be exposed to that early on in a mock situation should reduce your anxiety for the real exam. For the residents, it seems to help them feel more confident when they take cases," she said.

After the feedback with Dr.

Chankowsky, the young radiologists had a chance to tune up before being taped in a subsequent session of formal rounds.

Two independent academic radiologists then reviewed both sets of tapes in random order without knowing which were from the first round and which were from the second round. The analysis showed a positive shift in performance.

"Almost universally, all the residents expressed a new feeling of comfort when they were presenting," he said. "They were provided with good tips to organize themselves and present properly."

Dr. Nguyen said her research found many instances where videotaped feedback is used in other medical specialties including psychiatry, family medicine and surgery. But because she could not find examples of video used in teaching radiology she was unsure what her results would reveal. Now she believes it would be beneficial for institutions to consider turning the cameras on residents in an effort to make their communication more meaningful. "Every word is important in radiology," explained Dr. Nguyen. "In fact radiology is the science and art of

describing—of conveying what you see. In order for a radiologist to be a useful and credible consultant you have to have a fairly consistent, clear and uniform way of describing so that people can recognize what you say."

The McGill University radiologists involved in the project don't know if they will find the time or funding to continue the video program, but they are making note of the idea's popularity. "This one research project has been discussed at nine major meetings," said Dr. Chankowsky. "Dr. Nguyen has been invited across the world. Few people do radiology education research, so she really fell into an interesting area."

Dr. Nguyen and/or her colleagues presented the "ACTION!" program at meetings for organizations including the American Roentgen Ray Society, Association of University Radiologists, and Association for the Study of Medical Education. □

Chicago Events and Attractions Enhance the Cultural Experience During RSNA 2005

RSNA members and their families will be able to enjoy a diverse selection of activities during their stay in Chicago for RSNA 2005. Chicago's calendar of events includes theater, art, music and a number of other activities. There's something for everyone.

RSNA2005
Connecting for Lifelong Learning



SEE PAGE 16 FOR RSNA TOURS AND EVENTS INFORMATION.



Replica of the 1788 marble sculpture *George Washington* by Jean Antoine Houdon.

Art Institute of Chicago

THE ART INSTITUTE'S world-renowned permanent collection includes a noteworthy exhibition of surrealistic paintings and Impressionist art. The winter special exhibit features the work of Michael Asher, a highly influential contemporary artist who first explored the concept of art having site-specific meaning. Asher's *Focus* exhibit delves into the different contextual circumstances that impact the meaning of sculpture. The exhibit features Jean Antoine Houdon's bronze sculpture of George Washington (1788), which has been moved into the Art Institute for this exhibit from outside Chicago City Hall.

- 111 S. Michigan Ave.
Tickets: (312) 930-4040
Membership: (312) 575-8000
www.artic.edu
www.ticketmaster.com

The Field Museum

A NEW GROUP of dinosaurs is visiting The Field Museum all the way from China, the current hot spot for dinosaur research. *Dinosaur Dynasty: Discoveries from China* features dozens of fossils and casts illustrating 165-million years of dinosaur evolution. Visitors can touch a six-foot-long leg bone and see life-sized casts of a feathered dinosaur and the longest-necked dinosaur that ever lived.

While visiting The Field Museum, say hello to Sue, the largest, most complete and best preserved *Tyrannosaurus rex* fossil ever discovered. Sue is only one of the many noteworthy specimens in the Field's permanent collection. The Field Museum anchors the Museum Campus, which contains the Shedd



A 16.5-foot-long *Monolophosaurus*, an early theropod, is attacking a 20-foot-long *Tuojiangosaurus*, a precursor to the stegosaur and the first plated dinosaur discovered in China.

Aquarium and Adler Planetarium, on South Lake Shore Drive at Soldier Field.

- 1400 S. Lake Shore Dr.
(312) 922-9410
www.fnmh.org

Chicago Historical Society

This urban museum presents the fascinating multicultural heritage of the region in creative, up-to-date exhibits. Check the Web site for neighborhood tours, lectures, performances and events.

- 1601 N. Clark St.
(312) 642-4600
www.chicagohs.org



Lincoln Park Conservatory

A tropical oasis features greenery from around the world. Seasonal features include a chrysanthemum show in November and a Christmas show in December.

- 2391 N. Stockton Dr.
(312) 742-7736

MUSEUMS

© Courtesy of Dinobon, Inc.



One of the robots in the *Robots Like Us* exhibit.

Museum of Science and Industry

THE Museum of Science and Industry is one of the most popular tourist destinations in the City of Chicago, and among seven of the most visited museums in the United States. It opened in 1933 and was the first Museum in North America to develop the idea of hands-on, interactive exhibits.

Annual special exhibits include the *Christmas Around the World* and *Holidays of Light*. Also on display in a special exhibit are more than 200 robots

and space toys from the Robert Lesser collection. *Robots Like Us* explores how these delightful toys once illustrated a generation's fantasies and fears of the future. The Omnimax theater at the Museum of Science and Industry features *Ocean Oasis*, a journey through Mexico's Sea of Cortés and the Baja California desert.

Permanent exhibits include the U-505 World War II subma-



U-505 World War II submarine

rine, Colleen Moore's fairy castle, the Apollo 8 command

module and *IMAGING: Tools of Science*, an exhibit featuring the use of computer-based imaging technology in the fields of medicine, science, law enforcement and entertainment.

■ 57th St. and Lake Shore Dr.
(773) 684-1414
www.msichicago.org

Shedd Aquarium

THE AQUARIUM is home to aquatic life from around the world. The *Wild Reef* exhibit offers one of the most diverse displays of sharks in North America. You can also visit seahorses, otters, seals, dolphins, penguins and whales. The Shedd, a principal part of the Museum Campus, is a tasteful blend of contemporary and 1930s architecture situated on the shore of Lake Michigan.

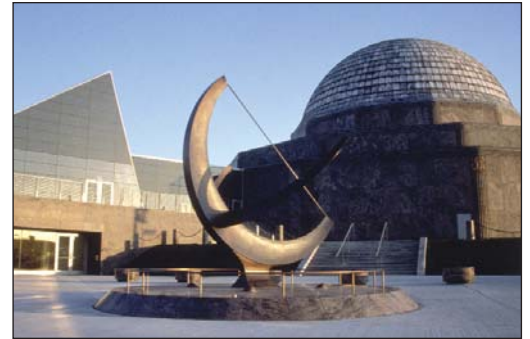


■ 1200 S. Lake Shore Dr.
(312) 939-2438
www.sheddnet.org

Adler Planetarium

PLANETARIUM shows play continuously throughout the day. Scheduled in the virtual reality StarRider Theater are *Stars of the Pharaohs*, *Journey to Infinity* and *SonicVision*. The Sky Theater depicts stars and other nighttime wonders projected on Adler's distinctive dome. Sky Theater presentations include *Race to the Edge of the Universe* and *Space in Your Face*. The Adler Planetarium is located on a scenic section of the Museum Campus jutting into Lake Michigan.

■ 1300 S. Lake Shore Dr.
(312) 922-7827
www.adlerplanetarium.org



Chicago's Adler Planetarium & Astronomy Museum was the first planetarium in the western hemisphere, opening to the public in 1930.

Smith Museum of Stained Glass Windows

Located on the east end of Navy Pier, this free museum houses the nation's largest permanent collection of Tiffany stained glass windows. This tranquil exhibit offers a wonderful repose from the recreational chaos of Navy Pier. The museum has more than 150 stained glass works—some dating back to the 1890s—by artists including John LaFarge, Louis Sullivan, Frank Lloyd Wright, Franz



Mayer and F.X. Zettler. Free guided tours are also available by appointment.

■ 600 E. Grand Ave.
(312) 595-5024

Located on Lake Michigan, Navy Pier has been a Chicago landmark since it first opened in 1916.

Peggy Notebaert Nature Museum

A special exhibit, *Climatic Chaos*, recreates environmental effects, including a thunderstorm, with the

goal of demystifying climate changes. Also, be sure to enjoy the beauty of the butterfly haven. Other permanent exhibits include a look-in animal lab, extreme green house, and a hands-on habitat for visitors age seven and younger.

■ 2430 N. Cannon Dr.
(773) 755-5100
www.chias.org

Garfield Park Conservatory

View the holiday flower show at the Garfield Park Conservatory, which was built in 1907. The conservatory was designed by architect Jens Jensen and is one of the world's largest gardens under glass.

■ 300 N. Central Park Ave.
(312) 746-5100
www.garfield-conservatory.org

Museum of Contemporary Art

TWO SPECIAL EXHIBITS are on display. The *Fluidity of Time* uses work from the MCA's permanent collection to examine the influence contemporary artists working in the '60s, '70s and '80s have had on today's art. The exhibit includes work by Lee Bontecou, Christo, Jasper Johns, Barbara Kruger, Bruce Nauman, Fred Sandback, George Segal, Cindy Sherman and Robert Smithson as well as recent pieces by Carroll Dunham, Ellen Gal-

agher, Jim Hodges, Donald Moffett and Damien Ortega.

Tropicália is named for the seminal movement in Brazilian popular culture that encompassed film, music, theater and the visual arts and has influenced advertising, fashion and television. This exhibit profiles work from the *New Brazilian Objectivity* exhibition along with advertisements, concert excerpts, fashion and film and television clips.

The MCA's permanent collection

represents trends in art after 1945, with a special emphasis in Surrealism (1940s and 1950s), Minimalism (1960s), conceptual art and photography (1960s to the present), installation art and art by local artists. The collection includes paintings, sculpture, photography, video, film and installations.

■ 220 E. Chicago Ave.
(312) 280-2660
www.mcachicago.org

Theater

Mabou Mines DollHouse

Isben's tragedy turned comedy. The director chose a cast composed of extremely tall women and exceptionally short men to completely change the tone of this classic.

■ Court Theatre
5535 S. Ellis Ave.
(773) 753-4472
www.courttheatre.org

Hortensia and the Museum of Dreams

Two estranged siblings return home to Cuba to search for recollection and healing.

■ Victory Gardens Theater & Training Center
2257 N. Lincoln Ave.
(773) 871-3000
www.victorygardens.org

Joseph and the Amazing Technicolor Dreamcoat

Andrew Lloyd Webber's much loved musical about Israel's favorite son stars Patrick Cassidy and American Idol's Amy Adams.

■ Auditorium Theatre of Roosevelt University
50 E. Congress Parkway
(312) 902-1400
www.ticketmaster.com

Chicago—The Musical

A saucy tale of sin and celebrity plays on Chicago's gangster image. The dancing and costumes are not to be missed.

■ Cadillac Palace Theatre
151 W. Randolph
(312) 902-1400
www.ticketmaster.com

After the Quake

This thought-provoking play was adapted from a collection of stories about the personal lives of the people affected by the disastrous earthquake that destroyed Kobe, Japan.

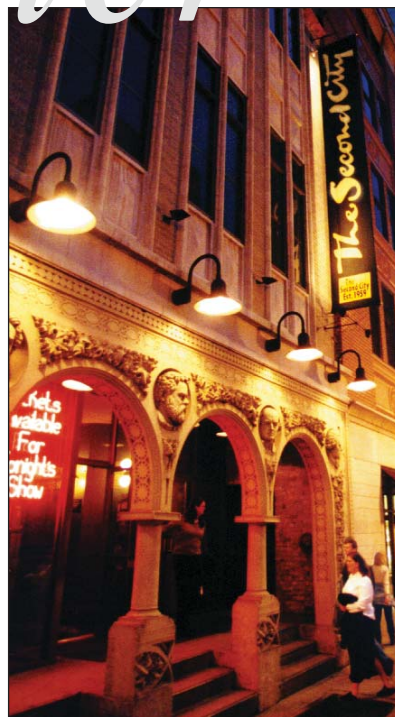
Tickets go on sale in August.

■ Steppenwolf Theater
1650 N. Halsted St.
(312) 335-1650
www.steppenwolf.org

Tommy Gun's Garage

Set in a Prohibition-era speakeasy, the 1920s musical comedy revue includes dinner.

■ Tommy Gun's Garage
2114 S Wabash Ave.
(800) 461-0178
www.tommygunsbar.com



The Second City

Chicago's favorite comedy venue, the venerable Second City, has spawned stars such as John Belushi, Bill Murray, Mike Myers and Tina Fey. The ETC stage features up and coming Chicago comics.

■ Mainstage and ETC stage
1616 N. Wells St.
(312) 337-3992
www.secondcity.com

FAMILY PERFORMANCES:

A Christmas Carol

This production of the famous Dickens' tale makes even Scrooge seem magical.

■ Goodman Theatre
170 N. Dearborn St.
(312) 443-3800
www.goodman-theatre.org

Christmas Schooner

A family production that teaches us to honor our ancestors, remember our histories and celebrate living.

■ Bailiwick Repertory Theater
1229 W. Belmont Ave.
(773) 883-1090
www.bailiwick.org



Tubes

by Blue Man Group
Performance art and comedy meet music.

■ Briar Street Theatre
3133 N. Halsted
(773) 348-4000
www.blueband.com
www.ticketmaster.com



Symphony & Opera

The Lyric Opera of Chicago is recognized internationally as one of the truly great opera companies of our time.

Lyric Opera of Chicago

Manon Lescaut

NOVEMBER 27, 30 AND
DECEMBER 3

The choice between love and riches is always a favorite opera dilemma. This masterwork began Puccini's ascent to fame. *by Giacomo Puccini*
Conductor: Bruno Bartoletti with Vladimir Galouzine and Karita Mattila

The Midsummer Marriage

NOVEMBER 29 AND DECEMBER 2

A runaway bride sets the scene for a journey of discovery.

by Sir Michael Tippett
Conductor: Sir Andrew Davis with Hugh Smith, Stacey Tappan, Kurt Streit and Janice Watson
Tickets go on sale in August
■ 20 N. Wacker Dr.
(312) 332-2244 x5600
www.lyricopera.org

Chicago Symphony Orchestra

NOVEMBER 29

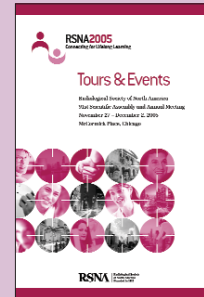
Conductor: John Williams
Program: TBA

DECEMBER 1 AND 2

Conductor: Pinchas Zukerman
Hubbard Street Dance Chicago
Program: All Mozart

■ 220 S. Michigan Ave.
(888) 294-3550
www.chicagosymphony.org

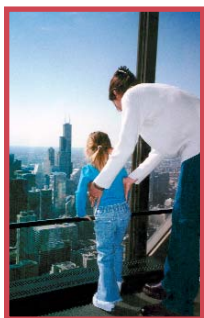
RSNA Tours & Events



RSNA is sponsoring a series of tours and events during RSNA 2005. A Tours & Events brochure is available at rsna2005.rsna.org. Click Tours and City Events in the left-hand column.

RSNA members who participated in tours at RSNA 2003 and RSNA 2004 will automatically receive a brochure in the mail.

You can enroll for tours and events online when you register for the annual meeting or add courses.



The newly renovated Hancock Observatory, located on Chicago's Magnificent Mile, provides spectacular views spanning up to 80 miles and four states!

■ 875 N. Michigan Ave.
www.hancock-observatory.com

American Girl Place

SHOPPERS AT American Girl Place may choose among the beautiful dolls and catch American Girl Review in the theater. Lunch, tea and dinner are served at The Café. Reservations are recommended.

■ 111 E. Chicago Ave.
(877) 247-5223
www.americangirl.com

Navy Pier IMAX Theatre

Visit the Navy Pier IMAX theatre to see Harry Potter and the Goblet of Fire and The Polar Express: An IMAX 3D Experience.

■ 700 E. Grand Ave.
(312) 595-5629
www.imax.com/chicago

Lincoln Park Zoo

The Lincoln Park Zoo is the oldest zoological garden in the country, as well as one of the most modern. Casting a festive glow on the zoo grounds, the ZooLights Festival is a nightly event during the holiday season.

■ 2200 N. Cannon Dr.
(312) 742-2000
www.lpzoo.com

Chicago Children's Museum

CHICAGO CHILDREN'S MUSEUM is committed to creating a community where play and learning connect. More than 12 interactive exhibits and new programs offer hours of creative play. The hands-on exhibits are creatively focused on science, literacy, humanities and the arts. The annual Gingerbread Fantasy Factory

exhibit will open for holiday visitors so children of all ages can pretend to make, bake and decorate gingerbread goodies and participate in creating gingerbread-scented sculptures in the Kraft Artabounds Studio. Children can read and sing-a-long with the Gingerbread Man.

■ 700 E. Grand Ave. (on Navy Pier)
(312) 527-1000
www.chicildrensmuseum.org

Family Activities

Journal Highlights

The following are highlights from the current issues of RSNA's two peer-reviewed journals.

American College of Radiology Imaging Network Digital Mammographic Imaging Screening Trial: Objectives and Methodology

GIVEN THE controversial climate surrounding the value of screening mammography in saving women's lives, the results of the Digital Mammographic Imaging Screening Trial (DMIST) will be important.

Radiology

In a special report in the August issue of *Radiology* (RSNA.org/radiologyjnl), Etta D. Pisano, M.D., from the University of North Carolina School of Medicine in Chapel Hill, and colleagues describe the objectives and methodology of DMIST, including:

- Digital technology
- Screen-film technology
- Acceptance testing and quality control for the equipment
- Training for protocol compliance
- Imaging protocol
- Image interpretation
- Work-up after an abnormal mammogram
- Determination of truth regarding breast cancer status
- Data collection and management
- Statistical considerations for primary aim
- Quality of life substudy
- Cost-effectiveness analysis
- Reader studies using the DMIST image archive

(*Radiology* 2005;236:404-412)

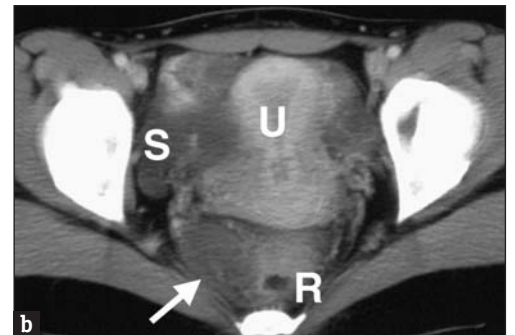
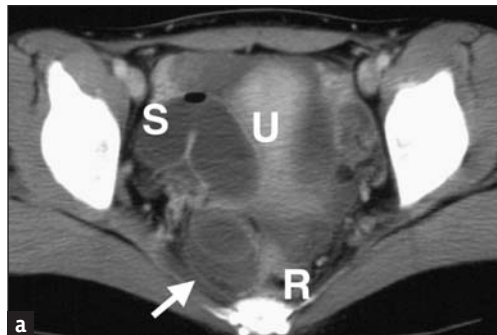


CT of Internal Hernias

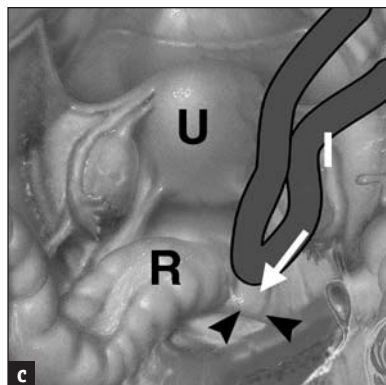
CT PLAYS an important role in the diagnosis of acute intestinal obstruction and planning of surgical treatment. Although internal hernias are uncommon, they may be included in the differential diagnosis in cases of intestinal obstruction, especially in the absence of a history of abdominal surgery or trauma. Knowledge of the anatomy of the peritoneal cavity, the characteristic anatomic location **RadioGraphics** and CT findings of each type of internal hernia may assist in their identification.

In an article in the July-August issue of *RadioGraphics* (RSNA.org/radiographics), Nobuyuki Takeyama, M.D., and colleagues from the Showa University School of Medicine in Tokyo describe their clinical experience with internal hernias, the imaging technique and diagnosis with CT.

Continued on next page



Hernia through a defect of the right perirectal fossa in a 28-year-old woman with continuous lower abdominal pain of 34 hours duration. (a, b) Contrast-enhanced CT scans of the pelvis (b obtained 10 mm below a) show dilated and fluid-filled small bowel loops (S). A cluster of dilated bowel loops (arrow) is located to the right of the rectum (R) and behind the uterine cervix (U). Laparotomy was performed four hours after CT.



(c) Drawing (superior view) of the surgical findings shows that the antimesenteric wall of an ileal loop (I), located 50 cm from the ileocecal valve, was herniated (Richter hernia) through a defect (arrow) in the anterior peritoneal layer of the right perirectal fossa (arrowheads). When withdrawn manually, the incarcerated bowel loop was viable and nongangrenous.

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Radiology in Public Focus

Press releases have been sent to the medical news media for the following articles appearing in the August issue of *Radiology* (RSNA.org/radiologyjnl):

Incidentally Discovered Extracolonic Abnormalities at CT Colonography in a Male Population

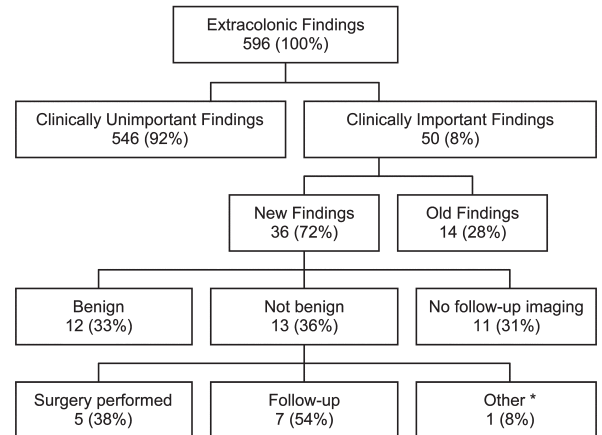
CT COLONOGRAPHY (CTC) can identify clinically important extracolonic findings at very little additional cost.

Judy Yee, M.D., and colleagues from the Veterans Affairs Medical Center and University of California School of Medicine in San Francisco prospectively evaluated the prevalence of incidental extracolonic findings at CTC in 500 high-risk and average-risk men.

Of the 500 patients in the study, 315 (63 percent) had extracolonic findings. Among that subset, 45 patients (14 percent) had clinically important extracolonic findings, the

majority of which were validated on follow-up imaging. The cost of additional imaging prompted by extracolonic findings on CTC was low, averaging an additional \$28.12 per patient screened.

“Given the relatively small additional cost of \$28.12 per patient and that a substantial portion of the total cost was directed toward diagnosing lesions that were truly important, the work-up of abnormal extracolonic findings appears to be economically feasible,” the authors wrote.



Flow chart categorizes extracolonic findings in the study population. *This patient, who had metastatic colon cancer, refused treatment of the extracolonic finding of renal cell carcinoma.

(Radiology 2005;236:519-526) © 2005 RSNA. All rights reserved. Printed with permission.



Media Coverage of Radiology

In June, 47 media outlets carried news stories generated from articles appearing in *Radiology*. These stories reached an estimated 103 million people.

Defensive medicine and mammography (*Radiology* 2005;236:37-46) garnered the

most attention with 18 media placements, including *Investor's Business Daily* and United Press International. Diagnostic imaging's role in healthcare costs (*Radiology* 2005;235:934-939) was covered

by *Physician's Weekly*. Ivanhoe Broadcast News distributed a wire story on fMRI for presurgical evaluation of patients with seizure disorder (*Radiology* 2005;236:247-253).

RSNA press releases are available at www.rsna.org/media.

CT of Internal Hernias

Continued from previous page

They also:

- Describe the normal anatomy of the peritoneal cavity
- Describe the characteristic anatomic location of each type of internal hernia

- Identify the characteristic CT appearances of various types of internal hernias
- Discuss the clinical findings and appropriate management of internal hernias

This article meets the criteria for 1.0 CME credit.

Adding in Vivo Quantitative ^1H MR Spectroscopy to Improve Diagnostic Accuracy of Breast MR Imaging: Preliminary Results of Observer Performance Study at 4.0 Tesla

THE ADDITION of quantitative hydrogen 1 (^1H) MR spectroscopy to the breast MR imaging examination may help to improve the radiologist's ability to distinguish benign from malignant breast lesions.

Sina Meisamy, M.D., and colleagues from the Center for Magnetic Resonance Research Medical School in

Minneapolis reviewed the results of 55 breast MR imaging cases evaluated by four radiologists.

Of the 55 lesions evaluated, 35 were invasive carcinomas and 20 were benign. The addition of ^1H MR spectroscopy resulted in higher sensitivity, specificity, accuracy and interobserver agree-

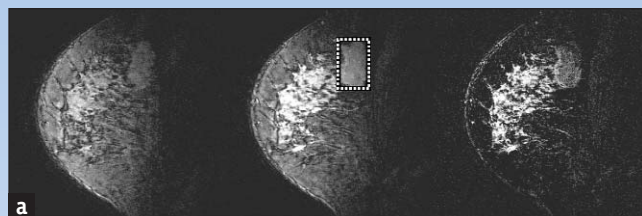
ment for all four radiologists. More specifically, two of the four radiologists achieved a significant improvement in sensitivity and all four radiologists achieved a significant improvement in accuracy.

"With the addition of ^1H MR spectroscopy, it may be possible to reduce the number of missed cancers and

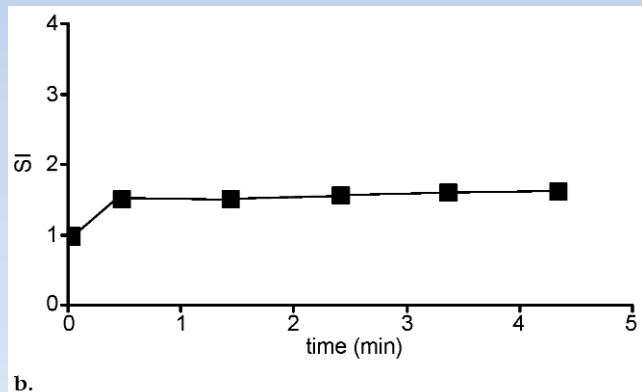
benign lesion biopsies and to improve the accuracy of surgical staging. The promising findings in this study were observed in a moderately small group of patients; thus, an observer performance study involving a larger patient series is needed," the researchers wrote.

Radiology

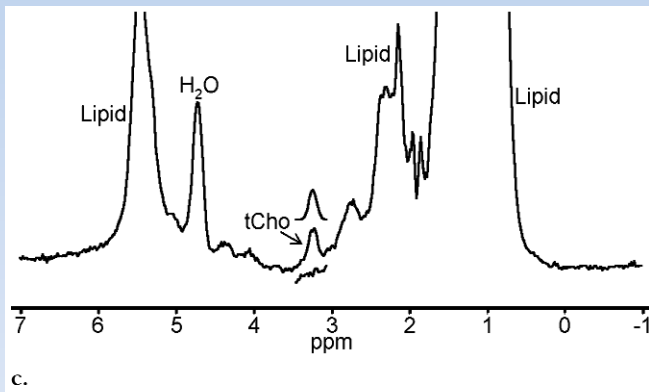
Breast MR imaging case in which ^1H MR spectroscopic findings led to altered treatment recommendations.



(a) Sagittal high-spatial-resolution 3D fat-suppressed fast low-angle shot MR images of the breast (13.5/4.1) obtained before (left) and seven minutes after (middle) gadopentetate dimeglumine injection and with subtraction (right) show an 8.3-cm³ lesion. The box surrounding the lesion depicts the MR spectroscopic voxel.



(b) Time-signal intensity (SI) curve measured from the lesion depicted in a. All four readers described this curve as showing slow enhancement during the initial phase followed by an enhancement plateau or persistent enhancement during the delayed phase. After evaluating the morphologic features and time-signal intensity curve of the lesion, three of the four readers did not recommend biopsy; rather, they recommended a six-month follow-up examination. The fourth reader recommended biopsy.



(c) ^1H MR spectra measured from the lesion. The spectral peaks of mobile lipid, water, and total choline-containing compounds are labeled. The lines above and below the tCho peak represent the fitted tCho peak and the residual of the fit, respectively. The mean tCho concentration measured from this lesion was 1.78 mmol/kg \pm 0.56. When the tCho measurement was presented to the readers in the second interpretation, three of the four readers changed their decision and recommended biopsy; the fourth reader kept the recommendation of biopsy. This patient received a diagnosis of invasive ductal carcinoma.

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Working For You

Coffee Mugs for New Chief Residents

RSNA will send a congratulatory gift to new radiology chief residents in the United States. The chief residents will receive a mug in a coffee-themed package to acknowledge their accomplishments and congratulate their choice to become radiologists. RSNA membership is free to residents and medical students.



RSNA Endorses Smoke-Free Chicago

RSNA is supporting a coalition whose mission is to make Chicago a smoke-free city. The coalition is led by the American Cancer Society, in partnership with the American Heart Association, American Lung Association, The Campaign for Tobacco-free Kids and National African

American Tobacco Prevention Network.

McCormick Place, home to the RSNA annual meeting, is NOT a smoke-free building. During the annual meeting, RSNA insists that the complex is smoke free. Smoking areas are set up outside of McCormick Place during the meeting.



RSNA Research & Education Foundation

THE Research & Education Foundation staff comprises five people working in three areas—grant review and administration, Board of Trustees/committee governance and fund development. Together, the team pursues the mission of the Foundation: *to improve patient care by supporting research and education in radiology and related scientific disciplines through funding grants and awards to individuals and institutions that will advance radiologic research, education and practice.*

Obtaining grant support has become increasingly important in today's academic environment. The



(from left)
Diane Tokarski
Susan Thomas, M.A., Director
Deborah Kroll, Managing Director of Fund Development
Scott Walter, M.S.
 (not pictured) **Rita Lietz**

Foundation's grant programs often provide the first step to a career in radiologic research or education while providing the experience necessary to obtain major funding from corporations and governmental agencies. Foundation staff works with the Trustees, committee and peer-review study section members, and the grant applicants to make "proposed projects" a reality. Fundraising is crucial. Grant

awards would not be possible without the financial contributions of RSNA members and corporate sponsors.

The Research & Education Foundation staff reports to RSNA Assistant Executive Director Mark Watson, C.P.A.

Working for you DEPARTMENT PROFILE

If you have a colleague who would like to become an RSNA member, you can download an application at RSNA.org/mbrapp or contact the RSNA Membership and Subscription Department at (877) RSNA-MEM [776-2636] (U.S. and Canada), (630) 571-7873 or membership@rsna.org.

Program and Grant Announcements

NEW!

Image-Guided, Minimally Invasive Diagnosis & Treatment of Prostate Cancer

October 27-29 • Loews L'Enfant Plaza Hotel, Washington, D.C.

THE 3rd international public conference on Innovative Solutions for Prostate Cancer Care will be held this fall in Washington, D.C. The goal of "Image-Guided, Minimally Invasive Diagnosis & Treatment of Prostate

Cancer" is to review the current state of the art in and to expedite development and implementation of new technologies in the area of prostate imaging and image-guided treatment.

This conference is sponsored and

organized by AdMeTech, in cooperation with the National Cancer Institute and National Electrical Manufacturers Association.

For more information, go to www.admetech.org/conferences.php.

Surviving the Filmless Transition

September 17, 2005 • RSNA Headquarters, Oak Brook, Ill.

REGISTER ONLINE at RSNA.org/education/shortcourses for this one-day course specifically designed to address the changing needs of practicing radiologists.

7.25 CME credits available

Co-sponsored by RSNA and the Society for Computer Applications in Radiology (SCAR), this course is for radiologists who are faced with the dilemma of relearning the practice of

radiology due to new digital technologies and applications. These advancements pose new challenges in all facets of medical imaging, from image acquisition to report generation.

For more information, contact the RSNA Education Center at (800) 381-6660 x3747 or ed-ctr@rsna.org.



In June, RSNA and SCAR hosted the Planning for the Filmless Transition course in Orlando. (from left) David Channin, M.D., Nogah Haramati, M.D., Bruce Reiner, M.D., David Weiss, M.D., David Piraino, M.D., Eliot Siegel, M.D., and Khan Siddiqui, M.D.

PowerRAD 2005

August 13, 2005 • RSNA Headquarters, Oak Brook, Ill.

LIMITED SPACE is still available for this one-day RSNA workshop for radiologists, radiologic technologists and support personnel.

Directed by Paul J. Chang, M.D., the course will inform attendees about how to convert analog and digital radiology images into electronic formats for presentations, case files and personal teaching files, and how to edit images and text using lecture software. Since RSNA will provide attendees with the use of a desktop computer, space is limited.

This course includes:

- Practical hands-on experience
- Personalized instructions
- CD-ROM software

For more information and to register, go to RSNA.org/education/shortcourses or contact the RSNA Education Center at (800) 381-6660 x 3747 or ed-ctr@rsna.org.



6.25 CME credits available

Continued on page 24



Research & Education Foundation Donors

THE BOARD OF TRUSTEES of the RSNA Research & Education Foundation and its recipients of research and educational grant support gratefully acknowledge the contributions made to the Foundation **May 31 – June 30, 2005**.

For more information on Foundation activities, a quarterly newsletter, *Foundation X-aminer*, is available online at www.rsna.org/research/foundation/newsletters/x-aminer/x-aminer.pdf.

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Austin Radiological Association

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Platinum level



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GOLD (\$500 - \$999)

Vikram S. Dogra, M.D.
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Online donations can be made at RSNA.org/research/foundation/donation.

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\$1,500 per year

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Kenneth G. Carter, M.D.
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In memory of Robert G. Parker, M.D.
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In honor of Oscar C. Zink, M.D.
Robert D. Zimmerman, M.D.
In honor of Israel Zimmerman

RSNA Grant Recipient Sees Bright Future for MR Colonography



MR colonography may be just what the doctor ordered for increasing the number of patients screened for colon cancer.

Colorectal cancer is the third leading cause of cancer death in the United States with more than 57,000 fatalities per year, according to the National Cancer Institute. More than 147,000 new cases are diagnosed each year, a slight decrease over recent years.

Despite public information campaigns urging Americans to undergo screening, fewer than 50 percent do so. Many complain about the uncomfortable prep and sedation, and report anxiety about the delicate nature of the procedure itself. In addition, there is growing concern among patients and medical professionals about the use of radiation for screening purposes.

Martina Morrin, M.D., a staff radiologist at Beth Israel Deaconess Medical Center and an assistant professor of radiology at Harvard Medical School, used her 1999 RSNA Research Seed Grant to help develop MR colonography. The technique requires very little prep, is minimally invasive and uses air as the luminal contrast agent.

"We are on the path to developing a nearly prep-free screening and unlike CT colonography, MR colonography does not expose the patient to radiation," she said.

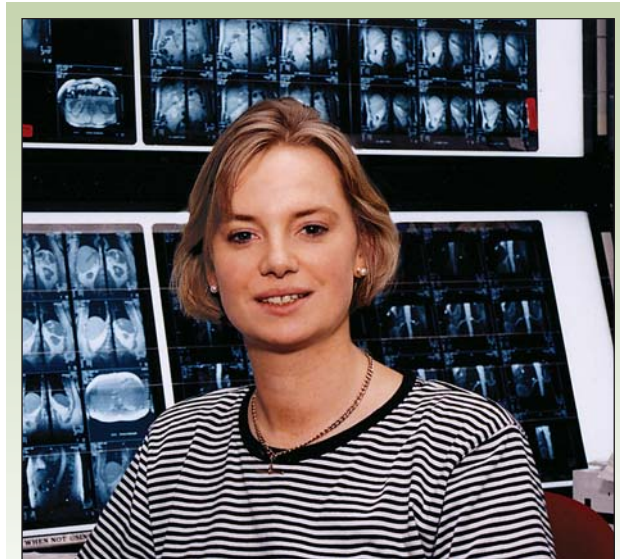
In addition, MR colonography demonstrates all organs in the abdomen giving it a distinct advantage over tra-

ditional colonoscopy. "In my work with MR colonography, I have found some potentially cancerous complex renal cysts that would not have been found with colonoscopy," explained Dr. Morrin.

She said patients have found the technique much more tolerable than colonoscopy. When surveyed, she said 43 percent of patients preferred MR screening, 29 percent preferred colonoscopy and the remainder had no preference.

"Dr. Morrin's work addresses an extremely important area of research and development for future application in virtual imaging," said Melvin Clouse, M.D., vice-chairman and director of Research at Beth Israel Deaconess Medical Center and professor of radiology at Harvard Medical School. "Advances in cutting-edge image processing have created a unique opportunity for the radiologist to take a more active and pivotal role in the detection of colorectal cancer."

When Dr. Morrin began her research of MR colonography in 1999, she scanned 22 patients with a 1.5 Tesla MR system. She was able to identify three out of five polyps that were one centimeter or larger, representing a 60 percent sensitivity for



Martina Morrin, M.D.
1999 RSNA Research Seed Grant Recipient

large polyps. Identifying smaller polyps was difficult using the available technology.

With the preliminary data obtained through her RSNA Research Seed Grant, Dr. Morrin applied for and received another research grant, this one from the Association of University Radiologists. She began to build her database by scanning an additional 40 patients using newer computer software and an up-to-date protocol. The sensitivity increased dramatically. She garnered 100 percent sensitivity for polyps one centimeter and larger, 80 percent for medium-sized polyps (5-10 mm) and 20 percent for polyps less than five millimeters."

"Over the past five years there has been a real evolution in hardware and software and our research has evolved with the technology. There seems to be a new advance every couple of months that makes a huge impact on the field," said Dr. Morrin.

Continued on next page

The technology is evolving so rapidly that I know things will look a lot better for MR colonography in five years and our work will have contributed to that progress.

Martina Morrin, M.D.

Continued from previous page

But while MR colonography is showing real promise, going from bench to bedside has been tricky, especially with the increased use of CT colonography.

“A lot of software companies are very interested in CT and have been part of the force that has pushed it forward. It has been a bit more challenging to get people in the software companies involved in MR because they’re so involved in CT,” said Dr. Morrin. “We are nowhere near where CT is today. But the technology is evolving

so rapidly that I know things will look a lot better for MR colonography in five years and our work will have contributed to that progress.”

Dr. Morrin says she loves the diversity of her work and credits the RSNA grant with kick-starting her research career. “I have learned so much through research that I can apply to my everyday clinical work. It has given me a much better understanding of the field in general,” said Dr. Morrin. “I’m more confident now and consider myself a capable independent researcher, which is a wonderful sce-

nario particularly now that I am moving back to the European scene.”

Dr. Morrin received her medical degree from the University College in Dublin, Ireland, and completed her radiology residency at Mater Misericordiae Hospital in Dublin. She and her husband, a gastroenterologist, came to the United States in 1997 to complete their fellowships at Beth Israel Deaconess Medical Center and subsequently joined the staff in 1999. They plan to return to Ireland in the fall where Dr. Morrin says she will continue her research on MR. □

EDUCATION RESEARCH

Program and Grant Announcements

Continued from page 21

NEW!

Personal Financial Management Strategies Seminars Prior to RSNA 2005

RSNA is offering two personal financial seminars on Saturday, November 26, 2005, at McCormick Place in Chicago. These two popular sessions are prior to the RSNA annual meeting.

Protecting Assets From Creditor Claims, Including Malpractice Claims

10:00 a.m. – 12:00 p.m.

Presented by Barry Rubenstein, B.S., J.D., L.L.M.

IN TODAY’S tort claim environment, a practitioner’s exposure to potential malpractice and creditor claims in excess of insurance coverage has dramatically increased. This course addresses, in essential detail, how to minimize and even avoid that exposure and protect hard-earned assets from creditor attack.

Each includes a textbook written specifically for the course!

Effective Real Estate Investment Strategies

1:00 p.m. – 5:00 p.m.

Presented by J. Michael Moody, M.B.A.

ASTUTE INVESTORS know that investment real estate pays steadier and higher cash returns than stocks and that no other investment offers the combined advantages of cash flow, appreciation and tax shelter. This course will provide attendees with a strong foundation and working knowledge of investment real estate. Unlike financial planner or stockbroker provided courses, there is absolutely no sales pitch.



Registration Fees:

(These seminars do not qualify for AMA category 1 credit.)
 Protecting Assets From Creditor Claims \$129
 Effective Real Estate Investment Strategies . . . \$159
 Both courses \$269
 Register for both courses online at RSNA.org/register.

For seminar questions, please contact the RSNA Education Center at (800) 381-6660 x3747 or at ed-ctr@rsna.org.

Product News

NEW PRODUCT

Interactive Desk Improves PACS Reading Room Environment

B IOMORPH® (*biomorph.com*) has unveiled its Level 3 desks featuring a linear design that supports multiple LCD monitors. Level 3 desks include corner and floating designs to maximize space planning, and are available with either crank or electric-driven height adjustment, capable of instant sit-to-stand adjustment for increased comfort and compatibility.

“The key to good ergonomics is adjustment for each individual,” said Stephen Barlow-Lawson, president of Biomorph. “Our desks improve efficiency in PACS reading rooms by dealing with the physical challenges radiologists face on a daily basis, mainly reading image files for up to 10 or more hours a day.”



NEW PRODUCT

New Digital Color Medical Imager

Eastman Kodak Company (*kodak.com*) has released its new KODAK Color Medical Imager 1000 that prints high-quality diagnostic color images for nuclear medicine, ultrasound, 3D imaging and other digital medical imaging systems.

The networked, desktop digital imager includes an integrated DICOM interface to provide maximum functionality with a minimal footprint. It also supports 13 languages and features a touch screen interface that enhances operator



productivity.

Every image is protected with a durable laminate overcoat that resists fingerprints, water and fading.

NEW PRODUCT

New Radiology Reporting Solutions

StructuRad LLC (*structurad.com*) has unveiled two radiology reporting solutions—FastFindings Reporter™ and FastFindings Reporter Pro™—that include a powerful macro management feature allowing for the creation, modification and management of standard and custom macros.

FastFindings Reporter is designed for radiologists and transcriptionists who

want to create reports directly using macros and knowledge base selections via keyboard and mouse. FastFindings Pro contains powerful command and control voice recognition features to recall commonly used macros and or voice recognition for hands free reporting.

Both products create final reports and can be easily exported into a variety of RIS or HIS systems.

PATENT, FDA APPROVAL

Hormone Peptide Patent Approved, Labeling Expanded

Bracco Diagnostics Inc. (*bracco.com*) has received patent approval from the U.S. Patent and Trademark Office for a new formulation of Kinevac® (Sinclairide for Injection).

Kinevac is a cholecystopancreatic-gastrointestinal hormone peptide for parenteral administration. Its main use is to stimulate gallbladder contraction during diagnostic imaging examinations to help evaluate gallbladder function.

Bracco also received approval from the U.S. Food and Drug Administration to implement a labeling change to expand Kinevac usage under all imaging modalities. Originally, Kinevac was approved only for use with cholecystography or ultrasonography. The new labeling covers more widely used hepatobiliary imaging techniques including cholescintigraphy.

News about RSNA 2005

Registration Materials

NORTH AMERICANS who register for RSNA 2005 by **November 11** will have their registration materials mailed to them in advance of the annual meeting. International attendees will have their materials mailed to them if their registration forms are received by **October 28**.



The registration materials are sent in a badge wallet that includes:

- Name badge and holder
- Course and tour tickets (if requested)
- Attendance vouchers
- ExpoCard™
- Free pass for the Metra Train System
- Airport shuttle discount coupon
- Coupon book
- *Pocket Guide*

ExpoCard™

ExpoCard™ is an electronically-personalized business card attendees can use at the technical exhibition to request exhibitor information. The card is encoded with the holder's name, institution, address, e-mail address, phone/fax numbers and radiologic specialty. Attendees who prefer that exhibitors contact them



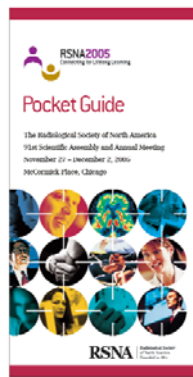
at a different address than the one used during advance registration should provide the alternate information directly to the exhibitor at the point of contact. They may also visit either Help Center at McCormick Place to change the registration and ExpoCard detail.

Pocket Guide

The RSNA 2005 *Pocket Guide* is an important, easy-to-use reference guide for the annual meeting. It includes two main sections:

Overview of the RSNA Scientific Assembly and Annual Meeting

- Complete A-Z listing of everything available to attendees
- Room assignments for the scientific sessions, refresher courses and plenary sessions
- Floor plans of each building and each floor of McCormick Place



- Airport transportation service with times, cost and boarding information
- Complete Metra Train System schedule outlining station locations, times and drop-off destinations
- Parking lot locations, hours and fees

Traveling to and from McCormick Place

- Shuttle bus schedules, routes and boarding locations
- Taxi fees, loading and unloading areas

Transportation information is also available online at rsna2005.rsna.org. Click on Transportation in the left-hand column.

How to Register

There are four ways to register for RSNA 2005:

1 Internet

Go to RSNA.org/register. Use your member ID# from the **INSTANT CONFIRMATION!** RSNA News label or meeting flyer sent to you. If you have questions, send an e-mail to rsna@itsmeetings.com.

2 Fax (24 hours)

(800) 521-6017
(847) 940-2386

3 Telephone

(Monday – Friday,
8:00 a.m.–5:00 p.m. CT)
(800) 650-7018
(847) 940-2155

4 Mail

ITS/RSNA 2004
108 Wilmot Rd.,
Suite 400
Deerfield, IL
60015-5124
USA

Registration Fees

BY 11/11	ONSITE	
\$0	\$100	RSNA Member, AAPM Member
\$0	\$0	Member Presenter
\$0	\$0	RSNA Member-in-Training, RSNA Student Member and Technical Student
\$0	\$0	Non-Member Presenter
\$120	\$220	Non-Member Resident/Trainee
\$120	\$220	Radiology Support Personnel
\$570	\$670	Non-Member Radiologist, Physicist or Physician
\$570	\$670	Hospital or Facility Executive, Commercial Research and Development Personnel, Healthcare Consultant, Industry Personnel
\$300	\$300	One-day registration to view only the Technical Exhibits area

For more information about registration at RSNA 2005, visit RSNA.org, e-mail reginfo@rsna.org, or call (800) 381-6660 x7862.



News about RSNA 2005

Enroll for Courses

RSNA2005
Connecting for Lifelong Learning

Advance Registration,
Housing and Course
Enrollment

Radiological Society of North America
91st Scientific Assembly and Annual Meeting
November 27 - December 2, 2005
McCormick Place, Chicago

Earn up to 83 AMA PRA category 1
CME credits at RSNA 2005

RSNA Radiological Society
of North America
Fond du Lac, WI

Room is still available in many of the courses at RSNA 2005. Online registration occurs instantly while faxed or mailed registration forms are processed in the order of receipt. The Advance Registration, Housing and Course Enrollment brochure and online registration is available at rsna2005.rsna.org.

An Interventional Oncology Symposium, cosponsored by RSNA and the SIR Foundation, is being offered at RSNA 2005 and can be found under the course enrollment section. Details of the symposium program content will be included in a feature article in the September issue of *RSNA News*.

You must be registered for RSNA 2005 in order to enroll for courses.

Important Dates for RSNA 2005

Oct. 28	International deadline to have full-conference badge and tickets mailed in advance
Nov. 7	Final housing reservation deadline
Nov. 11	Advance registration deadline
Nov. 27–Dec. 2	RSNA 91st Scientific Assembly and Annual Meeting



Routes servicing 35 hotels in the RSNA block use the new dedicated bus lane.

Shuttle Bus Service

RSNA offers shuttle bus service to and from McCormick Place. A dedicated bus lane makes the trip quick and easy, even during rush hours. The schedule is available online at rsna2005.rsna.org. Click on Transportation in the left-hand column and then on Getting Around Chicago.

Children under the age of 16 will be allowed to ride on the RSNA shuttle buses; however, they still will not be allowed to attend the meeting. Onsite childcare will be available for children ages six months to 12 years through ACCENT on Children's Arrangements, Inc. Application forms are available on rsna2005.rsna.org. Click on Registration, Housing and Courses, then on Childcare.

International Delegates

Personalized invitation letters are available at rsna2005.rsna.org. Click on International in the left-hand column. That section of the annual meeting Web site also includes important information about visa applications.

Visa applicants are advised to apply as soon as they decide to travel to the United States and at least **three to four months** in advance of their travel date. It is recommended that international attendees start the visa process now.

For more information, go to:

- www.unitedstatesvisas.gov
- travel.state.gov/visa
- nationalacademies.org/visas

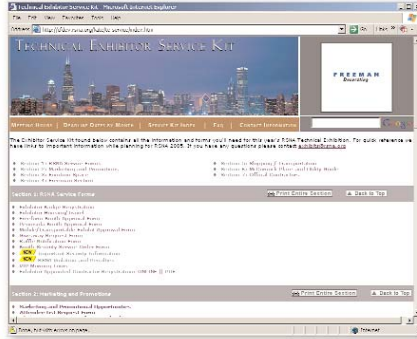


RSNA 2005 Exhibitor News

Service Kit Available Online

THE RSNA 2005 Technical Exhibitor Service Kit is available at rsna2005.rsna.org. Click on the Already an Exhibitor link in the Technical Exhibition area on the right.

Exhibitors can download service request forms and easily find important information such as registration hours, exhibit installation and dismantling hours, rules and regulations, RSNA forms and official contractor information.



The electronic kit also allows online ordering capabilities with some contractors.

For up-to-date information about technical exhibits, go to rsna2005.rsna.org.

Free Promotional Tools for Exhibitors

As part of the Technical Exhibitor Service Kit, RSNA has included free promotional tools to help exhibitors make customers and potential customers aware of their booth location at the annual meeting.

Postcards and flyers can be customized with an exhibitor's logo, message and exhibit location. Downloadable images are also available for the creation of other customized promotional materials.

Advertising opportunities at RSNA 2005 include:

- *Pocket Guide*



- *Daily Bulletin*
- Subspecialty content brochures
- Coupon Book
- Motion Billboard
- Directional Signs

For more information, contact Jim Drew at (630) 571-7819 or jdrew@rsna.org.

Exhibitors at the Annual Meeting

About 70 first-time exhibitors have already signed up to participate in RSNA 2005. The total number of exhibitors is also up six percent from this time last year at 599.

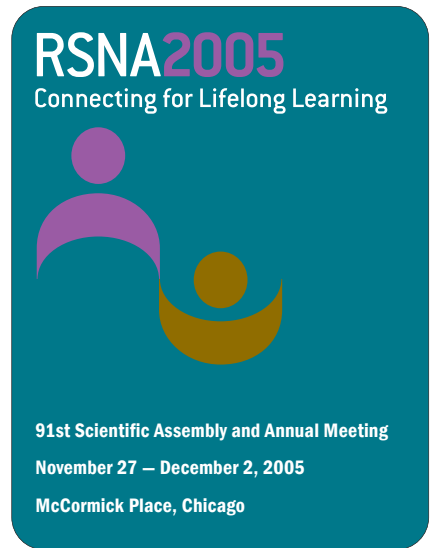
Exhibit Space Summary (As of July 22, 2005)

■ Exhibit Type	
Technical	599
Hands-on Computer Workshops	6
Headquarters Office Space	22
Publishers Row	24
■ Square Footage	
South Building	310,370 square feet
North Building	153,700 square feet
Total	464,070 square feet

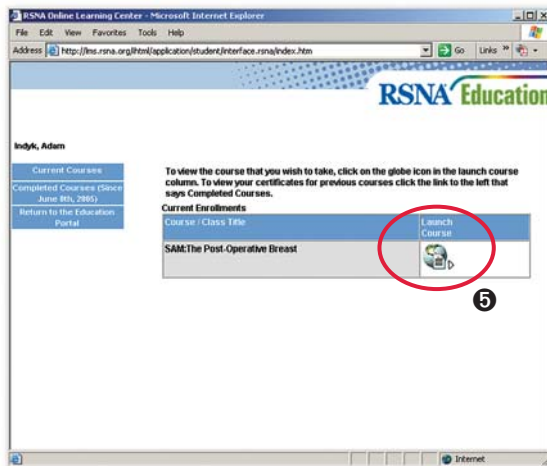
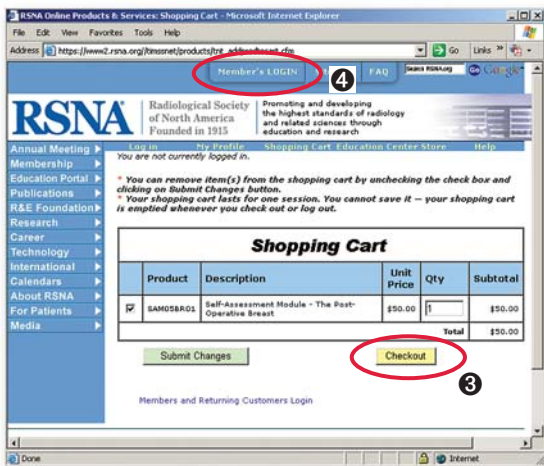
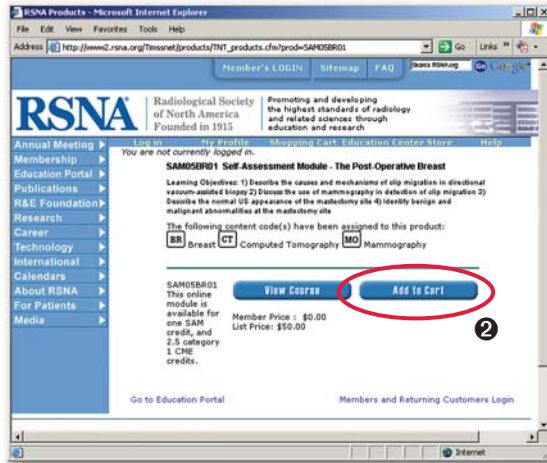
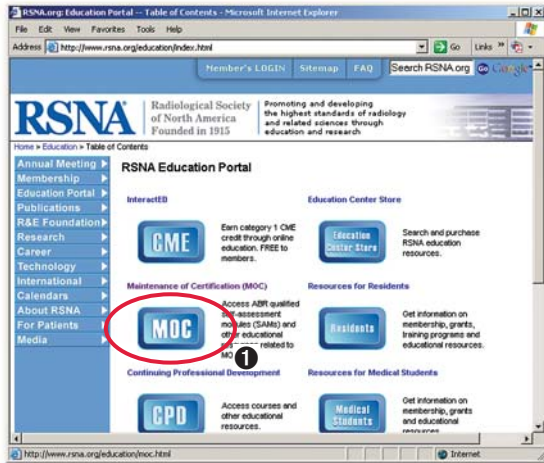
■ For more information, contact RSNA Technical Exhibits at (800) 381-6660 x7851 or e-mail: exhibits@rsna.org.

Important Exhibitor Dates for RSNA 2005

- Aug. 12** Deadline for final payment
Deadline for reduction/cancellation (for partial refund)
- Aug. 15** Deadline to submit Block Housing room deposits
- Aug. 26** Headquarters Office Space Assignments close
- Sep. 2** Deadline for submission of freeform/peninsula/mobile exhibit plans
- Sep. 19** Target move-in assignments released
- Oct. 12** RSNA net early bird deadline
- Oct. 14** Exhibitor Appointed Contractor Request Form deadline
- Oct. 28** Deadline for Exhibitor Badge Order Form
- Nov. 4** Deadline for housing changes and cancellations
Deadline for Exhibitor Individual Housing
Deadline for Function Space Requests
- Nov. 11** Technical exhibit space assignments close
- Nov. 27–** RSNA 91st Scientific Assembly and Annual Meeting
- Dec. 2**



RSNA.org



connections Your online links to RSNA

- RSNA.org**
- Radiology Online**
RSNA.org/radiologyjnl
- Radiology Manuscript Central**
RSNA.org/radiologyjnl/submit
- RadioGraphics Online**
RSNA.org/radiographics
- RSNA News**
rsnanews.org
- Education Portal**
RSNA.org/education
- CME Credit Repository**
RSNA.org/cme
- CME Gateway**
CMEgateway.org
- RSNA Medical Imaging Resource Center**
RSNA.org/mirc
- RSNA Career Connections**
RSNA.org/careers
- RadiologyInfo™**
RSNA-ACR patient information Web site
radiologyinfo.org
- RSNA Press Releases**
RSNA.org/media
- RSNA Online Products and Services**
RSNA.org/memberservices
- RSNA Research & Education Foundation**
Make a Donation
RSNA.org/donate
- Community of Science**
RSNA.org/cos
- Membership Applications**
RSNA.org/mbrapp
- RSNA Membership Directory**
RSNA.org/directory
- Register for RSNA 2005**
RSNA.org/register
- RSNA 2005**
rsna2005.rsna.org

NEW

RSNA Offers Self-Assessment Modules for MOC Requirements

TAKE ADVANTAGE of RSNA's new self-assessment modules (SAMs) to meet a key component of the American Board of Radiology's maintenance of certification (MOC) requirements.

SAMs are free for RSNA members. Nonmembers pay \$50 per SAM.

Go to RSNA.org/education

and click on MOC. ❶ Click on Self-Assessment Modules and then click on the subspecialty of your choice.

Once you choose a course and read the learning objectives, you will need to click Add to Cart ❷ and Checkout ❸ before you can begin. You must be logged in as an RSNA member to receive the course for free. If you

were not yet logged in, click Member's login ❹ at the top of the page before proceeding to checkout.

When you are ready to begin, click on the icon of the globe in the Launch Course column. ❺ Additional details about RSNA SAMs are available on page 9.

Medical Meetings

September – October 2005

SEPTEMBER 7-10

Society for Molecular Imaging (SMI), 4th Annual Meeting, Gürzenich Congress Center, Cologne, Germany
• www.molecularimaging.org

SEPTEMBER 10-14

Cardiovascular and Interventional Society of Europe (CIRSE), Annual Meeting and Postgraduate Course, Nice Acropolis, Nice, France • www.cirse.org

SEPTEMBER 14-17

International Organization for Medical Physics (IOMP), 14th International Conference of Medical Physics, 9th European Congress of Medical Physics, 64th Annual Meeting of the German Society of Medical Physics (DGMP), 39th Annual Meeting of the German Society for Biomedical Engineering, Congress-Center Nürnberg, Germany • www.icmp2005.org

SEPTEMBER 14-17

Sociedad Mexicana de Radiología e Imagen (SMRI), IV Annual Ultrasound Course, Hotel Sheridan Maria Isabel, Mexico City
• www.smri.org.mx

SEPTEMBER 15-17

Journal of the American Medical Association (JAMA), *British Medical Journal (BMJ)*, 5th International Congress on Peer Review and Biomedical Publication, Fairmont Hotel, Chicago
• www.jama-peer.org

SEPTEMBER 17

Surviving the Filmless Transition, RSNA/SCAR Course, RSNA Headquarters, Oak Brook, Ill.
• RSNA.org/education/shortcourses

SEPTEMBER 21-24

American Society of Head and Neck Radiology (ASHNR), 39th Annual Meeting, Renaissance Parc 55 Hotel, San Francisco
• www.ashnr.org

SEPTEMBER 21-24

American Society of Emergency Radiology (ASER), Annual Meeting and Postgraduate Course, Westin La Paloma Resort and Spa, Tucson, Ariz. • www.erad.org

SEPTEMBER 22-24

European Society of Head and Neck Radiology (ESHNR), Annual Congress, Keble College, Oxford, United Kingdom
• eshnr2005.org

SEPTEMBER 25-28

European Federation of Societies of Ultrasound in Medicine and Biology, 17th European Congress of Ultrasound, Palexpo Congress & Exhibition Centre, Geneva, Switzerland
• www.euroson2005.org

SEPTEMBER 28-OCTOBER 1

International Skeletal Society (ISS), 32nd Annual Refresher Course, Raffles City Shopping and Convention Centre, Singapore • www.iss2005.com

SEPTEMBER 29-OCTOBER 2

Canadian Association of Radiology (CAR), 68th Annual Scientific Meeting, Fairmont Château Lake Louise, Alberta, Canada • www.car.ca

OCTOBER 8-11

North American Society for Cardiac Imaging (NASCI), 33rd Annual Meeting & Scientific Sessions, Ritz-Carlton, Amelia Island, Fla. • www.nasci.org

OCTOBER 9-12

Radiology Business Management Association (RBMA), Fall Educational Conference, Westin, Seattle • www.rbma.org

OCTOBER 16-20

American Society for Therapeutic Radiology and Oncology (ASTRO), 47th Annual Meeting, Colorado Center, Denver
• www.astro.org

OCTOBER 27-29

Image-Guided, Minimally Invasive Diagnosis & Treatment of Prostate Cancer, AdMeTech/National Cancer Institute/National Electrical Manufacturers Association, Loews L'Enfant Plaza Hotel, Washington, D.C. • www.admetech.org

NOVEMBER 27-DECEMBER 2

RSNA 2005, 91st Scientific Assembly and Annual Meeting, McCormick Place, Chicago • rsna2005.rsna.org

RSNANews

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