Mobile Apps Gain New Ground in Radiology

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Post-residency Success Means Leaving the Reading Room
Prostatic Artery Embolization Promising for Treating Enlarged Prostate
PET/MR Leads to Potential Biomarkers for Autism Spectrum Disorders
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QIIBA Meeting Focuses on Clinical Value of Quantitative Imaging

The fifth annual Quantitative Imaging Biomarkers Alliance (QIIBA) meeting drew more than 75 stakeholders from the clinical community, imaging equipment manufacturers, the pharmaceutical industry, government agencies and medical institutions. Held in May in Rosemont, Ill., highlights of the meeting included:

• QIIBA Modality Committee leaders provided updates concerning ongoing projects funded from a contract awarded to RSNA by the National Institute of Biomedical Imaging and Bioengineering.
• Limited panellists from pharmaceutical, equipment and informatics companies and academia provided their perspective on the clinical value of quantitative imaging and engaged attendees in a question-and-answer session afterwards.
• Co-chairs of the newly formed Ultra Sound Technical Committee met to discuss the organization of subcommittees and their short-term project goals.
• Modality and Technical Committees worked in breakout sessions to further develop QIIBA Profiles and plan for groundwork studies to provide the data needed to establish or reinforce Profile claims.

For more information on QIIBA and to access the QIIBA Newsletter and presentations from the 2012 QIIBA Annual Meeting, go to RSNA.org/QIIBA.aspx

Numbers in the News

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Percent of their workday radiologists should devote to activities that don’t involve image interpretation, according to some experts. See Page 9 to learn how undertaking activities such as utilization management and quality initiatives can help both residents and senior radiologists increase their value in a tight job market.

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Increase in estimates of autistic spectrum disorder (ASD) prevalence in the overall population between 2002 and 2008, according to a recent report by the Centers for Disease Control and Prevention. Turn to Page 7 to learn how researchers using MR and PET have discovered potential biomarkers that may lead to earlier ASD diagnosis and improved treatments.

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RSNA Research & Education Foundation Roentgen Resident/Fellow Research Awards presented this year. Roentgen Awards recognize and encourage residents and fellows, nominated by their program directors or department chairs, who have played active and outstanding roles in radiologic research. See RSNA.org/ Roentgen Research_Award.aspx for a list of awardees.

SAMSON RECEIVES CAR GOLD MEDAL AWARD

The Canadian Association of Radiologists (CAR) presented its Gold Medal Award to Louise M. Samson, M.D., head of the Department of Radiology at the University of Montreal. A revered educator, Dr. Samson is the first radiologist to serve as president of the Royal College of Physicians and Surgeons of Canada. She is a former RSNA second vice-president and was a member of both the Education and the Maintenance of Certification/Education Councils.

RSNA Editorial Fellows Announced

Birgit Ertl-Wagner, M.D., a professor of radiology and section chief for MR imaging at the University of Munich, has been named the 2012 RSNA Eyler Editorial Fellow. Mai-Lan Ho, M.D., a fourth-year resident and clinical fellow in the Department of Radiology at Beth Israel Deaconess Medical Center, is the 2012 Trainee Editorial Fellow.

Dr. Ho’s work focuses on neuroradiology and MR imaging. She has served on the editorial board of the International Journal of Stroke Research, as a section editor for Radiopaedia.org and as a reviewer for the Journal of Pediatric Neurology. Among the 11 funded projects on which Dr. Ho serves as principal investigator is “Sodium-23 MRI for Stress-Free Localization in Epileptic Patients,” funded by a 2011 Bracco Diagnostics Research Resident Grant from the RSNA R&E Foundation. Transforming patient care through research and educational innovation is her ultimate goal, Dr. Ho said. “During residency and medical school, I have published several original and review articles and pursued initiatives in medical education and leadership,” she said in her application. “The RSNA Trainee fellowship will be an amazing opportunity for me to broaden my experiences in medical journalism, thus enhancing my contributions to radiology research and practice.”

Both fellows will work with Radiology Editor Herbert Y. Kiesel, M.D., in Boston and Radiographics Editor Jeffrey S. Klein, M.D., in Burlington, Vt. The Eyler fellowship lasts one month and the fellow trainee lasts one week. Each fellow will also visit the RSNA Publications Department at RSNA Headquarters in Oak Brook, Ill. Professor Ertl-Wagner will also work with the Radiographics editorial board at RSNA 2012.

Car Gold Medal Award recipient Birgit Ertl-Wagner, M.D., is shown with Dr. Omary, a professor of radiology and section chief for MR imaging at the University of Munich, who has been named the 2012 RSNA Eyler Editorial Fellow.

Omary Named Chair at Vanderbilt University

Reed Omary, M.D., M.S., has been appointed a professor and chair of the Department of Radiology and Biomedical Sciences at Vanderbilt University Medical Center in Nashville, Tenn. Dr. Omary previously served as a professor of radiology and biomedical engineering and vice-chair of research for the Department of Radiology at the Northwestern University Feinberg School of Medicine in Chicago. Dr. Omary is a past recipient of two RSNA R&E Foundation grants and remains active in Foundation activities. He has served as a manuscript editor for Radiology.
In today’s changing healthcare system, the process of finding a job has become a challenging task. The perfect position you envisioned at the start of your residency may no longer exist. With the country in a sluggish economic recovery, fewer positions are open to training residents and fellows and the competition is intense for a smaller number of quality positions. However, the situation may not seem as bleak if you approach your job search with a reasonable strategy. While it would be ideal to find a job that matches your specific interests, what drives most of us to choose one position over another is often location. You may need to be in the same city as a spouse or stay in a large urban environment, as opposed to a rural community. This is a factor, then, if you plan to search in jobs banks to a few select areas. Don’t be disheartened if you don’t see a multitude of postings since many jobs are advertised. Talk to everyone you know about tracking down a position. Your current residency and/or fellow-ship program can be a great starting point. Radiology meetings and conferences are also fantastic places to meet potential employers. Still not enough leads? Call the prac-tices in your target area and ask them if they are in need of a physician with your unique skills. Remember that being able to perform the core duties of your position is just the start. Sometimes it is your additional non-patient care abilities that can benefit the prospective employer and get you hired. For some, specialization in informatics or a business background may be the skills that are critical to a specific practice. For others, it may be serving as a liaison for the community to improve patient care. Most importantly, be patient but per-sistent. The process may take longer than it has in prior years, but you will eventually find the right position.

## Getting Started with Your First Job Search

Getting started with your job search can be daunting. It is a process that requires patience, persistence, and often, a bit of luck. Here are some steps to help you get started:

1. **Research Your Options**: Start by researching the different types of positions available in your field. Consider factors such as location, work environment, and potential growth opportunities.

2. **Network**: Connect with professionals in your field. Attend conferences, seminars, and other events to meet people who can provide insights and possibly lead to job opportunities.

3. **Update Your Resume**: Ensure your resume is up-to-date and tailored to the positions you are applying for. Highlight your skills and experiences that are relevant to the positions you are seeking.

4. **Connect on LinkedIn**: LinkedIn is a valuable tool for networking. Connect with professionals in your field and join relevant groups to stay informed about job opportunities.

5. **Apply for Positions**: Once you have a well-crafted resume and a strong network, start applying for positions. Keep track of the applications you have sent and follow up as needed.

6. **Prepare for Interviews**: If you are invited to an interview, prepare thoroughly. Research the company and the role, know your strengths and weaknesses, and practice common interview questions.

7. **Negotiate Salary and Benefits**: Once you secure an offer, don’t hesitate to negotiate salary and benefits. Be clear about your expectations and what you value in a position.

Remember, finding your first job is a process. Keep a positive attitude, be persistent, and don’t give up. Success in your new position is within reach!
Mobile Apps Gain New Ground in Radiology

From helping to demonstrate the meaningful use of electronic healthcare records (EHRs) to improving workflow in the MR imaging suite, ever-evolving mobile devices are well on their way to becoming embedded in the daily routine of many radiologists.

Acceso, with tapping into mobile apps for their convenience and potential for collaboration, consultation and teaching, radiologists are using them to strengthen relationships with referring physicians who are adopting the technology in greater numbers and to improve relationships with patients who appreciate the accessibility mobile apps afford.

‘Now I can do my job better because I am always available to answer questions on a CT study,’ said Elliot K. Fishman, M.D., director of diagnostic imaging and body CT at Johns Hopkins University Medical Center in Baltimore. Dr. Fishman was named RSNA Outstanding Educator in 2009 and is vice chair-co-chair of the RSNA-American College of Radiology (ACR) Public Information Website and serves on RSNA Public Information Committee and Public Information Advisors Network. ‘Because you are always available, it really improves patient care.’

As tablets continue to offer greater image clarity, resolution and functionality, mobile devices will more beyond a consultative role to a diagnostic one, experts say.

Apps Move Toward Diagnosis

Introducing this spring, Apple’s iPad 3 makes it easier for radiologists to review images, potentially moving medical imaging closer to using mobile devices for diagnostic purposes. Mobile MIM Software was one of the first apps for diagnostic radiology approved by the U.S. Food and Drug Administration (FDA), opening the way for other companies.

‘Due to recent innovations in computer hardware and software, the iPad and other tablet devices have emerged as the newest forms of mobile computing with a role in image interpretation,’ Dr. Fishman said.

With a retina display of 2.048 by 1,536 pixels, iPad 3 features more than four times the number of pixels offered by iPad 2 and a million more than the iPad. The system in Detroit. ‘If I schedule a follow-up, this plug-in will alert me if that patient has or has not been seen at our healthcare system. This not only helps the primary care physician but also the continuity of patient care.’

The app also helps guard against frivolous recommendations and add to the value of the radiology service, Dr. Halabi said.

Along with the ultra-readable “must-have” apps free to iPhone, iPod touch and iPad users, including:

- **Radiology and RadioGraphics**: Access full-text content of current and recent issues, jump to sections within articles, perform full-text searches, share and store articles and more.
- **Radiology Select**: Access this continuing series of selected Radiology articles highlighting developments in imaging science, techniques and clinical practice.
- **RSNA Suite**: One app offers instant access to current information on the RSNA Annual Meeting, Radiology, RadioGraphics and RadiologyInfo.org. Find and connect to interrelated apps at the App Center.
- **myRSNA**: Instantly access the files and bookmarks you’ve saved. Coming soon, RSNA’s newest app will offer patient safety content from RadioGraphics.org for tablets and smartphones.

For more information on RSNA mobile features, go to RSNA.org/Mobile_Options.aspx or search “RSNA” on the App Store.

**Access this content for free via RSNA.org:**

- **Annual Meeting**: Check in throughout the year for updates on new content to be featured at RSNA 2012, as well as information about esteemed lecturers and honorees and other announcements.
- **RadioGraphics**: Browse Tables of Contents for RSNA’s peer-reviewed science and education journals and read articles.
PET/MR Leads to Potential Biomarkers for Autism Spectrum Disorders

Researchers using MR and PET to study autism spectrum disorders (ASD) in children have discovered potential biomarkers that may lead to earlier diagnosis and improved treatments.

ASD—sometimes also referred to as pervasive developmental disorder (PDD)—is characterized by deficits in social interaction, verbal and nonverbal communication and engagement in repetitive behaviors or interests. The Centers for Disease Control and Prevention (CDC) estimates that one in approximately 88 children has been identified as having some form of ASD, with autism being the most common and debilitating type. There is no cure for ASD but behavior and communication therapies and medication can help control symptoms.

Diffusion-weighted MR imaging (DW-MRI) is giving researchers insight into the connection between autism and irregularities involving signal pathways in the brain. Jeong-Won Jeong, Ph.D., an assistant professor in the departments of Pediatrics and Neurology at Wayne State University School of Medicine in Detroit, and colleagues used DW-MRI to study differences among children with ASD in research first presented at RSNA 2011 and later published in the April 2012 issue of The Cerebellum.

Focusing on the brain’s dentatorubrothalamic tract—which has been implicated in the deficits in communication and motor skills found in autism patients—researchers examined children with high-functioning autism (HFA), who have typical cognitive function, and with low-functioning autism (LFA), who have impaired cognitive function. Researchers imaged 13 HFA children, 11 LFA children and 14 typically developing children. Results showed decreased white matter integrity in HPA and LPA children, Dr. Jeong said. “We found that the reduction of axonal integrity measured by DW-MRI correlates highly with the reduction of communication and living skills in children with high- and low-functioning autism,” he said. “A child with high-functioning autism receives an entirely different treatment than a child with low-functioning autism,” he said. “A low-functioning child could not tolerate the sensory input that a high-functioning child could. Thus, early distinction between the two is critical to caring or managing the disorders.”

PET to identify protein synthesis abnormalities in disorders related to autism

Previously, researchers have detected unusual increases in the synthesis of dendritic proteins, which make up the branched projections of neurons that conduct electrochemical stimulation from other nerves in conditions like Fragile X syndrome and tuberous sclerosis.

In research originally presented at RSNA 2011 and published in the November 2011 issue of the Journal of Child Neurology, Dr. Shandal and colleagues used PET with the radiotracer Carbon-11 leucine—an amino-acid-tagged radioisotope—to measure protein synthesis in 16 children with developmental delays. Eight of the children had PDD.

Researchers generated time activity curves for leucine concentration in the blood and leucine uptake in the brain and found higher rates of cerebral protein synthesis in children with PDD. Higher rates of protein synthesis correlated with more severe and pervasive autistic features, Dr. Shandal said.

“This increase in dendritic protein synthesis causes deficits in synaptic connections and alters the normal development of brain functions such as language and cognition,” Dr. Shandal said.

Abnormal protein synthesis in the language centers of the brain may offer an imaging biomarker in assessing the severity of autism, according to study co-author Varun Shandal, M.B.B.S., a research assistant at Children’s Hospital of Michigan, Wayne State University of Medicine in Detroit, and colleagues have used Carbon-11 PET to identify protein synthesis abnormalities in disorders related to autism.

In current research, Dr. Jeong and colleagues are studying how the reduced white matter integrity of the dentatorubrothalamic pathway affects serotonin synthesis in the cerebellum of children with LFA and HFA.

Carbon-11 PET Identifies Abnormal Protein Synthesis

In a first-of-its-kind study, Varun Shandal, M.B.B.S., a research assistant at Children’s Hospital of Michigan, Wayne State University of Medicine in Detroit, and colleagues have used Carbon-11 PET to identify protein synthesis abnormalities in disorders related to autism.

Researchers using MR and PET to study autism spectrum disorders (ASD) in children have discovered potential biomarkers that may lead to earlier diagnosis and improved treatments.
Post-residency Success Means Leaving the Reading Room

While radiology residents and fellows seeking their first position in today’s tight job market find themselves having to be flexible on issues like salary, vacation and geographic location, they’re also likely to discover they need to bring more skills to the table, according to experts.

Candidates can increase their marketability by offering more than interpretive skills, said William T. Thorwarth Jr., M.D., a nationally recognized expert on radiology economics and reimbursement who serves as the RSNA Board Liaison for Publications and Communications. “New residents need to show employers that they have done more than just pass the boards,” said Dr. Thorwarth. “Getting involved beyond clinical care will have an impact both on an individual’s career and on the future of the profession.”

Dr. Thorwarth is a radiologist with Catawba Radiological Associates in Hickory, N.C., where he also serves the Frye Regional Medical Center, Catawba Valley Medical Center and Caldwell Memorial Hospital. Calling it a “cultural shift in radiology,” the American College of Radiology (ACR) is working on a number of initiatives to promote the value of radiologists in various capacities throughout healthcare. ACR President John A. Patti, M.D., suggests that radiologists devote 10 percent of their workload to non-interpretive activities such as utilization management and quality initiatives. “Willingness to be involved is a requirement,” said Bibb Allen Jr., M.D., vice-chair of the ACR Board of Chancellors and a presenter at the RSNA 2011 session, “Critical Issues Facing the Profession of Radiology: An ACR Leadership Perspective.”

“I think the days of reading out a batch of exams and being finished for the workday is over,” said Dr. Hazenfield, who is completing his residency at the University of Cincinnati. More than Reading: Serving and Leading

A radiology leader for the entirety of his career, Dr. Thorwarth stressed that committee work and leadership positions provide radiologists with the opportunity to be seen and heard—"as well as to influence. "Serving in leadership positions within your healthcare institution heightens the profile of radiology and gains respect and credibility for the profession," he said.

While speaking across the country, Dr. Thorwarth stresses the importance of radiologists participating on medical staff credentialing committees, in professional radiology and medical societies and within local community organizations. “It’s important to be around the people whose decisions impact our practice,” Dr. Thorwarth said. Serving on the Medicare Contractor Advisory Committee and working alongside local business leaders responsible for evaluating healthcare contracts are two simple examples of ways to become involved, he said.

It is important for practicing radiologists to work with and partner with every physician group they can, Dr. Allen added. “We need to make ourselves indispensible to our institutions and the communities we serve, not be a faceless name on a report,” he said.

Newly trained radiologists with an energy and enthusiasm for such initiatives have an opportunity to help mold the future of the profession, according to Dr. Thorwarth. But he advises graduates to be discriminating when it comes to choosing where they practice.

Residents and fellows should assess what a workplace values,” Dr. Thorwarth said. “Is it just reading and generating revenue, or does the practice reward and promote people who participate? The economy has made it tough, but to focus exclusively on income generation is a short-term gain in productivity at the risk of long-term sustainability.”

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Dr. William T. Thorwarth Jr., M.D.

“Standing Out From the Crowd”

Annam Annam, D.D., a fourth-year radiology resident at Baylor College of Medicine in Houston, is fully cognizant of the value of non-interpretive skills. “I’m a strong believer in the idea of participation,” said Dr. Annam, who also has great perspective on assessing job opportunities: after completing a pediatric residency in 2005, she worked for three years as a neonatal hospitalist in New York City. “It’s not the same market that it was then,” Dr. Annam said. “It’s definitely a buyer’s market now.”

In her next position as a fellow in pediatric interventional radiology at Texas Children’s Hospital, Dr. Annam expects to be actively involved in various aspects of healthcare. “We don’t want to be an invisible partner who doesn’t have a say in the issues we face,” she said. “Unless we put in face time with our colleagues, we will become isolated from other physicians. They won’t know or rely on us.

Ultimately, academic institutions and radiology practices will hire based on their individual needs. If you demonstrate that you are willing to contribute beyond your clinical skills, there will be a place for you,” Dr. Annam said.

For more information on this and other RSNA 2012 sessions, go to RSNA.org/Rsna_2012_NewsMeeting.asp. Enrollment for RSNA 2012 courses is under way at RSNA.org/registry.

For more information on the American Board of Radiology’s newly revised Certifying Exam, go to www.theabr.org.

The Academy of Radiology Leadership and Management (ARLM), sponsored by five radiology education societies including RSNA, offers this opportunity to gain knowledge and skills essential to serve as a leader in your practice or institution. For more information, go to www.radleaders.org.

WEB EXTRAS

Resident/Fellow Symposium Offered at RSNA 2012

Designed to provide useful information to residents and fellows as they begin their career paths, the RSNA 2012 Resident/Fellow Symposium will focus on topics including employment options, the job-searching process and legal aspects of radiology.

For more information on this and other RSNA 2012 sessions, go to RSNA.org/Rsna_2012_NewsMeeting.asp. Enrollment for RSNA 2012 courses is under way at RSNA.org/registry.

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Prostatic Artery Embolization Promising for Treating Enlarged Prostate

Prostatic artery embolization (PAE) offers a potential breakthrough for treating prostatic hypertrophy while potentially avoiding some of the debilitating side effects that often accompany transurethral resection of the prostate (TURP).

In presentations at the recent Society of Interventional Radiology (SIR) 2012 annual meeting. Francisco Cesar Carnevale, M.D., Ph.D., a professor and chief of interventional radiology at the University of Sao Paulo Medical School in Brazil, said that results of a four-year study suggest that PAE is “safe, effective, and has a low rate of complications.”

Men over 50 are more susceptible to benign prostatic hyperplasia (BPH), which can seriously impact quality of life. With PAE, clinicians use a catheter to inject small microspheres into the arteries that nourish the prostate, blocking the arteries and starving the prostate of its blood supply, eventually shrinking it.

One advantage of PAE is that it can treat even very large prostates, which may limit those who are good candidates for TURP; the current gold standard for BPH treatment. And potential side effects associated with TURP have not been seen with PAE, Dr. Carnevale said.

“We haven’t seen impotence, ejaculatory disorders or urinary incontinence in our patients after prostatic artery embolization,” said Dr. Carnevale, who heads a group of physicians performing the procedure in Brazil.

PAE Yields Clinical Success, Improves Quality of Life

Dr. Carnevale’s study included 11 men with acute urinary retention due to BPH who had been managed with medical treatment and indwelling urethral catheters and were waiting to undergo surgery.

Using a micro-catheter threaded into the prostatic arteries, interventional radiologists performed 12 PAE procedures under local anesthetic in 11 patients using resin microspheres as embolizing agents. The men ranged from 59 to 78 years of age, with a mean age of 68.5 years. Researchers used MR imaging and ultrasound to study the exact anatomy of the prostatic arteries.

Patient follow-up ranged from 16 months to almost four years. Results showed a 30 percent reduction in prostate size in these men at final follow-up, a result “supported by urodynamic findings and symptom relief,” Dr. Carnevale said. Patients reported having “mild” symptoms and an improved quality of life, he said.

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In research also presented at the 2012 SIR annual meeting, a group of researchers from the New University of Lisbon in Portugal, led by Joao Martins Pisco, M.D., Ph.D., reported similar results in performing PAE.

Dr. Pisco reported that 84 men treated with PAE after an average follow-up of nine months showed “significant” clinical improvement. Treatment was technically successful in 98.5 percent of the cases, with 77 men showing “excellent” improvement, he said.

“After treatment, we assessed quality of life and evaluated how well the urinary system was working,” Dr. Carnevale said. “Technical success (bilateral prostatic artery embolization) was 75 percent and clinical success (Foley catheter removal and symptoms improvement) was 91 percent.”

If we can demonstrate that it’s safe, we can expand PAE to a larger number of patients and begin to look at preliminary data to determine the actual therapeutic impact.”

James B. Spies, M.D., M.P.H.
Mobile Apps Gain New Ground in Radiology

Continued from Page 6

Safety Trials of PAE Necessary
As a radiologist who has traveled to Portugal and Brazil to observe the procedure, Dr. James B. Spies, M.D., M.P.H., said the potential for PAE will be adopted on a wider scale.

“Experience physicians trained in interventional radiology techniques as well as someone who has a strong understanding of pelvic vascular anatomy should perform the procedure,” Dr. Carnevale said.

Dr. Spies hopes to bring treating patients in coming months and said it’s likely that comparative trials will be under way for next year. In the meantime, prospective patients have called him after reading about the procedure and its promising results.

“Potentially, this has a great future in this country and around the world,” Dr. Spies said. “There certainly is the skill set out there for people to do this, but it’s not quite ready for primetime yet.”

Although HP is no longer involved in the manufacturing of tablet PCs with webOS, the project has moved beyond the dependence on this operating system. Dr. Holbrook is now developing applications using modern, cross-platform web technologies that can run on a myriad of devices including PCs and tablets, regardless of vendor.

Mobile Devices Offer “Best of Both Worlds” Challenges remain and radiologists aren’t likely to abandon traditional workstations overnight, but experts say the industry is definitely moving in that direction.

In fact, in a study published in the March 2012 issue of Emergency Radiology, Dr. Fishman and other Johns Hopkins researchers found no difference between the use of an iPad and a PACS workstation in terms of diagnostic accuracy for detecting pulmonary embolism.

The device “has the potential to expand radiologists’ availability for consultation and expedite emergency patient management,” according to the authors. “It’s the best of both worlds—the application provides everything you need,” Dr. Fishman added.

Continued on next page

Experience the Best of Chicago during RSNA 2012
No matter what your passion or interest, Chicago has something for everyone attending RSNA 2012. Peruse our annual roster of Chicago events for everything from world-class museums and restaurants to dazzling architecture and artwork and much more. We also include Our Insider’s Guide to Chicago’s Best Deals, featuring the many free activities available in the Windy City.

Museums

ART INSTITUTE OF CHICAGO
Renowned for its Impressionist and Post-Impressionist collection as well as its Depression-era American paintings, the Art Institute boasts a 260,000-piece collection representing 5,000 years of art from around the globe. Don’t miss the Modern Wing, which exhibits early 20th Century European Art.

Artist and director Steve McQueen’s film and moving image installations are among the highlights of the special winter exhibits which also include Allen Ruppersberg’s “The Birth and Death of Rock ‘n’ Roll.”

FIELD MUSEUM OF NATURAL HISTORY
Upon entering, visitors will encounter Sue, the world’s largest and most complete Tyrannosaurus Rex fossil. The natural history museum has something for everyone from taxidermal animals and dinosaurs to Egyptian mummies and a memorable dinosaur exhibit. Stop by this year’s special exhibits: Extreme Mammals and Images of the Afterlife, featuring sculpted portraits of mummies imaged with CT.

SMITH MUSEUM OF STAINED GLASS WINDOWS
When visiting Navy Pier, enjoy the largest collection of Tiffany stained glass windows, which are displayed along the interior public walkway at the end of the pier building. The collection contains more than 150 stained glass works by artists such as Louis Comfort Tiffany and Frank Lloyd Wright.

Located at the east end of the pier building. Don’t miss the modern Wing, which exhibits early 20th Century European Art.

Institute boasts a 260,000-piece collection representing 5,000 years of art from around the globe.
seven years of age and younger are invited to the Water lab and the Wilderness Walk. Visitors can also enjoy the multilevel Science of Storms exhibit, located in the Henry Crown Space Center. A temporary exhibit, "Apollo 8: A Journey to the Moon," features restored Gemini 12 spacecraft to landing in the Lunar Module simulator on the face of the moon. Planetarium shows play continuously throughout the day in three theaters.

PEGGY NOTEBAERT NATURE MUSEUM
The Notebaert welcomes children of all ages to explore nature in unusual and innovative ways. Permanent exhibits include the Bird Rookery, Extreme Green House, Isotak: Family Look-in Animal Lab, Judy Isotak Butterfly Haven, Mysteries of the Marlin, Nature’s Lunchbox, RiverWorks, Water Lab and the Wilderness Walk. Visitors seven years of age and younger are invited to enjoy the Hands-on Habitat.

MUSEUM OF SCIENCE AND INDUSTRY
The only remaining building from the 1893 World’s Columbian Exposition, the museum is packed with one-of-a-kind exhibits: one of two U-555 German submarines captured during World War II; a realistic coal mine; the multilevel Science of Storms exhibit; complete with a vapor tornado and tsunami tank; and the Henry Crown Space Center featuring Apollo 8: A Temporary Exhibit. Smart Home: Green + Wired, demonstrates innovative ways. Permanent exhibits include the museum’s Special Collections and the Notebaert’s Colorful Collections.

A sustainable “green” home. Annual special events include the Christmas Around the World and Holidays at Light. • 57th St. and Lake Shore Dr. • 1-312-664-1444 • www.msic饶a.org

CHICAGO HISTORY MUSEUM
This collection dates from 1856, approximately 25 years after the founding of Chicago, and was started with the intent to help to research and interpret the city’s history. The museum brings life to many aspects of Chicago’s past, including the Great Chicago Fire of 1871, the rise of Chicago’s Chinatown and the life and times of Abraham Lincoln. Details on neighborhood tours, lectures, performances and events are available on the website.

DUSABLE MUSEUM OF AFRICAN AMERICAN HISTORY
A special museum dedicated to collecting and preserving the history of African Americans, this nearly 50-year-old institution is the first of its kind in the U.S. It features exhibits on salient historical topics such as civil rights as well as work by African-American artists.

LINCOLN PARK CONSERVATORY
Built in the late 1800s, the conservatory originally provided visitors a chance to view exotic plants while growing most of the specialized horticulture for Chicago’s parks. Today, visitors can stroll among the four display houses: Fern Room, Orchid House, Palm House and Show House, where the Christmas show is hosted.

Garfield Park Conservatory
Enjoy this holiday flower show in one of the world’s largest gardens under glass, built at the turn of the last century. The conservatory is famous for its pristine waterfall set among stone and water landscapes.

300 N. Central Park Ave. • 1-312-746-3030 • www.garfield-conservatory.org

Millennium Park Ice Rink
The McCormick Tribune Plaza ice rink is located just off Michigan Avenue in the shadow of the Cloud Gate sculpture, affectionately called “The Bean.” The windows of the Park Grill restaurant look out on the rink. Skating is free and skate rental is available.

East side of Michigan Avenue between Washington and Madison streets • 1-312-746-1168 • www.millenniumpark.org

DALEY BICENTENNIAL PLAZA ICE RINK
Located across Millennium Park’s snake-like 57th Street Pedestrian Bridge is a secluded ice rink with far fewer skaters than the well-known Millennium Park rink. The facility offers free skating, skate rental and a warming building.

South side of East Randolph Street between Columbus Drive and Lake Shore Drive • 1-312-746-7650 • www.chicagoparkdistrict.com

RSNA Tours & Events
RSN A is sponsoring a series of tours and events during RSNA 2012. The RSNA Tours & Events Schedule is available at RSNA.org/Tours & Events.

Look for the RSNA Tour icon next to event listings in this article, suggesting that a place-to-go-see-DO rep will be available. Email for tours and events online when registering for the annual meeting or while adding courses.

Theater
FAiLURE: A LOuR STory
A tale of love and loss following three Chicago sisters through the 1970s.
• Victory Gardens Beijar Theater 2423 N. Lincoln Ave. • 1-312-777-3100 • www.victorygardens.org

JAMES JOYCE’S “THE DEAD”
Classic Irish tale told through a family gathering in Dublin on the Feast of the Epiphany.
• Court Theatre 5535 S. Ellis Ave. • 1-773-773-4472 • www.courttheatre.org

LATE NITE CATHOLICism
This witty performance examining the Baby Boomer parochial school experience is a long-time favorite among those taught by nuns and also serves as a very introduction to Catholicism.
• Royal George Theatre 1641 N. Halsted St. • 1-312-988-9000 • www.royalgeorgetown.com

LES MISERABLES
The 25th anniversary production of this much-loved musical features sets inspired by author Victor Hugo’s paintings.
• Cadillac Palace Theatre 151 W. Randolph St. • 1-312-902-1400 • www.cadillacpalace.com

The SANTALAND DiARIES
David Sedaris’ witty account of his experience as a Macy’s Christmas Elf.
• Theater Wit 1229 W. Belmont Ave. • 1-312-975-8150 • www.theaterwit.org

THE SCHOOL FOR LiEsi
Enjoy this raucous adventure based on Molier’s The Misanthrope.
• Second City 230 W. North Ave., Third Floor • 1-312-943-4562 • www.secondcity.com

ZANiES COMEDY NIGHT CLUB
Chicago’s favorite for stand-up comedy. Enjoy comedians from Comedy Central, HBO and the Tonight Show in Zanies’ intimate atmosphere.
• Zanies 1548 N. Wells St. • 1-312-337-4077 • www.chicagozanies.com

Family Performances
A CHRISTMAS CARoL
For more than 30 years, the Goodman Theatre has presented this timeless Dickens classic during the holiday season.
• Goodman Theatre 170 N. Dearborn St. • 1-312-443-8800 • www.goodman-theatre.org

THE BLUE MAN GROUP
A vibrant event blending flashing lights, comedy, loud music—and yes, blue men—for one unique experience. Shows are unique to each city. Children under five not admitted.
• Briar Street Theatre 3133 N. Halsted St. • 1-773-346-4000 • www.briarstreet.com • www.ticketmaster.com

KNUFFLE BUNNY: A CAUTIONARY MUSICAL
Dad saves the day when Trixie loses her lovey in this classic Mo Willems tale.
• The Apollo Theater 2540 N. Lincoln Ave. • 1-773-935-6100 • www.amospace theater.com

360 DEGREES ENSEMBLE
170 N. Dearborn St. • 1-773-346-4000 • www.ticketmaster.com

References to venues and events are available on the website.
Continued from previous page

Symphony and Opera

**LYRIC OPERA OF CHICAGO**

The historic and renowned art-deco Civic Opera House is the perfect setting to see the renowned Lyric Opera of Chicago. Free lectures are offered one hour before every performance. Tickets go on sale Aug. 1. Productions include:

- **Don Pasquale**
  - Nov. 25 & 28
  - The young woman turns out to be more than Don Pasquale can handle in this operatic comedy. By Gaetano Donizetti. Conductor: Stephen Lord with René Barbera, Nicholas Danial and Mark Padmore.

- **Werther**
  - Nov. 26

- **Ildebrando D’Arcangelo and Marlis Petersen**
  - Nov. 26

Family Activities

**CHICAGO SYMPHONY ORCHESTRA**

**Nov. 25**

**Special Event: Disney Fantasia**

Program: Dukas: The Sorcerer’s Apprentice; Beethoven: Symphony No. 5; Tchaikovsky: The Nutcracker Suite.

**Conductor: Ludwig Wicki**

- Nov. 29 & 30 and Dec. 1
  - Conductor: Sir Mark Elder
  - Program: Dvorak: The Golden Spinning Wheel; Bartok: Les nuits d’ile; Shostakovich: Symphony No. 1
  - 720 S. Michigan Ave.
  - 1-312-294-3000
  - www.cso.org

**AMERICAN GIRL PLACE**

Beyond the shopping frenzy the American Girl experience can include dining, book signings, cooking classes and the popular doll hair salon.

- Water Tower Place
  - 835 N. Michigan Ave.
  - 1-877-247-5223
  - www.americangirl.com

**CHICAGO CHILDREN’S MUSEUM**

Children of every age experience interactive learning through 15 permanent hand-on exhibits that range from dinosaurs to art, water play to fire safety, climbing to commerce. Daily activities offer even more focused learning opportunities.

- 700 E. Grand Ave. (Navy Pier)
  - 1-312-957-3700
  - www.chicagomuseum.org

**JOHN HANCOCK OBSERVATORY**

This observatory experience on the 94th floor begins with a ride on the fastest elevator in North America and includes an open-air skywalk, free multimedia sky tour and the first interactive telescopes in the U.S.

- 875 N. Michigan Avenue
  - 1-888-875-VIEW

**NAVY PIER IMAX THEATRE**

The Navy Pier IMAX theatre will announce its complete holiday film schedule in late autumn.

- 700 E. Grand Ave.
  - 1-312-957-3700
  - www.imax.com/chicago

**LINCOLN PARK ZOO**

One of the nation’s last free zoos, and one of its oldest, the Lincoln Park Zoo is conveniently located in nearby Lincoln Park. Walk through the zoo at night with the holiday-themed Zoolights festival on Friday through Sunday evenings.

- 2200 N. Cannon Dr.
  - 1-312-724-2000
  - www.zoo.org

**SKYDECK CHICAGO AT WILLIS TOWER**

At 1,353 feet above the ground, Skydeck Chicago in Willis Tower, the tallest building in the Western Hemisphere, offers views up to 60 miles. If you dare, venture out onto The Ledge, four glass-enclosed—and glass-bottomed—boxes outside the building.

- 233 S. Wacker Dr.
  - 312-875-9447

The Insider’s Guide to Chicago’s Best Deals

Many Chicago museums offer free admission on select days. With some smart scheduling, you can visit many of the city’s top attractions for little to no money. Here is a rundown of some of the best deals in town:

**FREE AS INDICATED:**

- Museum of Contemporary Art, 220 E. Chicago (Tuesday for Illinois residents)
- Charnley-Persky House Museum, 1665 N. Astor St. (Wednesday)
- Clarke House Museum, 1827 S. Indiana Ave. (Free tours on Wednesday)
- DuSable Museum of African American History (Sunday)
- Glessner House Museum, 1800 S. Prairie Ave. (Free tours on Wednesday)
- Art Institute of Chicago, 11 S. Michigan Ave. (First and second Wednesdays of the month for Illinois residents)
- Chicago Children’s Museum at Navy Pier, 700 E. Grand Ave. (Thursday, 5-8 p.m. for all and first Sunday of each month for ages 15 and younger)
- Notabasco Nature Museum, 2430 N. Cannon Dr. (Thursday for Illinois residents)

**ALWAYS FREE:**

- Chicago ArchiCenter, 224 S. Michigan Ave.
- Chicago Cultural Center, 78 E. Washington St.
- City Gallery at the Historic Water Tower, 806 N. Michigan Ave.
- Lincoln Park Conservatory, 2297 N. Stockton Dr.
- Lincoln Park Zoo, 2200 N. Cannon Dr.
- Millennium Park Welcome Center, 201 E. Randolph St.
- Museum of Contemporary Photography, 600 S. Michigan Ave.
- National Museum of Mexican Art, 1852 W. 19th St.
- Navy Pier, 600 E. Grand Dr.
- Smart Museum of Art, 5550 S. Greenwood Ave.

**MACY’S HOLIDAY WINDOWS**

Walk outside alongside Macy’s store at 111 N. State St. to view animated holiday scenes.

**MCDONALD’S THANKSGIVING PARADE**

 Spend Thanksgiving morning with marching bands, enormous inflatables, floats, and Santa Claus and Ronald McDonald. This annual parade travels down State Street from 8 to 11 a.m.

**CHRISTKINDLMARKET CHICAGO AND THE SANTA HOUSE**

One of Chicago’s most popular holiday events is Christkindlmarkt Chicago, a traditional German open air market offering authentic German food, drink and wares. Christkindlmarkt is free and is located on Daley Plaza between Washington and Dearborn Streets.
RSNA BOARD CHAIRMAN SUPPORTS R&E FOUNDATION WITH CHARITABLE GIFT ANNUITY

Among the RSNA Research & Education Foundation donors who have established a charitable gift annuity are RSNA Board Chairman N. Reed Dunnick, M.D., and his wife, Marilyn A. Roubidoux, M.D.

A charitable gift annuity is a wonderful way to continue to receive income, yet provide a lasting contribution to the RSNA Foundation," Dunnick said. "We feel we are receiving more than we are giving.

"A charitable gift annuity works like this: through a simple contract, the donor gives cash or stocks to the R&E Foundation, and then RSNA pays the donor—or someone else, if the donor chooses—a fixed amount each year for the rest of that person’s life. The fixed rates are based on age and do not fluctuate with the stock market or interest rates. The gift itself is partially income-tax deductible, as are the payments the donor receives. In the case of a gift of appreciated stock, the donor’s capital gains taxes may be reduced.

"The charitable gift annuity is a true win/win—a revenue stream for us and a contribution to the Foundation," Dunnick said.

Individual Donors

Donors who give $1,500 or more per year qualify for the RSNA Presidents Circle. Their names are shown in bold face.

$1,500 – $4,999

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Predictions of cancers and cancer deaths caused by medical imaging procedures that use ionizing radiation are often computed by multiplying small and highly speculative risk factors by large populations of patients to yield a substantial impressive number of “cancer victims.”

Not infrequently, patients are anxious about a scheduled imaging procedure because of articles they have read in the public media, according to the Annual Oration/Review and Commentary in the August issue of Radiology (RSNA.org/Radiology), authored by William R. Hendee, Ph.D., and Michael K. O’Connor, Ph.D., of the Mayo Clinic in Rochester, Minn. Along with discussing the basis for this anxiety, the authors discuss:

• The Linear No-Threshold Hypothesis
• Dose descriptors
• Risk models/estimates

Average effective dose per capita to the U.S. population from major sources of exposure. (a) Effective dose (percentage of total) in early 1980s. (b) Effective dose (percentage of total) in 2006. (Reprinted, with permission, from reference 1)

"On some occasions, the fear and anxiety results in reluctance to accept imaging procedures, even though the risk of a deferred examination creates a much greater risk than that related to radiation from the procedures, if any risk exists at all," they write.

Although a wide array of diseases can affect the female perineum in adults, there are limited articles in the literature describing the intricate imaging anatomy of the female perineum. Understanding of the anatomy and diseases of the female perineum allows appropriate utilization of imaging modalities for accurate diagnosis and for guiding treatment.

In a July-August article in Radiographics (RSNA.org/Radiographics), Keyanosh Hassanazad, M.D., of the University of Pittsburgh Medical Center, and colleagues use illustrations detailing the structures of the perineum and discuss various disorders and diseases with characteristic imaging findings encountered in the female perineum in adults for each organ or region. Specifically, the authors discuss:

• The anatomy of the female perineum relevant structures
• The disease processes unique to the female perineum
• The strengths and weaknesses of the various imaging modalities for appropriate diagnostic imaging and planning of therapy

The female perineum is an important anatomic region that traditionally has been described in the literature in relation to its physiologic contribution to continence, the authors write.

"However, a wide spectrum of diseases arises within the female perineum in adults, and knowledge of the diseases and spatial anatomy allows the radiologist to confidently identify the site of origin and extent of disease with the appropriate selection of imaging modality. For many diseases, MR imaging is the preferred modality for diagnosis and definition of disease extent."
Submit Abstracts for the RSNA-ASTRO Co-sponsored Cancer Imaging and Radiation Therapy Symposium

Abstract submission for the second Cancer Imaging and Radiation Therapy Symposium, co-sponsored by ASTRO and RSNA, is now open. Submit an abstract by August 13, 2012, 11:59 p.m. Eastern Time, in one of the following categories: anatomic imaging and normal tissue definition; molecular and biological imaging (including PET); diagnosis, staging and recurrence; therapeutic target definition; and image-guided therapeutic techniques.

The symposium will continue to focus on the collaboration between radiation oncologists and clinical radiologists—requiring head and neck, breast, gastrointestinal and lung cancers—in determining the extent of a patient’s cancer, developing the radiation plan and following up for response and recurrence. Taking a multidisciplinary look at cancer staging and treatment, the symposium will seek the many points of contact between imaging and radiation oncology from diagnosis through the entire course of the patient’s disease. The future of biologic imaging and adaptive therapy will also be addressed from the perspective of both specialties.

Kevin Camphausen, M.D., and Sarkar Mukherji, M.D., are co-chairs of the committee planning the symposium. Camphausen is a radiation oncologist at the National Cancer Institute in Bethesda, Md. Mukherji is a professor of radiology at the University of Michigan in Ann Arbor.

Registration will open in September. To submit abstracts and for more information, go to www.cancerimagingrtsymposium.org.

Medical Meetings August-September 2012

AUGUST 12-15 The Association for Medical Imaging Management (AHRA), 40th Annual Meeting and Exposition, Gaylord Palms, Orlando, Fla. www.ahramed.com
AUGUST 30 – SEPTEMBER 2 Asian Oceanian Society of Radiology (AOASR); 14th Congress and 63rd Royal Australian and New Zealand College of Radiologists (RANZCR); 20th Annual Scientific Meeting, Sydney Convention and Exhibition Centre www.aosrs2012.com
SEPTEMBER 5-9 2012 World Molecular Imaging Congress (WMIC), The Convention Centre Dublin www.wmicomming.org
SEPTEMBER 9-12 American Society of Nuclear Cardiology (ASNC), 17th Annual Meeting, Baltimore Convention Center www.asnc.org
SEPTEMBER 9-12 American Society of Emergency Radiology (ASER), Annual Scientific Meeting, New Orleans Marriott www.erasociety.org
SEPTEMBER 12-15 European Society of Urogenital Radiology, joint meeting of European Symposium on Urogenital Radiology (ESUR) and British Society of Urogenital Radiology (BSUR) Annual Scientific Meeting, Royal College of Surgeons in Edinburgh, Scotland www.rsna.org/calendar.aspx.
SEPTEMBER 12-15 Cardiovascular and Interventional Radiological Society of Europe (CIRSE); Annual Congress and Postgraduate Course, Centro de Congresos, Logroño, Lisbon, Portugal www.cirse.org
SEPTEMBER 12-15 European Society of Neuroradiology (ESNR), Congress and Advanced Course, Edinburgh, Scotland www.esnr.org
SEPTEMBER 22-25 Canadian Association of Radiation Oncology (CARO), 24th Annual Scientific Meeting, Hyatt Regency, Vancouver, BC www.ca-ro.ca

News You Can Use

Open-source Toolkits Create Radiation Exposure Data Repositories

Researchers have developed and validated open-source informatics toolkits capable of creating radiation exposure data repositories from existing CT dose information and nuclear medicine report archives.

Results of two studies conducted by a research team at Brigham and Women’s Hospital in Boston were published in the May issue of Radiology.

Led by Aaron Sodickson, M.D., Ph.D., the first study demonstrated that large-scale anatomy-specific radiation exposure data repositories can be created with high fidelity from existing digital image archives by using open-source informatics tools.

Researchers created the general radiation observation kit, or GROK, capable of locating and retrieving volume CT dose index and dose-length product information from a DICOM image archive and converting dose screens to text for analysis.

Software was validated by using 150 randomly selected encounters for each major CT scanner manufacturer. After validation, GROK was used to populate an exposure repository from a cohort of 54,569 CT encounters, at which 948 had available dose screens.

Results showed that dose screen retrieval occurred at a rate of 99 percent and an anatomic assignment precision of 94 percent.

“Open-source informatics tools can be used to create accurate large-scale repositories of anatomy-specific CT radiation exposure data from existing image archives, which may be useful in patient safety initiatives, including radiation exposure monitoring and technique optimization programs,” the authors write.

In a second study, Ichiro Ikuta, M.D., and colleagues randomly selected 5,000 nuclear medicine reports from Sept. 17, 1995, to Feb. 28, 2011, of which 1,500 were used for an iterative code training process that tailored the search patterns of the toolkit. Manual validation was then performed on 2,339 reports to assess effectiveness.

Results showed that the toolkit was able to extract data with a recall rate of 97.6 percent and precision of 98.7 percent. Researchers say the toolkit could potentially enhance patient safety efforts in nuclear medicine quality assurance and radiation dose monitoring.

“In particular, radiopharmaceutical administrations can be readily mapped to organ doses, opening new avenues in longitudinal patient-specific dose monitoring and risk assessment and potentially enhancing physician-patient communication and informed decision making,” they write.

To access the full Radiology studies, go to RSNA.org/Radiology.

Stroke is Focus of Radiology Select, Volume 2

The newest volume of Radiology Select, Volume 2: Stroke, is now available to members and non-members for purchase.

The second in the continuing series of selected Radiology articles focusing on a specific subspecialty topic, Radiology Select, Volume 2, contains 3D Radiology articles totaling nearly 300 pages of content dedicated to stroke and associated imaging. Volume 1 focused on pulmonary nodules.

Volume 2 covers topics including:

- Dual-energy imaging, perfusion imaging and thrombus detection
- Techniques for risk stratification, diagnosis and therapeutic monitoring in cerebral ischemic stroke
- MR applications for predicting infarct growth, ischemic lesions and hyperperfusion
- “Mismatch” MR imaging techniques
- Observations on neonatal intracranial hemorrhage and cerebral artery flow in pediatric sickle cell disease

The edition is available in print, online and tablet formats. The online self-assessment module (SAM) edition features four SAM tests with the opportunity to earn up to 8 SAM credits and 12 CME credits. Interactive videos and podcasts are featured with the tablet and online SAM editions.

Radiology Select will be published bi-annually. To purchase and for information on Radiology Select, visit RSNA.org/RadiologySelect.
Enroll Now for Courses

Course enrollment for RSNA 2012 is under way. Online enrollment occurs instantly, while faxed or mailed registration forms are processed in the order they are received. The RSNA 2012 Advance Registration, Housing & Course Enrollment brochure is available at RSNA.org/register. Use this brochure to make the most of your RSNA 2012 experience. RSNA has organized the information in the course brochure to help you complete your enrollment in just a few steps. Find the courses you need, build your schedule and enroll quickly and easily online or via the print form. You must be registered for RSNA 2012 in order to enroll for courses.

Arrange Childcare

To uphold the professional and educational standards of the RSNA annual meeting, children under 16 years of age are not permitted in the exhibit halls or sessions or issued a badge. Onsite childcare will be available for children six months to 12 years through ACCENT on Children’s Arrangements, Inc. Online registration and application forms are available at RSNA2012.RSNA.org (click childcare).

International Visitors

If you must apply for a temporary non-immigrant visa to attend RSNA 2012, you are advised to apply as soon as U.S. travel is decided and no later than three to four months in advance of the travel date. The RSNA offers an official letter of invitation for RSNA 2012 attendees. For more information go to RSNA2012.RSNA.org/attendees/international.cfm.

RSNA has many hotel rooms available at discounted rates. Reserve Your Room Now Go to RSNA.org/register.

Guarantee Your Seat!

RSNA 2012 course after all ticketed registrants have been seated. There is no onsite course ticketing.

Receive Registration Materials Prior to the Meeting

RSNA will mail registration materials in late October / early November to all full-conference registrants enrolled by November 2 (October 19 for international registrants). Technical exhibits—space permitting—after all professional registrants have been seated. CME credit is not tracked or awarded.

RSNA 2012 Registration

How to Register

There are four ways to register for RSNA 2012:
1. INTERNET—Fastest way to register! Go to RSNA.org/register.
2. FAX (24 hours) 1-888-772-1888
3. TELEPHONE (Mon.-Fri. 8 a.m. - 5 p.m. CT) 1-800-450-7038
4. MAIL...RSNA 2012 P.O. Box 4088 Frederick, MD 21705 USA

Registration Fees

Registration

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For more information about registering for RSNA 2012, visit RSNA.org, e-mail reginfo@rsna.org or call 1-800-381-6660 x7662.
**RSNA Offers One-Stop-Shopping for MOC Needs**

Meet Maintenance of Certification (MOC) needs with the newest RSNA online self-assessment modules (SAMs) produced in conjunction with several refresher courses recorded at RSNA 2011.

Each SAM course has been approved for AMA PRA Category 1 Credit™ and qualifies for SAM credit by the American Board of Radiology (ABR). Online SAM refresher courses are available free to all members, nonmembers pay $50 to access each course.

RSNA currently offers more than 80 online SAMs in nearly every radiology subspecialty area. Check out the newest titles added to the online SAMs library:

- Acute Aortic Disorders
- Brachytherapy
- Controversies in Oncologic Imaging
- Eye and Orbit
- Lower Extremity Venous Imaging and Intervention
- Patient and Staff Safety with Focus on Radiation Dose Reduction
- Practical Oncologic MR Imaging Applications in the Abdomen and Pelvis
- Pulmonary Infections
- Spinal Injuries: Surgical or Nonsurgical? A Fresh Look at Injury Assessment
- Tailored Breast Cancer Screening

To view the available courses, visit RSNA.org/education/search/sam or call 1-800-272-2920, extension 3733 for more information.

**Explore RSNA’s New Online Education Search Page**

RSNA members can enhance their professional knowledge and earn CME/Self assessment modules (SAMs) credit online with RSNA’s new education search page. With this free benefit, RSNA members can easily browse hundreds of online education opportunities custom-built for radiology.

Tailor searches through pre-defined content areas specific to radiologists’ areas of interest or narrow searches further by browsing a pre-populated list of activity types. Enter an author’s name or keyword to further define search results. View current course enrollments by using the “My Enrollments” button at any time. RSNA members will find vetted and customized search results automatically populated based on their subspecialty designation in myRSNA. Additionally, activities that have already been completed will automatically appear with a green checkmark. Look for the blue “NEW” tag next to activities that have just been added to the growing collection of RSNA educational activities. Visit RSNA.org/education/search.

**Members Across the Globe Stay Current through International Portal**

Ever-committed to serving members around the globe, RSNA now offers a Web portal devoted exclusively to the news, events and resources most critical to its international members.

With one click, visitors to the international portal on the redesigned RSNA.org can access everything from RSNA 2012 visa information and a library of international resources to RSNA education initiatives like the Introduction to Research for International Young Academics program. Accessible on the top menu above the search field, the international portal is your all-access pass to the news and information you want most.

Highlights include:

- **International News**: International news: Visitors can access RSNA 2012 travel and visa information, peruse a calendar of international events and stay plugged into regularly updated news and information.

- **International Resources**: Programs, Fellowships and Grants: Find information on international programs, fellowships and grants for young investigators across the world.

- **Membership**: Join RSNA’s global community and enjoy exclusive benefits, including free registration to the RSNA Annual Meeting.

- **Annual Meeting**: As an RSNA member, you can receive free advance registration to the world’s premier annual event in medical imaging.

- **Radiology Organizations**: Explore a comprehensive list of national and international organizations in the radiologic sciences.

- **Additional Icons at the Bottom of the Page**: Direct you to essential tools and interactive content relevant to your online experience.

**COMING NEXT MONTH**

In next month’s RSNA News, experts will provide an update on the second phase of the federal Meaningful Use incentives set to take effect in 2014, and discuss radiology’s progress in complying with the laws and what they can expect when the new rule takes hold.
MAKE AN IMPACT

YOUR GIFT CAN LEAD TO BIG RESULTS

For every $1 the R&E Foundation provides in grants, recipients go on to receive over $30 in additional funding for projects that advance the field of radiology.

To make a gift, visit RSNA.org/donate or call 1-630-590-7760.