



## Annual Meeting Preview

Medical imaging science, education, and technology—RSNA 2012 offers it all. Use this overview of the myriad educational and scientific offerings, technical exhibits and courses—as well as the technologies available to guide you and the amenities that will help you enjoy your Chicago stay—to plan your ideal experience.

# Learning Opportunities

From lectures and special sessions focused on the specialty's hottest topics to presentations of cutting-edge research and the latest in radiology informatics, learning opportunities in every subspecialty abound at RSNA 2012. With full participation in the meeting, each physician can earn up to 93.75 *AMA PRA Category 1 Credits™*.

## Science, Education Programs Raise the Bar at RSNA 2012

New research, evolving techniques and technology, expert updates on healthcare policy and the latest in patient-tailored care are included on the rich roster of offerings sure to capture attention.

Along with an overall uptick in abstract submissions, RSNA's science and education committee chairs reported stronger international participation, an increase in technology-driven sessions and a steady focus on keeping "Patients First." RSNA 2012 attendees can choose from a wide range of education exhibits and scientific sessions, refresher courses, self-assessment modules (SAMs), applied science, integrated science and practice sessions and workshops encompassing every subspecialty.

"RSNA 2012 attendees will see even more high-quality education exhibits," said Isaac R. Francis, M.D., Education Exhibits Program Committee chair. "Attendees visiting the Lakeside Learning Center can learn at their own pace, network with

friends and colleagues and earn CME credit by reviewing specific exhibits and correctly answering Cases of the Day."

Dr. Francis urged attendees to stop by the Bistro RSNA Table Discussions (see Page 38) and join hot-topic and contemporary conversations led by experts from several radiology disciplines, the American Board of Radiology and Resident Review Committee.

Scientific abstracts submitted for RSNA 2012 reflect a growing interest in functional oncologic imaging, neurodegenerative disease and quantitative imaging in the



Francis



Mauro



Jackson

chest and musculoskeletal systems, said Scientific Program Committee chair Matthew A. Mauro, M.D. "Diffusion imaging is finally making its way into the abdomen, where it has clinical applications, particularly in oncologic imaging," he added. "All of the hot topic and other special sessions are thought-provoking and will forecast standard of care imaging in the future."

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"Refresher courses will continue to build upon the success of previous years, with emphasis on reviews and updates of information related to the technical and interpretative aspects of imaging and intervention," said Valerie P. Jackson, M.D., RSNA Refresher Course Committee chair. "Innovative interactive programming will be available, continuing on the success of last year's popular 'Diagnosis Live' sessions."

The RSNA 2012 program will offer a wide spectrum of courses for all levels of radiologists, radiation oncologists, medical physicists and other healthcare professionals, Dr. Jackson said. RSNA 2012 offers multiple SAMs for maintenance of certification (MOC) and an innovative refresher course track on leadership and management in radiology, Dr. Jackson said.

RSNA received 13,162 abstracts to consider for presentation at RSNA 2012—688 more than last year. Of those, 2,125 were chosen for education exhibits and 3,121 were chosen for formal or informal scientific presentations.

## BREAST IMAGING

RSNA received a noticeably greater number of submissions for newer imaging modalities such as automated breast ultrasound and 3D tomosynthesis, said Hiroyuki Abe, M.D., Education Exhibits Breast Subcommittee chair. "In addition, a number of high-quality exhibits cover a wide spectrum of current interests in breast imaging, including imaging of post-surgery/reconstructed breast, background parenchymal enhancement on

MR and evaluation of neoadjuvant chemotherapy," Dr. Abe said. Pediatric breast imaging and molecular classification of breast cancer will share the spotlight, he added.

Hot topics include tomosynthesis as well as methods for decreasing time and possibly costs for breast MR, said Robyn L. Birdwell, M.D., Scientific Program Breast Subcommittee chair. Dr. Birdwell also noted interest in imaging assessment of risk based on breast density.

## CARDIAC RADIOLOGY

This year's cardiac education exhibits are "a great mix, very accessible, offering something of interest for everyone," said Linda B. Haramati, M.D., Education Exhibits Cardiac Subcommittee chair. "There are reviews suitable for residents or radiologists who are initiating a cardiac imaging program in their practice and cardiac exhibits relevant to radiologists who interpret chest radiographs and CTs for non-cardiac indications," she said. "Finally, we have high-level technical and clinical exhibits focused on enhancing the practice of dedicated cardiac imagers."

Scientific Program Cardiac Subcommittee Chair Arthur E. Stillman, M.D., Ph.D., noted many abstracts focusing on dose reduction, particularly with iterative reconstruction. Transcatheter valve implantation is a "must see" topic this year and attendees should pay special attention to coronary CT angiography for patients presenting with chest pain in the emergency department, Dr. Stillman said.

## CHEST RADIOLOGY

Jane P. Ko, M.D., Scientific Program Chest Subcommittee chair, observed a trend toward abstracts pertaining to lung nodules, radiation dose reduction and thoracic malignancy. Chest abstracts at RSNA 2012 will be presented in separate vertical series courses on pulmonary arterial imaging and lung nodules. "The series course will interweave informative refresher course presentations with scientific abstracts on similar topics," she said.

Scientific oral and poster presentations will address noninvasive CT characterization of subsolid nodules and adenocarcinoma, which are challenging to manage and are of increasing clinical interest in light of molecular imaging and changes in classification, Dr. Ko said. "Additionally, abstracts span a range of methods for MR evaluation of ventilation and perfusion of the lung and malignancy."

In terms of education exhibits, "the trend toward correlating with other specialties continues—surgical techniques, staging, correlating CT with clinical scores," said Sanjeev Bhalla, M.D., Education Exhibits Chest Subcommittee chair. "Another trend is the discussion and illustration of the new staging and nomenclature for lung cancer, especially adenocarcinoma."

## EMERGENCY RADIOLOGY

"A record number of education exhibits were submitted in emergency radiology, continuing its steady growth and increasing popularity," said Stephen P. Hatem, M.D., Education Exhibits Emergency Radiology Subcommittee chair. "Exhibits cover the gamut of the specialty, including submissions on technique and protocols ranging from organ-centered to disease-specific," Dr. Hatem said. "The breadth is impressive. Reviews of traumatic injuries and nontraumatic emergencies will provide attendees with a variety of educational opportunities."

Scientific presentations will highlight advances in CT technology such as multi-energy imaging and iterative reconstruction for improved and safer imaging of pulmonary embolism, trauma and acute abdominal pain, said Jorge A. Soto, M.D., Scientific Program Emergency Subcommittee chair, who also reported a growing international influence. "The

number of submissions for this section from all over the world increased substantially," he said.

## GASTROINTESTINAL RADIOLOGY

Most of this year's submissions focus on new MR contrast agents and MR imaging techniques for diagnosing and staging hepatocellular carcinoma and other liver tumors, said Lisa M. Ho, M.D., Education Exhibits Gastrointestinal Subcommittee chair. "Advances in MR imaging for rectal cancer staging and MR enterography or CT enterography for evaluation of inflammatory bowel disease are also popular topics."

CT dose reduction was the greatest area of interest for gastrointestinal scientific submissions, said David H. Kim, M.D., Scientific Program Gastrointestinal Subcommittee chair. "In addition to newer iterative reconstruction techniques, researchers are investigating a number of 'lower tech' interventions," he said. "The abstracts paint a widespread, encompassing effort to minimize dose while maintaining the obvious diagnostic benefits to CT."

Another popular topic is hepatic steatosis and fibrosis, underscoring the growing frequency of non-alcoholic steatohepatitis, Dr. Kim added. "Excellent abstracts were submitted regarding the use of MR and ultrasound, and considerable research into rectal MR evaluation of cancer continues," Dr. Kim said. "Imaging is playing an increasingly important role in oncologic management decisions. Also, trial results in CT colonography performance continue to emerge and reinforce the ability of this modality to detect important colorectal polyps."

## GENITOURINARY/URORADIOLOGY

Genitourinary science submissions increased by 20 percent this year, said Julia R. Fielding, M.D., Scientific Program Genitourinary Subcommittee chair, with interest focused particularly on prostate and diffusion imaging and MR imaging methods that assess renal blood flow and function.

RSNA 2012 will feature a full prostate series highlighting presentations of three prostate scoring systems developed in Europe. "Prostate remains one of the top three fatal cancers in men yet we cannot

tell which tumors will progress," Dr. Fielding said. "This is part of the reason the national health task force no longer recommends prostate-specific antigen tests."

Diffusion imaging is another popular topic, Dr. Fielding noted. "Diagnosis and staging are critically important to therapy and diffusion imaging is everywhere—for gynecologic tumors, specifically endometrial and cervical cancers, and, once again, prostate cancer," she said.

MR imaging of the prostate is starting to dominate education exhibits as well, said Aytekin Oto, M.D., Education Exhibits Genitourinary Subcommittee chair. "For the first time, the total number of prostate exhibits exceeded the number of kidney exhibits," he said. Along with paying special attention to prostate and kidney neoplasm imaging, Dr. Oto recommends that attendees explore the prostate MR exhibits and those on image-guided interventions, as well as exhibits on renal cell carcinoma imaging.

## HEALTH SERVICES EDUCATION, RESEARCH, POLICY AND PRACTICE

Education Exhibits Policy and Practice Subcommittee Chair Dean K. Shibata, M.D., noted a particular rise in the 'quality improvement' category, reflecting the burgeoning importance of this area for all radiologists, both in academic and private practice settings. "Highlights include exhibits on surgical foreign body identification, the role of PACS in medical error, and exhibits on quality improvement methodology to help radiologists establish programs in their own practice," he said.

Other innovative topics focus on creating a milestone-based curriculum for residents and improving the quality of radiology reports. "As usual, there will be several particularly timely exhibits reflecting the world beyond radiology, including an exhibit on the impact of the Affordable Care Act on radiologists and how to discuss radiation risks with your patients," Dr. Shibata said. "There will definitely be something for everyone in this year's Policy and Practice exhibits."



Aine M. Kelly, M.D., Scientific Program Health Services Policy and Research Subcommittee chair, noted a continuing rise in international submissions and an increased focus on alternative teaching methods such as videoconferencing and open-access materials.

"Topical issues such as the medicolegal aspects of radiology, including standardized reporting, the issuing of a second opinion on outside studies, proper documentation and communication of results remain as popular as ever," Dr. Kelly said. "With the changes in healthcare reform, many have looked at the resultant trends in advanced imaging modalities with some interesting and unexpected findings. The future of radiology as a specialty and patient-centered imaging—including screening—are popular issues. Teleradiology continues to attract many differing opinions, leading to lively debate," Dr. Kelly said.

## INFORMATICS

Interest remains strong in the use of mobile devices for clinical and educational use as well as image sharing across institutional boundaries, said David S. Hirschorn, M.D., Scientific Program Informatics Subcommittee chair.

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# Virtual Meeting Returning to RSNA 2012

Returning to RSNA 2012 is the Virtual Meeting – a fascinating 2D environment, available via the Internet, offering education opportunities and virtual technical exhibits.

The Virtual Meeting delivers even more content this year: you will have access to live streaming courses, Cases of the Day, complete with expert discussion and new opportunities to earn CME credit up to 78.50 AMA PRA Category 1 Credits™.

In addition, “on demand” courses and sessions, scientific presentations, education exhibits, and virtual technical exhibits will be available throughout the week. Learn about new products being displayed in the Exhibitor Product Theater.

You can access the Virtual Meeting from any Internet connection, on your own time during RSNA 2012. It’s available for your

Mac or your PC. Content will be available directly in the 2D world.

It’s free for RSNA members and registered attendees.

It’s a smart educational investment even if you’re not a member or not attending the physical meeting. Non-member, non-attendee registration is only \$300, and gives you the opportunity to experience meeting highlights and earn continuing education credits, no matter where you are.

RSNA has an exciting lineup of courses, presentations and live sessions planned for this year’s Virtual Meeting.

Explore another dimension of RSNA 2012!

New this year: If you’re an RSNA member or have already registered for RSNA 2012, you’re automatically registered for the Virtual Meeting. Visit [RSNA.org/Virtual\\_Meeting.aspx](http://RSNA.org/Virtual_Meeting.aspx) to log in with your member/badge number when the Virtual Meeting goes live!



## Educational Program Schedule

### Saturday, November 24

1:00 PM – 5:00 PM

**SPSP01** (CIR) / Emergency Radiology: Session of the Interamerican College of Radiology (presented in English and Spanish)

### Sunday, November 25

8:30 AM – 10:15 AM

**PS10** Opening Session (President’s Address and Opening Session Panel)

10:45 AM – 12:15 PM

**SSA01** Breast (Ultrasound: Diagnostic and Screening)

**SSA14** Musculoskeletal (Arthritis)

2:00 PM – 3:30 PM

**RC101** Hot Topics in Thoracic Imaging  
**RC106** Sinonasal Imaging: A Practical Approach

4:00 PM – 5:45 PM

**PS12** Sunday Afternoon Plenary Session (Image Interpretation Session)

### Monday, November 26

8:30 AM – 10:00 AM

**RC224** Sarcoidosis from Head to Toe (In Conjunction with the American Institute for Radiologic Pathology)

8:30 AM – 12:00 PM

**VSER21** Emergency Radiology Series: Imaging Medical Emergencies

10:30 PM – 12:00 PM

**SSC06** Gastrointestinal (Hepatocellular Carcinoma)

1:30 PM – 2:45 PM

**PS20** Monday Plenary Session (New Horizons Lectures)

3:00 PM – 4:00 PM

**SSE06** ISP: Gastrointestinal (Ablative Techniques and Applications)

**SSE16** Neuroradiology (Dementia)

4:30 PM – 6:00 PM

**SPS122** Radiation Dose in Medical Imaging: What Do the Numbers Really Mean?

**SPS124** The Cost of Achieving Good Quality

### Tuesday, November 27

8:30 AM – 10:00 PM

**MSES31** Essentials of Cardiac Imaging

8:30 AM – 12:00 PM

**VSGU31** Genitourinary Series: The Abdominal Incidentaloma: What to Report for the Liver, Pancreatic, Adrenal and Renal Incidentaloma

10:30 AM – 12:00 PM

**MSES32** Essentials of Breast Imaging

1:30 PM – 2:45 PM

**PS30** Tuesday Plenary Session (Annual Orations in Diagnostic Radiology)

1:30 PM – 3:00 PM

**MSES33** Essential of Neuro Imaging

3:00 PM – 4:00 PM

**SSJ16** Musculoskeletal (Shoulder)

3:30 PM – 5:00 PM

**MSES34** Essentials of Genitourinary Imaging

4:30 PM – 6:00 PM

**RC432** How to Avoid Failure: Qualities of a Successful Leader

### Wednesday, November 28

8:30 AM – 10:00 AM

**MSES41** Essentials of Ultrasound

**RC518** Advances in Cross-sectional Oncologic Imaging

10:30 AM – 12:00 PM

**SSK11** Neuroradiology (Spine)

**MSES42** Essentials of Chest Imaging

1:30 PM – 2:45 PM

**PS40** Wednesday Plenary Session (Annual Oration in Radiation Oncology)

1:30 PM – 3:00 PM

**MSES43** Essentials of Musculoskeletal Imaging

3:00 PM – 4:00 PM

**SSM02** Breast (MRI and Digital Mammography Topics)

3:30 PM – 5:00 PM

**MSES44** Essentials of Pediatric Imaging

4:30 PM – 6:00 PM

**SPSC43** V/Q Scans versus CT for Pulmonary Emboli

### Thursday, November 29

8:30 AM – 10:00 AM

**MSES51** Essentials of Nuclear Medicine

**RC623** Minicourse: Current Topics in Medical Physics—Practice Quality Improvement: Basics and Issues for Medical Physicists

10:30 AM – 12:00 PM

**SSQ01** Cardiac (Quantitative Imaging)

**MSES52** Essentials of Gastrointestinal Imaging

1:30 PM – 2:45 PM

**PS50** Thursday Plenary Session (RSNA/AAPM Symposium: Imaging Speed Demons)

3:00 PM – 4:00 PM

**SPSH52** Imaging Evaluation of Inflammatory Arthritis: How I Do It

**SPSH53** Functional and Quantitative Imaging of the Lung

4:30 PM – 6:00 PM

**RC704** Interactive Game: Musculoskeletal Pitfalls and Pearls

**RC708** Imaging of the Traumatized Spine (Traditional)



### Friday, November 30

8:30 AM – 10:00 AM

**RC815** Breast US

8:30 AM – 12:00 PM

**VVA61** Vascular Imaging Series: MR Angiography: Principles and Technique Optimization

10:30 AM – 12:00 PM

**SST03** ISP: Chest (Lung Nodules II)

12:45 PM – 3:15 PM

**SPBR62** Friday Imaging Symposium: High Level Interpretation of Breast Imaging—Distinguishing Yourself from the Crowd

**SPPD61** Friday Imaging Symposium: Pediatric Radiology—Challenges, Pitfalls, and Solutions.

#### Designation Statement

The Radiological Society of North America (RSNA) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The RSNA designates this live activity for a maximum of 78.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### Exhibitor Product Theater Presentations

Watch exhibitor product presentations by Agfa HealthCare, GNAX Health, Philips Healthcare, Siemens Healthcare and TeraRecon. These exhibitors will show you the latest in medical imaging technology with live demonstrations at 10:30 a.m., 12:45 p.m. and 3:00 p.m. on Monday, Tuesday and Wednesday. For a complete schedule of exhibitor presentation topics, dates and times, visit [RSNA.org/Attendees.aspx](http://RSNA.org/Attendees.aspx).

Program Key	Color	Description
Multisession Courses	Blue	
Plenary Sessions	Green	
Refresher Courses	Orange	
Series Courses	Purple	
Scientific Sessions	Red	
Special Courses	Light Green	



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“Critical test result management is also heating up as hospitals and government agencies become more cognizant of the patient care and medicolegal risk benefits of these systems,” Dr. Hirschorn said. “I would not want to miss the papers on decision support and meaningful use, as these topics are rapidly becoming part of everyday life for radiologists.” Abstracts on alternative user input mechanisms to manipulate images are also noteworthy, he said.

For this year’s education exhibits, “we again received a large number of submissions for image processing and analysis and educational tools categories, as well as more submissions in the clinical workflow and data sharing categories,” said Katherine P. Andriole, M.D., Education Exhibits Informatics Subcommittee chair.

Along with translational and clinical research exhibits, RSNA 2012 features a number of technology-focused exhibits offering participants hands-on interaction. Dr. Andriole encourages attendees to visit the Quantitative Imaging Reading Room featuring education exhibits including academic and vendor partnerships. “These exhibits are poster- and computer-based software application demonstrations throughout the week, with three ‘meet-the-expert/author’ sessions and a formal theater presentation,” she said.

To learn more about Informatics offerings at RSNA 2012, see Page 38.

## MOLECULAR IMAGING

“Attendees will see the translational efforts of molecular imaging: cutting-edge technologies developed in basic sciences and their clinical applications, i.e., oncology, neurology, cardiovascular diseases, inflammation, and other medical conditions,” said Satoshi Minoshima, M.D., Ph.D., who chairs the Education Exhibits and Scientific Program Molecular Imaging Subcommittees.

Integrated Science and Practice (ISP) sessions on Sunday, Monday and Wednesday will discuss new technologies and the future of molecular imaging, standardization of quantitative molecular imaging, and multi-modal molecular imaging, Dr. Minoshima said. “In collaboration with the RSNA Nuclear Medicine section, a special session on the emerging field of ‘theranostics’ is planned for Thursday.”

Hot topics sessions include molecular imaging of Alzheimer disease and Parkinson disease in collaboration with the Neuroradiology subcommittee, and an exciting PET-MR session, he added.

## MUSCULOSKELETAL RADIOLOGY

This year, RSNA received a high number of submissions on femoroacetabular impingement and complications related to metal-on-metal hip arthroplasties, said Jon A. Jacobson, M.D., Scientific Program Musculoskeletal Subcommittee chair.

“While the first topic is certainly not new, the high number of abstracts indicates the continued difficulties in diagnosis,” Dr. Jacobson said. “The second topic is very timely given the more recently recognized complications related to metal-on-metal hip arthroplasties and the importance of diagnostic imaging.”

Musculoskeletal Education Exhibits Subcommittee chair Susanne E. Anderson, Ph.D., B.Med., noted trends including a focus on patient interaction and clinically oriented work: “This goes beyond imaging, to diagnosis, treatment and post-treatment clinical regimes with clinical guidance,” Dr. Anderson said. “There is strong input for imaging and treating tendon pathologies around joints in both elite sports and aging groups.”

“Use of ‘advanced’ in tumor imaging, such as diffusion-weighted imaging, and an increased activity in muscle anatomical and metabolic information at the microscopic level with diffusion-tensor imaging and proton MR spectroscopy are popular topics,” she said. Along with sports injury and trauma-related abstracts, she noted an increase in a new subcategory of bone marrow-related abstracts.

## NEURORADIOLOGY/HEAD AND NECK

This year’s topics include morphologic and functional imaging for normal anatomy, pathophysiology and various diseases, said Education Exhibits Neuroradiology Subcommittee Chair William T. Yuh, M.D., M.S.E.E. “As more clinical experience is acquired in the brain, head and neck and spine, more researchers are applying advanced imaging or techniques for clinical applications and more detailed discussion of the pros and cons of each technique for various diseases,” he said.

With the improvement of anatomic and functional imaging, more presentations explore the smaller structures such as the hypothalamus and limbic system, Dr. Yuh added. Presentations also cover cerebrospinal fluid (CSF) dynamics, including CSF pathophysiology and flow interpretation and management of diseases such as CSF hypotension and hypertension.

“There is special focus on aging patients with dementia and techniques including MR, FDG-PET and Pittsburgh compound B (PiB)-PET,” Dr. Yuh said. Among the head and neck abstracts covering a broad spectrum this year are cancer diagnosis and staging for parotid, thyroid and rare tumors. “There are also a substantial number of presentations on topics including benign tumors, infection, trauma, congenital malformations including vascular malformations, temporal bone disease processes, skull base and cranial nerve anatomy and disease processes and new methods of disease detection,” Dr. Yuh said.

David B. Hackney, M.D., Scientific Program Neuroradiology Subcommittee chair, noted an increase in presentations—including many formal scientific sessions and a “Hot Topic” session on Thursday—addressing the role of imaging in patients with cognitive impairment.

## NUCLEAR MEDICINE

The most important trend for nuclear medicine science is the early experience in using PET/MR in clinical applications, said Homer A. Macapinlac, M.D., Scientific Program Nuclear Medicine Subcommittee chair. “Particularly interesting are the integrated simultaneous acquisition techniques, reconstruction for PET quantification and shorter MR acquisition times,” he said.

Theranostic techniques, or the use of the same or similar molecular imaging agent for both diagnosis and therapy—for example, Gallium 68 PET imaging of somatostatin receptors and therapy using beta emitters or alpha emitters with somatostatin receptor agents—is another exciting topic, Dr. Macapinlac said.

## OBSTETRIC/GYNECOLOGIC IMAGING

Trends include more emphasis on MR in fetal imaging and ovarian and uterine/cervical carcinoma diagnosis and cutting-edge diffusion and perfusion imaging techniques that are on their way to becoming clinically valid tools, said Robert D. Harris, M.D., M.P.H., Education Exhibits Obstetric/Gynecologic Subcommittee chair. “Fetal 3D imaging with ultrasound and MR is to be a big topic, too,” said Dr. Harris, adding that the number of international presenters is also increasing.

## PEDIATRIC RADIOLOGY

“Pediatric education exhibits have something for everyone covering a broad spectrum of topics from the standard pictorial essay pathology-focused exhibit to newer teaching methods, CT radiation safety and the technical side of imaging and imaging optimization,” said Education Exhibits Pediatric Subcommittee Chair Craig E. Barnes, M.D. In pediatric science, hot topics include markers of adult disease found in children and imaging of brown fat, said Marvin D. Nelson Jr., M.D., Scientific Program Pediatrics Subcommittee chair.

## PHYSICS

M. Elizabeth Meyerand, Ph.D., chair of the Education Exhibits Physics Subcommittee, noted an increase in the number of CT abstracts. “We had many interesting and timely abstracts dealing with safety,” she said.

Scientific Program Physics Subcommittee Chair Xiaochuan Pan, Ph.D., noted an increase in the number of MR imaging presentations and a continued trend toward iterative algorithm reconstruction for low-dose CT. Image-guided radiation therapy and multi-energy CT are among other topics with an increased presence, Dr. Pan said.

## RADIATION ONCOLOGY AND RADIOBIOLOGY

As in the past few years, abstracts reveal strong interest in using functional imaging to evaluate the response of tumors and surrounding normal tissues to therapeutic radiation doses, said Sunil Krishnan, M.D., Education Exhibits Radiation Oncology Subcommittee chair. “In particular, there is a focus on MR for differentiating between treatment response and disease progression, a distinction that has profound implications for optimal clinical management of patients after radiation therapy,” he said. This trend highlights the vital need for a constant dialogue between radiation oncologists and diagnostic radiologists to accurately diagnose and treat patients after they have received radiation therapy, Dr. Krishnan said.

The Bolstering Oncoradiologic and Oncoradiotherapeutic Skills for Tomorrow (BOOST) programs continue to grow, said Chung-Taik Chung, M.D., Scientific Program Radiation Oncology Subcommittee chair. This year’s topics are lung, gastrointestinal, breast, genitourinary and head and neck cancers. “The programs comprise longitudinal imaging and oncologic presentations, including contouring sessions, alongside broader topics such as gynecology, benign tumors and quality of life/outcome studies,” Dr. Chung said. “There are an increasing number of abstracts on image-guided radiotherapy, stereotactic radiosurgery and stereotactic body radiotherapy.”

## VASCULAR/INTERVENTIONAL RADIOLOGY

Regional and ablation cancer therapy and related imaging continue to dominate the interventional scientific program, reflecting strong growth and continued innovation, said Scott O. Trerotola, M.D., Scientific Program Vascular/Interventional Subcommittee chair. “Ultimately, patients benefit



substantially from these advances,” Dr. Trerotola said. “One interventional oncology trend observed this year is the use of adjuvant therapy in addition to the primary therapy to enhance tumor destruction and/or protect normal tissue.”

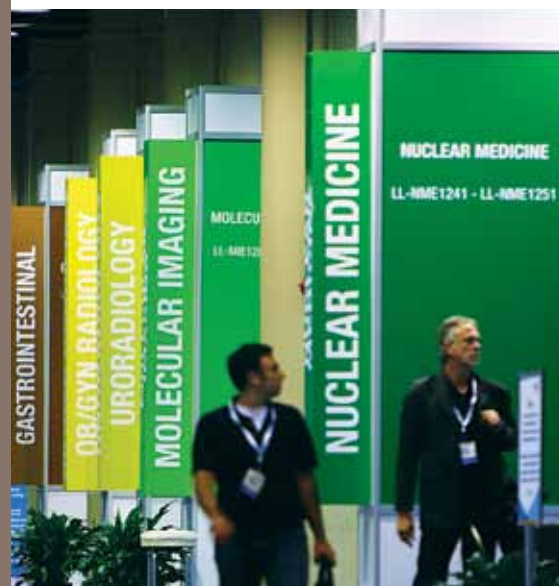
Interventional techniques in the male pelvis build on treatments for benign prostate disease and introduce other uses for embolotherapy, such as treatment of erectile dysfunction, Dr. Trerotola said. “Many abstracts describe advances in noninvasive vascular imaging both with MR angiography and CTA and a continued emphasis on radiation dose reduction.”

A strong resurgence of interest in adrenal vein sampling (AVS) includes abstracts devoted to both technical enhancements as well as imaging of the adrenal vessels, Dr. Trerotola said.

In terms of education exhibits, topics are trending more toward vascular imaging and less toward interventional oncology than expected, said David C. Madoff, M.D., Education Exhibit Vascular/Interventional Subcommittee chair. “There were also many submissions on technological advances as they relate to interventional radiology and numerous submissions on novel approaches to general embolotherapy, hepatobiliary diseases, oncology and venous disease,” Dr. Madoff said.

RSNA 2012’s scientific and educational program has “something for everyone,” with a record-high number of diverse offerings, Dr. Mauro said. He encouraged attendees to pay special attention to novel trends and hot topics: “These special sessions prove to be thought-provoking and will forecast the standard of care for imaging in the future.”

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## Plenary Lectures

RSNA 2012 will feature plenary session lectures on a spectrum of healthcare topics. All lectures will be presented in the Arie Crown Theater.

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### OPENING SESSION PANEL

Sunday, November 25 • 8:30 a.m.

#### Facial Restoration by Transplantation and the Role of Novel Imaging Technology

Facial allotransplantation has delivered superior aesthetic and functional outcomes to patients across the globe with substantial facial defects

stemming from trauma, burns or disease, and who had exhausted their reconstructive options without reaching satisfactory results.

Survival of the transplant, says **Bohdan Pomahac, M.D.**, primarily depends on successful anastomoses between the patient's and donor's blood vessels; therefore, pre-operative arterial and venous studies must be exhaustive and lead to a concrete plan. Furthermore, each potential facial transplantation candidate may present variations and complexity in the vascular anatomy of the head and neck resulting from the facial injury itself and/or prior reconstructions. Dr. Pomahac will outline novel noninvasive imaging protocols and image post-processing algorithms for the pre-operative screening of facial transplantation candidates and post-operative imaging of face transplant recipients, developed during four facial transplantations performed at Brigham and Women's Hospital (BWH).

Burn director at the BWH Burn Center since January 2009, Dr. Pomahac established the Plastic Surgery Transplantation Program and in April 2009 led the

nation's first male face transplant procedure. He then received a \$3.4 million contract from the U.S. Department of Defense to perform and investigate the outcomes of face transplantation. In 2011 Dr. Pomahac led the surgical team in performing the first two full face transplants and first combined face and bilateral hand transplant procedure in the U.S. and the first successful bilateral upper extremity transplantation in the Northeast.

#### The Doctor As Patient; The Patient As Advocate

The National Lung Cancer Screening Trial was terminated in fall 2010 when the trial's Data and Safety Monitoring Board notified the National Cancer Institute that accumulated data provided a statistically convincing answer to the study's primary question and those in the control arm must be advised. Subsequent analyses of national and international studies indicate a mortality reduction of 40 percent or more can be achieved with a protocol encompassing screening and a continuum of care in a multidisciplinary setting—an approach in which the radiologist is the linchpin. The advent of lung cancer screening presents challenges—remodeling the system of care, incorporating collection of outcome data to continuously refine the protocol, among others—but also an opportunity to redefine radiology's role in healthcare.

This presentation comes from the viewpoint of **Sheila Ross** and **Karen E. Arscott, D.O., M.Sc.**, both lung cancer survivors and advocates with the Lung Cancer Alliance.

Twelve years into a 20-year career as a staffer with the U.S. Congress, Ross was diagnosed with Stage II lung cancer. She returned to work within weeks but her annual chest X-ray failed to pick-up the tumor growing behind her sternum. A right pneumonectomy and some creative work on the left bronchus by her thoracic surgeon and her radiologist saved her life, says Ross, now a 12-year survivor.

Dr. Arscott is a Clinical Associate Professor in Clinical Sciences at Commonwealth Medical College in Scranton, Pa., and was formerly director of the Physician Assistant Program at Marywood University in Scranton. Dr. Arscott underwent surgery after being diagnosed with stage IA lung cancer in 2006; 16 months later, she received chemotherapy, radiation and underwent more surgery for stage IIIA lung cancer.

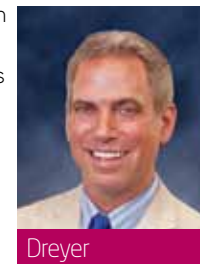
The Lung Cancer Alliance aims to change public health policies by engaging with organizations in support of biomedical and imaging research and working on Capitol Hill to promote the role of imaging in improving healthcare outcomes. The Alliance asserts that recent scientific validation of the benefits of CT screening is the turning point for lung cancer and an opportunity for radiologists to change patient treatment and diagnosis.

### EUGENE P. PENDERGRASS NEW HORIZONS LECTURES

Monday, November 26 • 1:30 p.m.

#### The Future of Imaging Informatics: Meaningful Use and Beyond

Evolution of the Internet, creation of high-resolution mobile computing devices and recent enactment of federal healthcare IT programs such as Meaningful Use are changing radiology practice and fueling a revolution of new opportunities and challenges, says **Keith J. Dreyer, D.O., Ph.D.** Further, the advancement of computational algorithms is providing new pathways for innovation, including: nationally standardized clinical decision support for ordering physicians and interpreting radiologists; natural language processing for real-time information access, clinical data mining, simulated training, and competency/certification testing; and cloud computing for speech recognition and image sharing across enterprise boundaries with secure access to remote providers and patients. Dr. Dreyer will explore current and near future use of innovative information technologies, the impact on radiology practice and the federal policies and regulations under way that promote and oversee their use.



Dreyer

Dr. Dreyer is vice-chair of radiology at Massachusetts General Hospital and associate professor of radiology at Harvard Medical School. His long history as an RSNA volunteer includes current service as a member of the Radiology Informatics Committee. Dr. Dreyer also holds numerous positions with the American College of Radiology, Society for Imaging Informatics in Medicine and global healthcare corporations. Dr. Dreyer has authored hundreds of scientific papers, presentations and books and has lectured worldwide on digital imaging standards, image sharing, clinical decision support, meaningful use and electronic health record initiatives.

### Meaningful IT Innovation to Support the Radiology Value Proposition

Radiology practices have undoubtedly benefited from the adoption of electronic-based information technology. However, electronic tools such as PACS, RIS, and speech recognition are still relatively immature and arguably support only "commodity-level" capability. These technologies can and have been exploited to commoditize and "outsource" radiology services. **Paul J. Chang, M.D.**, says that unless radiologists are willing to dramatically re-engineer their attitudes and practices, they will not only fail to effectively use these electronic tools, but will also facilitate the perceived devaluation of radiology and participate in its marginalization. Radiologists, he says, must be "value innovators" who leverage information technology to ensure their relevance and value to patient care through measureable improvements in quality, efficiency and safety.



Chang

Professor and vice-chair of radiology informatics and medical director of pathology informatics at the University of Chicago School of Medicine, Dr. Chang is also medical director of Enterprise Imaging and the informatics architect for the Service Oriented Architecture initiative at the University of Chicago Hospitals. Dr. Chang founded the Division of Radiology Informatics at the University of Pittsburgh Medical Center and is active in numerous research and development projects related to imaging informatics and enterprise-wide informatics integration issues. A longtime RSNA volunteer, Dr. Chang is a member of the Public Information Advisors Network, served on the Radiology Informatics Committee from 1995 to 2008 and is an informatics consultant for myRSNA.

### ANNUAL ORATIONS IN DIAGNOSTIC RADIOLOGY

Tuesday, November 27 • 1:30 p.m.

#### The Story Behind the Image

Using today's imaging technologies, radiologists can visualize aspects of human form and function that would have astounded Roentgen and Curie. Imaging

equipment serves as a kind of crystal ball, enabling the resolution of diagnostic uncertainty and increasing the quality of patient care. **Richard B. Gunderman, M.D., Ph.D.**, says radiologists play an almost oracular role within contemporary medicine, bridging the gap between the invisible and the visible, the unknown and the known. Yet to achieve their full potential, Dr. Gunderman says, radiologists must attend to the invisible aspects of their craft—the unseen but vital features of patients not revealed by images. Without images, we are blind, he says, but with images alone, we cannot see as deeply or comprehensively as needed.



Gunderman

Dr. Gunderman is a professor and vice-chair of radiology at Indiana University (IU), where he also is a professor of pediatrics, medical education, philosophy, liberal arts, and philanthropy. Dr. Gunderman is a fellow of the Tobias Center for Leadership Excellence and chairs the faculty steering committee of the IU School of Medicine. Dr. Gunderman was named RSNA Outstanding Educator in 2008 and chairs the Education Study Section of the Research & Education Foundation Grant Program Committee. He has authored more than 280 scholarly articles and published eight books including *Achieving Excellence in Medical Education*, *We Make a Life by What We Give* and *Leadership in Healthcare*.

### To Disclose or Not To Disclose Radiologic Errors—Should "Patient First" Supersede Radiologist Self-Interest?

Whether to disclose every radiologic error to patients presents a dilemma for many radiologists. Reluctance or refusal to disclose, says **Leonard Berlin, M.D.**, is driven by fear—of being considered incompetent, of reduced or revoked privileges, of malpractice suits. However, medical organizations' codes of ethics mandate that physicians deal honestly with patients,



Berlin

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inform them of mistakes and offer “professional and compassionate concern” toward those who have been harmed, regardless of whether the harm was caused by physician error. Surveys of physicians in all specialties show that a majority believe all errors “should” be disclosed to patients, but only a minority admit to such disclosures. All physicians, says Dr. Berlin, are ethically and morally obligated to place the needs of their patients first.

Dr. Berlin is a radiologist with Skokie Hospital, formerly North Shore Medical Center, where he chaired the Department of Radiology for 31 years, and a professor of radiology at Rush Medical College and the University of Illinois College of Medicine. Author of *Malpractice Issues in Radiology*, Dr. Berlin has lectured nationally and internationally on radiologic malpractice and risk management. Dr. Berlin’s service to RSNA includes chairmanship of the Professionalism Committee, co-chairmanship of the RSNA-American College of Radiology Task Force to Develop a Core Curriculum on Professionalism for Radiology Residents and as a member of the Public Information Advisors Network. Dr. Berlin has served as president of the Chicago and Illinois radiological societies.

## ANNUAL ORATION IN RADIATION ONCOLOGY

Wednesday, November 28 • 1:30 p.m.

### Radiation Oncology and Radiology—Should We Get Married Again?

In the early 20th century, diagnosis and therapy were two sides of the radiology coin. By mid-century, however, radiation oncologists had forged a unique identity reflecting increased understanding of radiation as a therapy and specialization of some practitioners. Radiation oncology residency programs were created and journals and clinical practice styles developed. Now, says



Zietman

Anthony L. Zietman, M.D., both specialties are changing again—while the burgeoning field of medical oncology has taken some patient care responsibility away from

radiation oncologists and allowed them more time for increasingly complex treatment techniques, diagnostic radiology has developed its own therapeutic branch, interventional radiology. A reconvergence has begun as interventional radiologists develop consultation clinics and radiation oncologists move toward radiotherapeutic ablation. Dr. Zietman will discuss the overlap and contemplate novel training tracks combining the specialties.

Dr. Zietman is the Jenot W. and William U. Shipley Professor of Radiation Oncology at Harvard Medical School. He has authored more than 100 original articles and reviews on genitourinary cancer, with particular research interests in the roles of active surveillance, brachytherapy, hormone therapy and proton beam therapy in prostate cancer treatment. He also has a long-standing interest in the organ-sparing management of bladder cancer. Dr. Zietman serves as editor-in-chief of the *International Journal of Radiation Oncology, Biology, Physics*, is a trustee of the American Board of Radiology and formerly served as president and chair of the American Society for Radiation Oncology.

## RSNA/AAPM SYMPOSIUM: IMAGING SPEED DEMONS

Thursday, November 29 • 1:30 p.m.

### Breaking Angiographic Speed Limits: Accelerated 4D MRA and 4D DSA Using Undersampled Acquisition and Constrained Reconstruction

Accelerated angiographic methods in MRA, using novel non-Cartesian k-space sampling schemes combined with constrained reconstruction, have led to acceleration factors up to 1000 relative to Nyquist requirements. Related approaches have permitted the extension of X-ray DSA to a full 4D modality, providing 3D vascular volumes 200 times faster than conventional rotational DSA. Fast 4D angiographic techniques, according to Charles A. Mistretta, Ph.D., are useful for evaluation of dynamic phenomena such as arteriovenous malformations—in the X-ray case, the availability of all view angles at all times eliminates the need for the X-ray exposure and contrast dose associated with repeat injections. Undersampled acquisition and constrained reconstruction, Dr. Mistretta says, will play a major role in a wide variety

of medical imaging applications leading to improved diagnosis, greater interventional flexibility and dose reduction.

Dr. Mistretta is the director of the International Center for Accelerated Medical Imaging at the University of Wisconsin, where he also serves as John R. Cameron Professor of Medical Physics and vice-chairman of the Department of Medical Physics. In 2010 RSNA named Dr. Mistretta its



Mistretta

Outstanding Researcher in recognition of his decades of research into DSA—his team’s DSA technique has been distributed worldwide and is still the gold standard against which the image quality of new angiographic techniques is measured.

### Ultrasound Goes Supersonic: Very-High-Speed Plane Wave Transmission Imaging for New Morphological and Functional Imaging Modes

Advances in ultra-high-speed ultrasound imaging employ the concept of plane wave transmissions rather than line-by-line scanning beams. The frame rate reaches the theoretical limit of physics dictated by the ultrasound speed and an ultrasonic map can typically be provided in tens of micro-seconds. This leap in frame rate, says Mickael Tanter, Ph.D., makes it possible to track in



Tanter

real time the transient vibrations—known as shear waves—propagating through organs. Such “human body seismology” provides quantitative maps of local tissue stiffness, of which the added diagnostic value has been recently demonstrated. For blood flow imaging, ultrafast Doppler permits high-precision characterization of complex vascular and cardiac flows and enables detection of subtle blood flow in very small vessels. In the brain, such ultrasensitive Doppler paves the way for fUltrasound (functional ultrasound), offering unprecedented spatial and temporal resolution compared to fMRI.

Dr. Tanter is a research professor at the French National Institute for Health and Medical Research and heads the Physics Methods for Biomedical Imaging and Therapy unit at Institut Langevin in Paris. He is a co-founder of SuperSonic Imagine, a French medical imaging and therapy company, and a member of the technical board of the IEEE Ultrasonics, Ferroelectrics and Frequency Society. Dr. Tanter contributes to the *Journal of the Acoustical Society of America*, *Wave Motion*, *IEEE Transactions on Ultrasonics, Ultrasound in Medicine and Biology*, *Physical Review Letters* and *Applied Physics Letters*.

## Other Plenary Sessions

More information about these sessions is available at [RSNA2012.RSNA.org](http://RSNA2012.RSNA.org).

### SUNDAY

8:30–10:15 a.m.

#### President’s Address

10:45 a.m.–12:15 p.m.

#### Oncodiagnosis Panel

4:00–5:45 p.m.

#### Report of the RSNA Research & Education Foundation

#### Image Interpretation Session

### FRIDAY

12:45–3:15 p.m.

#### Friday Imaging Symposia

## Saturday Courses

### RADIOLOGIA DE URGENCIAS: SESION DEL COLEGIO INTERAMERICANO DE RADIOLOGIA (CIR)/EMERGENCY RADIOLOGY: SESSION OF THE INTERAMERICAN COLLEGE OF RADIOLOGY (CIR)

This session is presented in Spanish with simultaneous English translation.

### AAPM/RSNA PHYSICS TUTORIALS FOR RESIDENTS: TOMOSYNTHESIS—AN EMERGING ADVANCED IMAGING TECHNOLOGY

The Physics Tutorial for Residents looks at the physics of tomosynthesis, as well as reconstruction methods and quality control considerations. Immediately following is the Tutorial on Equipment Selection, which will explore commercially available systems, clinical features and challenges and building a business case for tomosynthesis.

## WORK-LIFE BALANCE: SURVIVAL STRATEGIES FOR THE BUSY RADIOLOGIST

This highly interactive workshop engages physicians at all career stages and emphasizes both didactic and experiential learning.

## GRANTMANSHIP WORKSHOPS

Two workshops examine the National Institutes of Health (NIH) grant application process from different perspectives. The “NIH Grantsmanship Workshop” helps applicants understand the process for preparing a competitive research or training grant application. “RSNA/ARR Study Section Reviewers Workshop—What It Takes to Be an Expert Reviewer for the NIH: The Peer Review Process Demystified” prepares reviewers with an overview of grant mechanisms and evaluation criteria. Both sessions give attendees the opportunity to learn from a mock study section.

## Special Courses

### SPECIAL INTEREST, HOT TOPIC, CONTROVERSIES/GAME SESSIONS

Discover radiology-related topics that are late-breaking (Hot Topics), are particularly controversial or offered in a game format (Controversies/Game), or programs the RSNA Board deems of particular importance (Special Interest). High levels of audience interest and opinion are expected.

### MONDAY

7:15–8:15 a.m.

- Controversy Session: Stereotactic Radiation for Oligo-Metastasis: New Paradigm or Wishful Thinking?

- Hot Topic Session: Gold, Diamonds, and Glass: New Frontiers in Oncologic Imaging and Treatment with Nanotechnology

4:30–6:00 p.m.

#### Special Interest Sessions

- Providing Reports Directly to Patients: Should You Do It?

- Radiation Dose in Medical Imaging: What Do the Numbers Really Mean?

- Supporting Radiology Research: Imaging Cores, Faculty Development, and Finances

- The Cost of Achieving Good Quality

- What Imaging Measurements are Needed in Clinical Practice?
- Milestones for Diagnostic Radiology Residency Programs: Millstones or Touchstones

### TUESDAY

7:15–8:15 a.m.

- Controversy Session: Preoperative Breast MR Imaging: Pros and Cons

- Hot Topic Session: Pediatric Radiology in the Future

### WEDNESDAY

7:15–8:15 a.m.

- Controversy Session: The Radiologist as Gatekeeper: Should We Take a More Active Role?

- Hot-Topic Session: Whole Body Diffusion MRI for Malignancy

4:30–6:00 p.m.

#### Hot Topic Sessions

- Hand-held Ultrasound: Is It a Threat to Radiology?

- High Relaxivity MR Contrast Agents: Understanding the Advantages and Limitations

- V/Q Scans versus CT for Pulmonary Emboli

- Imaging of the Acute Abdomen in Pregnancy: Current Roles and Controversies (An Interactive Session)

- Screening for Diseases (Breast, Lung, etc.): Current Controversies

### THURSDAY

7:15–8:15 a.m.

- Controversy Session: How Should We Deal with Outside Images?

- Hot Topic Session: Clinical Applications in Simultaneous PET-MR Imaging

3:00–4:00 p.m.

#### Hot Topic Sessions

- Imaging Evaluation for Alzheimer’s and Parkinson’s Diseases: New Approaches

- Imaging Evaluation of Inflammatory Arthritis: How I Do It

- Functional and Quantitative Imaging of the Lung

- Imaging of Transcatheter Valve Replacement

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### RSNA DXLIVE™

Use your personal digital device to submit diagnoses for a series of interactive case studies and compete against your colleagues in a fast-paced game format. Monday's session from 4:30 to 6:00 p.m. features chest and abdomen; Wednesday from 4:30 to 6:00 p.m. is neuroradiology and musculoskeletal radiology; and Thursday from 3:00 to 4:00 p.m. is a radiology potpourri.

## Scientific Paper Sessions

Scientific sessions reveal new science. Sessions are offered over nine time slots during the week and will include 1,863 papers in a range of subspecialties.

### BRAZIL PRESENTS

Brazil is the latest country to be spotlighted as part of the "Presents" sessions at the RSNA annual meeting. The Brazil Presents session is scheduled for Monday, 10:30 a.m.–12:00 p.m., and offered in conjunction with the Brazilian College of Radiology and Diagnostic Imaging.

After a decade of remarkable economic progress—including a gross domestic product (GDP) growth rate of 7.5 percent in 2010 alone—Brazil surpassed the United Kingdom as the world's sixth largest economy in 2012. And while it still must overcome economic disparities within its population, the country has expanded healthcare coverage to its nearly 200 million people in the past two decades since implementing a national healthcare

program. Radiology is an integral part of that growth, with its state-of-the-art technology, research, quality of care and continued demand for radiologists and sonographers.

To be covered in the session:

- Parameters and Trade-offs in MRI (1.5 and 3.0 T)
- Congenital Posterior Fossa Malformations — New Concepts
- The Role of Advanced MRI Techniques in Demyelinating Diseases
- MRI of Hypervascular Lesions in the Cirrhotic Liver: A Diagnostic Dilemma
- Advances in Fetal 3D MRI

## Refresher and Multisession Courses

RSNA 2012 offers more than 300 refresher courses covering traditional and cutting-edge topics. Multisession courses are scheduled for time blocks ranging from several hours to several days, to allow intensive study of various topics.

### INTERACTIVE GAME COURSES

Attendees of select refresher courses will be able to interact with the course material via their personal digital devices. See listings for RC114, RC215, RC303, RC405, RC412, RC607, RC609, RC701, RC704 and RC829.

### QUALITY CERTIFICATES OF COMPLETION

RSNA will award Quality Essentials Certificates of Completion to RSNA 2012

attendees who successfully participate in Session II and/or Session III of the Quality Improvement Symposium, (MSQ132, MSQ133) on Tuesday, 10:30 a.m. to 12:00 p.m. or 1:30-3:00 p.m. Participants who achieve a score of 80 percent or higher on the SAM test questions will be eligible to receive the certificates.

## Lakeside Learning Center

The Lakeside Learning Center is home to education exhibits and scientific informal (posters) presentations, grouped according to subspecialty. Many authors of posters and education exhibits are scheduled to give lunchtime presentations of their work; see the *RSNA Meeting Program in Brief* for days and times.

New this year, select backboard panel education exhibits in each subspecialty will contain QR codes that, when scanned with a smartphone, will take users to an electronic version of the poster and supplemental materials. Copies of the panels will be located in the "Enhanced Education Exhibits" area near the entrance to the Lakeside Learning Center and copies from each subspecialty will be located in the individual subspecialty communities.

Note: The Lakeside Learning Center will close at 7:30 p.m., Sunday–Thursday, this year. Electronic scientific posters and education exhibits (excluding Enhanced Education Exhibits) are available to meeting attendees via the Virtual Meeting 24 hours a day throughout the meeting week.

### QUANTITATIVE IMAGING

Located in the Lakeside Learning Center, the Quantitative Imaging Reading Room is an educational showcase highlighting products and applications that integrate quantitative analysis and structured reporting into the image interpretation and reporting process.

At the Quantitative Imaging and Biomarkers Alliance (QIBA) kiosk, see the latest efforts of the RSNA-directed group that aims to improve the value and practicality of quantitative imaging biomarkers by reducing variability across devices, patients and time.

### RSNA BISTRO TABLE DISCUSSIONS

Special tables at the Lakeside Learning Center RSNA Bistro are reserved for attendees to participate in discussions with representatives of various subspecialties. Topic facilitators are present at Bistro tables Monday through Wednesday, 12:15-1:15 p.m.

#### Monday

- ABR: MOC—Diagnostic Radiology
- ABR: MOC—Radiation Oncology
- ABR: MOC—Radiologic Physics
- Breast: MRI
- Gastrointestinal: Small Bowel Imaging
- Informatics: Mobile Computing Devices
- Nuclear Medicine: PET/MR
- Women's Imaging: US of Adnexal Masses
- Cardiac: Imaging of Transcatheter Valve Replacement
- Pediatric Radiology: Neonatal Imaging
- Interventional Oncology: Nanotechnologies for Interventional Oncology

#### Tuesday

- ABR: MOC—Diagnostic Radiology
- ABR: MOC—Radiation Oncology
- ABR: MOC—Radiologic Physics
- Informatics: IT Tools for improving Safety & Quality
- Chest: Quantitative Imaging in Lung or Airway Diseases
- Emergency Radiology: Imaging the Pregnant Patient
- Musculoskeletal: MR Imaging Evaluation of Cartilage and Osteochondral Injuries
- Interventional Oncology: Liver/Bone
- Molecular Imaging: Breast Imaging in the Era of Molecular Medicine
- Whole Body Diffusion in Oncology
- Neuroradiology: Brain Neoplasms

#### Wednesday

- ABR: MOC—Diagnostic Radiology
- ABR: MOC—Radiation Oncology
- ABR: MOC—Radiologic Physics
- Cardiac: Multimodality- PET/SPECT CT Myocardial Perfusion and Viability
- Genitourinary: Abdominal Incidentalomas
- Neuroradiology: Dementia Imaging
- Musculoskeletal: Osteoporosis and Marrow Imaging
- Chest: Ground-glass Nodules

- Physics: Recording & Reporting Radiation Dose
- Radiation Oncology: Image-guided Radiation Therapy (IGRT)
- Vascular: Aortic Diseases—Treatment and Follow-up Imaging

## Radiology Informatics

### IMAGE SHARING DEMONSTRATION

Visit the IHE® Image Sharing Demonstration in the Lakeside Building, Hall D, Booth 1628, to see how medical images and reports can be shared through personal health record (PHR) accounts using standards defined by Integrating the Healthcare Enterprise®. These same methods are in clinical use in the RSNA Image Share pilot project, funded by the National Institute of Biomedical Imaging and Bioengineering (NIBIB). The demonstration also includes standards-based methods for dose reporting, ordering and scheduling of radiology procedures using the RSNA RadLex® Playbook, reporting using structured templates developed by the RSNA Reporting Committee and authoring teaching files using the RSNA MIRC® Teaching File Software.

### RSNA INFORMATICS OVERVIEW

"Decoding the Alphabet Soup (IHE®, MIRC®, RadLex®, Reporting): Whirlwind Tour of RSNA Informatics Projects" is designed for those who want to learn more about, or who are just beginning to use, RSNA informatics products. Presenters will discuss these RSNA-sponsored projects: Integrating the Healthcare Enterprise (IHE); The Medical Imaging Resource Center (MIRC); RadLex comprehensive lexicon; and reporting.

## PEDIATRIC AND NUCLEAR MEDICINE/MOLECULAR IMAGING CAMPUSES

This year, separate Pediatric and Nuclear Medicine/Molecular Imaging campuses feature many components—including refresher and series courses, scientific presentations, and education exhibits—of these subspecialties, to facilitate focused study during the week.

The Pediatric Campus is located in Rooms S101AB and S102AB of McCormick Place. The Nuclear Medicine/Molecular Imaging Campus is located in S503AB, S504CD and S505AB. Lunch hour and afternoon presentations of scientific posters and education exhibits in the pediatric and nuclear medicine/molecular imaging subspecialties will take place in the campuses.

### INFORMATICS AREA—LAKESIDE LEARNING CENTER

Visit the Informatics area in the Lakeside Learning Center to take guided tours of IHE, MIRC, RadLex and Reporting. For more information, go to [RSNA.org/Informatics.aspx](http://RSNA.org/Informatics.aspx).

## RSNA Education

### EARN SAM, CME CREDITS

Forty in-person, self-assessment module (SAM) courses will be offered at RSNA 2012, allowing participants to obtain both continuing medical education (CME) and SAM credit for each course attended. With the help of SAM faculty, this year's courses have been designed to cover a wide range of subspecialties.

All SAM courses are qualified by the American Board of Radiology (ABR) in meeting self-assessment criteria toward fulfilling ABR Maintenance of Certification Program requirements. Participants earn 1.5 SAM credits per course attended. In addition, each course has been approved for *AMA PRA Category 1 Credit™*.

RSNA annual meeting in-person SAMs are accredited by the new MOC program of the Royal College of Physicians and Surgeons of Canada and approved by the Canadian Association of Radiologists.

Guarantee spots in SAM courses by pre-registering at [RSNA.org/Registration\\_and\\_Housing.aspx](http://RSNA.org/Registration_and_Housing.aspx) by November 21. Attendees interested in sold-out SAM courses can go directly to the SAM course room and attendees will be seated on a

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first-come, first-served basis after all ticketed attendees have been seated.

Members attend RSNA 2012 SAM courses free; non-members pay a fee of \$50.

### RSNA STORE FEATURES CD REFRESHER COURSES, NEW COLLECTIONS, DEMONSTRATIONS

Visit the RSNA Store to experience all the educational products and services that RSNA has to offer and talk to RSNA staff about maintenance of certification, online education and more.

This year, the RSNA Education Center offers 20 new refresher courses for purchase on CD at the RSNA Store, including “Gastrointestinal: Liver,” “Great Cases in Abdominal US” and “Brain Imaging Work-up for Dementia.” Most courses focus on specific imaging challenges and cover a broad range of subspecialty topic areas. Individual CDs are \$55 for members and \$80 for non-members.

The RSNA Store also features two new CD collections: the Pediatric Gastrointestinal Collection and the Abdominal Collection. Each collection contains a set of refresher course CDs pertaining to a particular subspecialty. The Pediatric Gastrointestinal collection offers 2.75 *AMA PRA Category 1 Credits*™, while the Abdominal Collection features three CDs offering 4.50 *AMA PRA Category 1 Credits*™. Collections offer the opportunity to earn multiple CME credits and are priced at a 25 percent discount as compared to individual CD purchases.

CD collections from previous annual meetings will also be available for purchase at the RSNA Store. Collections are priced based on the number of CDs per collection but generally range from \$80-\$175 per collection.

*RadioGraphics* special editions from 2008-2012 will be available for browsing and purchase. New this year, the RSNA Store will also feature the print version of *Radiology Select Volume I: Pulmonary Nodules* and *Volume II: Stroke*.

## PATIENTS FIRST

In keeping with the “Patients First” theme of the annual meeting, RSNA will offer a spectrum of programming focusing on patient-centered care, including these refresher courses:

- Vignette-based Disclosure of Medical Error in Radiology (RC216)
- What the Referring Physician Needs to Know (RC316)
- Patient-centered Radiology: It’s Good Business (RC416)

Also being presented at RSNA 2012 is the workshop, Program to Enhance Relational and Communication Skills (PERCS)



for Radiologists. The workshop is made possible through a GE Healthcare/RSNA Research & Education (R&E) Foundation Education Scholar Grant.

Attendees should also stay alert for information on the launch of Radiology Cares, RSNA’s new patient-centered radiology campaign to encourage and facilitate radiologists’ meaningful engagement in the patient experience.

RSNA staff will also give demonstrations of the RSNA/AAPM Physics Modules, online Education search and CME Credit Repository.

### ACADEMY OF RADIOLOGY LEADERSHIP AND MANAGEMENT

More than three dozen courses at RSNA 2012 count toward the Certificate of Achievement offered by the new Academy of Radiology Leadership and Management (ARLM). RSNA collaborates with the Association of Administrators in Academic Radiology Departments, American Roentgen Ray Society, Association of University Radiologists, and the Society of Chairs of Academic Radiology Departments in the ARLM.

Medical imaging professionals can earn an ARLM certificate by participating in 50 hours of education—including at least 30 in person—across a spectrum of domains including financial, human resources, professionalism, and academic mission.

Learn more about eligible courses by picking up an ARLM subspecialty brochure at McCormick Place and looking for the **(ARLM)** in the *RSNA Meeting Program*. RSNA Store staff can answer questions regarding ARLM achievements or courses.

## Associated Sciences

Associated sciences offerings are tailored to the various disciplines that function within the radiology department.

### RADIOLOGIST ASSISTANTS SYMPOSIUM

Four refresher courses on Sunday designed to meet the educational needs of the radiologist assistant (RA) as defined by ARRT®.

### ASSOCIATED SCIENCES SYMPOSIUM

This set of 10 refresher courses over 2½ days begins Monday morning with “Are You Ready: The Business Case for Cultural Competence.”

### ASRT @ RSNA 2012

This 10-session course, held Wednesday and Thursday, offers continuing education credits for radiologic technologists. ASRT @ RSNA 2012, offered in collaboration with the American Society of Radiologic Technologists, will feature discussions of such wide-ranging topics as digital radiography image process and challenges in imaging the obese patient.