Soldiers’ Strength Inspires Radiologists Serving in Afghanistan

ALSO INSIDE:

- Image Wisely™ Focuses on Dose Reduction in Adults
- Cataract Risk Points to Need for Better Safety Measures
- Education Upgrades Key to Evolution of myRSNA®
- Biopsy Load Shifting to Radiologists

RSNA 2011 Abstract Deadline Moved to March 31—See Page 21
CELEBRATING 20 YEARS

RSNA News proudly celebrates 20 years of providing high-quality, timely coverage of radiology research and education and critical issues in private and academic practice, along with comprehensive information about RSNA programs, products and other member benefits.

UP FRONT
1 Announcements
2 My Turn

FEATURES
5 Soldiers’ Strength Inspires Radiologists Serving in Afghanistan
7 Image Wisely™ Focuses on Dose Reduction in Adults
9 Cataract Risk Points to Need for Better Safety Measures
11 Education Upgrades Key to Evolution of myRSNA®
13 Biopsy Load Shifting to Radiologists

RADIOLOGY’S FUTURE
15 R&E Foundation Donors

NEWS YOU CAN USE
17 Radiology in Public Focus
19 Journal Highlights
20 Education and Funding Opportunities
21 Annual Meeting Watch
22 For Your Benefit
23 RSNA.org
24 Retrospective: Celebrating 20 Years of RSNA News

Bonnie N. Joe, MD, PhD

“The RSNA R&E Foundation helped jumpstart my academic career, giving me invaluable experience running a prospective imaging trial. I’m now able to mentor an up-and-coming generation of researchers, like Vignesh A. Arasu, B.S., who can get their bright ideas funded by the RSNA R&E Foundation.”

Launch your career with research and education grants for medical students, residents, fellows and faculty.
NLST Results Analyzed

Researchers continue to evaluate the impact of National Lung Screening Trial (NLST) results showing 20 percent fewer lung cancer deaths among those screened with low-dose spiral CT versus with chest X-ray.

The NLST trial, imaging technique and dose considerations and false positive rate, as well as anticipated data analyses, were the subject of an RSNA 2010 Special Interest session. Coverage of that session appeared in the Wednesday, December 1, issue of the Daily Bulletin meeting newspaper and will be updated for the January issue of RSNA News.

The NLST, launched in 2002 and involving more than 53,000 current and former heavy smokers ages 55 to 74, was sponsored by the National Cancer Institute (NCI), a part of the National Institutes of Health, and conducted by the American College of Radiology Imaging Network (ACRIN) and the Lung Screening Study Group.

NCI announced the findings in early November after the NLST’s independent Data and Safety Monitoring Board determined that accumulated data provided a statistically convincing answer to the study’s primary question.

The National Lung Screening Trial: Overview and Study Design was published in the November issue of Radiology. A more detailed NLST analysis is being prepared for publication in a peer-reviewed journal in the future.

Swischuk Receives ASER Gold Medal

Leonard E. Swischuk, M.S., M.D., received the 2010 gold medal from the American Society of Emergency Radiology (ASER) during its recent 21st Annual Scientific Meeting. Dr. Swischuk is a professor and chair of radiology and director for the division of pediatric radiology at the University of Texas Medical Branch in Galveston. Dr. Swischuk has also received gold medals from the American Roentgen Ray Society and the Society for Pediatric Radiology. He contributes to Radiographics and Radiology.

ASHNR Awards Gold Medal to Smoker

The American Society of Head and Neck Radiology (ASHNR) presented its 2010 gold medal to Wendy R.K. Smoker, M.S., M.D., during the society’s recent 44th Annual Meeting. Dr. Smoker is a professor of radiology, neurology and neurosurgery and director of the Division of Neuroradiology at the University of Iowa Hospitals and Clinics in Iowa City.

Harold’s Receives APDR Academic Achievement Award

Jay A. Harold, M.D., received the Academic Achievement Award of the Association of Program Directors in Radiology (APDR) at the 2010 Annual Meeting of the Association of University Radiologists.

Currently the radiology residency director at Michigan State University in Grand Rapids, Dr. Harold serves as a councilor at large and as a member of the Council Steering Committee for the American College of Radiology. Prior accolades include the Lifetime Achievement Award and the Distinguished Service Award from the Academic Council of the SNM and the President’s Award from the American College of Nuclear Physicians. Dr. Harold has served as a councilor for the RSNA.

UCLA Physicians Receive SNM Awards

Three University of California, Los Angeles (UCLA) physicians were recognized at the recent Western Regional Annual Meeting. Co-Distinguished Scientist Awards were presented to Hossein Jadvar, M.D., Ph.D., M.P.H., M.B.A., and Daniel Silverman, M.D., Ph.D., while Henrik Schelbert, M.D., Ph.D., received the Taplin Memorial Award. Dr. Jadvar is an associate professor of radiology and biomedical engineering and the director of radiology research at UCLA, and Dr. Silverman is head of the Neurouclear Imaging Section in the Ahmanson Biomedical Imaging Division at UCLA Medical Center, associate director of the UCLA Alzheimer’s Disease Center Imaging Core and associate professor in the Department of Molecular and Medical Pharmacology. Dr. Schelbert is the chief of nuclear medicine services at the UCLA Medical Center and a professor of pharmacology and radiological sciences at the UCLA School of Medicine.

My Turn

Getting Off to an Appropriate Start

A simplified definition of “quality” in a product or service is that it meets or exceeds one’s expectations. In radiology, this has been distilled down to “the right test, at the right time, in the right manner (which also implies best use of resources), and with the right outcome.”

Despite general buy-in to this basic tenet, most of the focus on quality in radiology so far has been on the back end: catching errors and monitoring report turnaround times, particularly for critical results, with little attention paid to the front end. This is not unexpected. Radiologists are rarely consulted on what test is the most appropriate to order for a given situation. In fact, studies are often performed without a reason for the examination, and sometimes with no clinical history at all. The generic interpretations that result diminish any perceived value that radiologists might add. Our real task is mentoring clinicians and guiding the process that leads to the correct interpretation of the right study.

As we transition to computerized order entry, sometimes called computerized provider or physician order entry (CPOE), radiologists have an important role in designing how these systems are to function. CPOE must educate users as to the relative value of the tests being ordered—whether one test might be more appropriate than another, what is the most cost-effective strategy and how the answer to a question might be answered with the least radiation exposure. Clinicians need to know whether the same examination has already been performed and, if so, how many times. They need to know the risks associated with the tests they order.

CPOE provides a huge opportunity for radiologists to finally get vital clinical information and at the same time makes it easier for clinicians to make educated choices. If we view CPOE as just the “front end,” and not a vital decision support tool for patient care, or we implement a system that is not user-friendly for clinicians, then we are missing the point of what appropriateness is all about.

Holzer Named SIR Executive Director

The Society of Interventional Radiology (SIR) has appointed Susan E. Sedyo Holzer, M.A., CAE, its executive director. A chief executive with more than 20 years of experience working in association, corporate and federal government sectors, Holzer is currently a chief strategy officer at the American Academy of Otolaryngology—Head and Neck Surgery in Alexandria, Va. She succeeds Peter B. Lauer, who served as executive director for more than seven years. Lauer died in February.
SCCT Collaborates on Cardiac CT Criteria Update

The Society of Cardiovascular Computed Tomography (SCCT) has collaborated with the American College of Cardiology Foundation and other societies on an update to the Cardiac CT Appropriate Use Criteria.

The criteria published in this version have increased from 37 to 93 on the basis of significant technical advances and clinical evidence development for cardiac CT since the criteria were originally published in 2006. “These advances are reflected in progression in the criteria considered appropriate for imaging, and new clinical scenarios which reflect a broader range of considerations to utilize cardiac CT,” said Allen J. Taylor, M.D., chair of the writing committee and a professor of medicine at Georgetown University in Washington. “Performance and optimal use measures represent the new reality in healthcare and cardiovascular imaging. These criteria provide a pathway towards optimal utilization of imaging technology.”

The new criteria establish a new level of acceptance for cardiac CT and should be met favorably by clinicians and payers, added Matthew J. Budoff, M.D., president of SCCT, a professor of medicine at the David Geffen School of Medicine at UCLA and director of Cardiac CT at Los Angeles Biomedical Research Center at Harbor UCLA Medical Center in Torrance, Calif. The report outlining the criteria appears in its entirety in the November/December issue of the Journal of Cardiovascular Computed Tomography, online at www.cardiaccjournal.com.

Numbers in the News

8
Compound annual growth rate (CAGR) in the number of image-guided biopsies performed by radiologists between 1997 and 2008 (Read “Biopsy Load Shifting to Radiologists,” on Page 13.)

10
Number of medical personnel—a physician’s assistant and nine medics—with whom a naval radiologist found himself working to care for 2,200 soldiers in Afghanistan. (Read “Soldiers’ Strength Inspires Radiologists Serving in Afghanistan,” on Page 51.)

52
Percent of interventional cardiologists in a recent study who had radiation-associated posterior lens opacities, prompting some to urge interventional physicians to implement more safety measures. (Read “Cataract Risk Points to Need for Better Safety Measures,” on Page 97.)

118
Days from the end of RSNA 2010 until abstracts are due for RSNA 2011. The new, earlier abstract submission deadline is 12 p.m., Central Time on March 31, 2011. (See Annual Meeting Watch on Page 21.)

BERMAN RECEIVES PIONEER AWARD

Considered by many to be a founding father of nuclear cardiology, Daniel S. Berman, M.D., was awarded the Pioneer in Medicine Award from Cedars-Sinai Medical Center in Los Angeles. The award is presented to those who have significantly contributed to scientific advancement in medicine and image-guided therapy through a multidisciplinary approach. Dr. Berman is director of cardiac imaging at Cedars-Sinai and a professor of medicine at the University of California, Los Angeles. Dr. Berman is a past-president of the Society of Cardiovascular Computed Tomography.

Federal Standards for Safe MR Imaging Practice Not Necessary

I must take exception to the article “Spike in MR Imaging Accidents Underscores Need for Regulation” in the October issue of RSNA News. The experts interviewed for the article give a mixed message in that they seem to be particularly concerned that the “lack of federal regulation” has created a safety issue and that “no mandatory MR imaging standards exist.” While the article does mention that “it would be best if the MR imaging community would implement standards rather than wait for the government to do it,” the experts seem to have little faith in the American College of Radiology’s (ACR) program to set practice guidelines and technical standards or their new accreditation program. They would prefer to have the federal government set standards for this and perhaps other radiological procedures such as fluoroscopy, ultrasound, etc., that we practice on a daily basis.

I am strongly opposed to federal standards and feel that the ACR has done a fine job in setting technical guidelines and standards for performance of MRI and in establishing a new accreditation program. If further modifications to the ACR efforts are required, I would strongly support this approach. In asking for the federal government to provide standards, we would be doing irreparable harm.

Murray L. Janower, M.D.
Boca Raton, Fla.
It was cool in the desert, with no snow—an unusually nice day in the city of Kandahar. Dr. Boucher spent most of the day treating the sick and wounded while trying to enjoy the holiday as best he could. The 20-year military veteran and chair of radiology at the Naval Medical Center in San Diego had been deployed in August as an active duty U.S. Navy physician in a multinational medical unit comprised of Americans, Canadians, British, Dan-

ish, Dutch and Australians.

That Christmas day, Dr. Boucher and his fellow medics were bonding as they celebrated—smiling, laughing, sharing stories, gifts and cookies sent from home. “The Christmas spirit was upon us,” Dr. Boucher recalled. “We all were thinking about our kids and families at home, missing them dearly, wanting that one hug and kiss good night.”

“He died after four hours of intense effort, forever,” Dr. Ferrara said. “Suddenly, the young soldier lost consciousness. He died after four hours of intense effort, forever.”

Part of a multinational medical unit assigned to a battlefield hospital at Kandahar Airfield in Afghanistan, (from left) Navy Cmdr. Ronald Boucher, M.D., and Stephen Ferrara, M.D., provide life-saving radiology procedures to coalition force casualties as well as local nationals.

Radiologists Fill Medical, Humanitarian Roles

The young gentleman had the best possible chance of survival anywhere in this theater or argument. “This young gentleman had the best possible chance of survival, anywhere in this theater or argument,” Dr. Ferrara said. “He died after four hours of intense effort, forever.”

Once in the hospital, radiologists performed a focused assessment with sonography in trauma (FAST) scan that revealed internal bleeding, while field medics skillfully placed high tight bilateral lower extremity tourniquets to maintain critical central blood volume. Suddenly, the young soldier lost consciousness. He was taken immediately to the operating room, where surgeons from different nations worked to stabilize his lower extremity bleeding from the amputations, simultaneously performing an emergent open laparotomy and thoracotomy while anesthesiologists managed his airway and blood pressure. The soldier’s wounds were so extensive, however, that it was impossible to stop the bleeding. He died after four hours of intense effort, forever changing Dr. Boucher and fellow medics.

“Part of another third world,” Dr. Boucher said. “I was part of and witnessed an amazing feat—a pool of highly talented individuals all focused on a uni-

ified front. 31 people of different nations and special-

ties in the operating room.”

Radiologists Double as General Medic

“I felt a greater sense of community through this experience,” he said. “Much of this effort served as an opportunity to win the hearts and minds of the local people and Afghans.”

Despite what he describes as “trauma as horrific as you can ever imagine,” with soldiers suffering single, double and triple amputations and exten-

sive musculoskeletal and neurological injuries, Dr. Boucher was able to draw inspiration from the experience.

“The determination and optimism of these young soldiers and sailors gave me strength through this deployment,” Dr. Boucher said. “The coordinated care and collaboration we shared with our NATO forces is admirable. It was inspiring to see so many countries combine strength and knowledge for a common cause.”

Dr. Ferrara said. “We also were responsible for the routine health of these soldiers, caring for both their acute illnesses as well as preventive medicine and ongoing health maintenance, resulting in about 30 patient encounters a day.”

Although the battlefield hospital where Dr. Ferrara volunteered consisted of three operating rooms, a small ward and intensive care unit, he soon learned that there was only one general radiologist covering a service that included around-the-clock CT, plain-

film and ultrasound. From then on, Dr. Ferrara offered radiology assistance, even when he could break away from his other duties. Theater commanders
Image Wisely™ Focuses on Dose Reduction in Adults

At RSNA 2010, the RSNA/American College of Radiology (ACR) Joint Task Force on Adult Radiation Protection launched Image Wisely™, a high-visibility campaign that seeks to deepen understanding of adult radiation protection among radiologists, referring practitioners, medical physicists and radiologic technologists. While the educational component is sweeping in scope, perhaps even more noteworthy is the Image Wisely™ call to action.

“Radiation awareness has increased exponentially in the last few years, but now Image Wisely™ is asking stakeholders to actually commit—by pledging their support and utilizing the radiation safety resources available on its new website,” said James A. Brink, M.D., chair of diagnostic radiology, Yale University School of Medicine. Dr. Brink co-chairs the Image Wisely™ Joint Task Force with E. Stephen Amis, Jr., M.D., chair of radiology, Albert Einstein College of Medicine.

Image Wisely™ is a collaborative effort on the part of four charter members: RSNA, ACR, the American Association of Physicists in Medicine and the American Society of Radiologic Technologists (ASRT). Image Wisely™ follows on the remarkable success of Image Gently™, which since its January 2007 start continues to focus attention on the safety of infants and young children who undergo radiation imaging procedures. “Radiation awareness has increased exponentially since Image Gently™ launched, which is the best of the best by far,” Dr. Amis—will foster greater insight among imaging professionals, patients and the public at large, while underscoring the reality that radiation dose in adult imaging requires further study and is impacted by numerous factors.

In its call to action, Image Wisely™ asks stakeholders (individuals and groups) to demonstrate their involvement by electronically signing formal online pledge cards “that demonstrate their commitment to the campaign’s overarching principles,” Dr. Amis said.

Dr. Amis also encouraged facilities to enroll in ACR accreditation programs and participate in national dose index registries. Dr. Brink noted that RSNA and ACR, will give patients and the general public access to an interactive resource guide outlining the benefits of medical imaging vis-a-vis the risks of exposure to ionizing radiation. In addition, the Image Wisely™ website will provide links to vendor microsites that outline dose-reduction techniques on specific equipment. Combined, these user-friendly resources—described as “the best of the best” by referring physicians and other professionals—will foster greater insight among imaging professionals, patients and the public at large.

Image Wisely™ also seeks to raise awareness of opportunities to eliminate unnecessary imaging examinations and to lower radiation in necessary imaging examinations to only that needed to acquire appropriate medical images. Dr. Brink noted. “Initially, the campaign will focus on CT, but will broaden to include nuclear medicine procedures, fluoroscopy, and radiography,” said medical physicist William R. Hender, Ph.D., distinguished professor of radiology at the Medical College of Wisconsin. Through education and networking, the Joint Task Force anticipates the campaign will significantly expand participation among affiliated healthcare organizations, educational institutions, government agencies, and vendors. The campaign’s logo, a wise owl, is expected to give Image Wisely™ instant brand recognition.

Imaging stakeholders will have at their fingertips an array of electronic and print resources, including a new, state-of-the-art website linked to the www.ImageWisely.org for patient information. This highly successful website, a joint effort of ACR has “a vigorous radiation protection process as part of its CT accreditation program,” and said ACR Appropriateness Criteria™’s “elevate quality of care by providing evidence-based guidelines so that referring physicians and other professionals can make the most appropriate imaging decision for a specific clinical condition.”

Image Wisely™ reminds everyone that the radiation received from medical imaging scans could, over time, have adverse effects, but these advanced technologies also save lives, reduce the need for surgery and speed recovery. “CT, nuclear medicine procedures, angiography and interventional imaging methods give us powerful tools, but do deliver fairly high doses of radiation” said Dr. Hender. “We, as medical physicists, need to ensure the protocols we use are optimized according to the lowest as reason-

The multinational team of radiologists who care for wounded soldiers in Afghanistan quickly understood the importance of interventional radiology to casualties on the front lines. As a result, the first dedicated interventional radiology position in the Afghanistan theater was born, fostering the creation of a dedicated equipment and supply chain that brought full-service capabilities, including angiography, IVC filters, embolization and stent-graft procedures.

Over the next several months, the interventional radiology team performed dozens of life- and limb-saving angiogram and interventional procedures, and even served as a referral center for wounded casualties across southern Afghanistan. That led to the creation of the permanent interventional radiology position in Kandahar, Dr. Ferrara said.

Attacks Spur Equipment Improvements
“IT was not unusual to undergo incoming fire while in the midst of treating patients,” Dr. Ferrara said. “While standard procedure during rocket attacks was to don body armor and take cover in concrete shelters, that was not always possible. Patient care always comes first and it is one of a doctor’s duties to first protect their patient from that same incoming threat.”

Dr. Ferrara took on another, somewhat unexpected role as an inventor of sorts. While reading trauma films, he began to notice a predictable pattern of injury: blast-related spine injuries in soldiers whose tactical vehicle had driven over and detonated an IED. The explosion would lift the vehicle straight up from the ground, Dr. Ferrara noted, resulting in multiple vertebral compression fractures. Working with a civilian friend, the pair designed a modification to the underside of the seats that would redirect the explosive forces away from the soldiers in the vehicle.

This invention is an example of how the battlefield “gives me the opportunity to do what every doctor wants to do—make a substantial difference in the lives of their patients,” especially those who “sacrifice their lives for their country,” Dr. Ferrara said. “Being able to care for Americans injured on the battlefield is the realization of my purpose for joining the military at the onset of the first Gulf War in 1991,” said Dr. Ferrara. “It is also the culmination of my reason to be a physician, which is to care for the sick and injured for the sheer purpose of helping others, putting your skills to meaningful use, exclusive of the business and bureaucracy of medicine which can pervade a traditional practice.”

Perhaps most importantly, Dr. Ferrara’s experience in Afghanistan has helped to prioritize his life and improve his perspective. “The simple things gain greater meaning and make it much easier to find patience with the trivial frustrations of daily life.”

Soldiers’ Strength Inspires Radiologists Serving in Afghanistan

Continued from Page 4...
In light of new research showing increased risk for developing cataracts, interventional personnel are being urged to adopt a number of safety measures. Researchers have found that eye lens opacities can occur even at radiation levels below the currently known threshold values for cataracts.

A study reported during the 2009 meeting of the National Heart Association of Malaysia in Kuala Lumpur showed that interventional personnel have about five times the rate of lens opacities as compared to controls. Published in the June 2010 online version of Catheterization and Cardiovascular Interventions, the study showed a dose-dependent, increased risk of posterior lens opacities for interventional cardiologists and nurses when radiation protection tools were not used. Another study from the same group of researchers, published in the October 2010 issue of Radiation Research, found similar results.

“With respect to ocular exposure, the increasingly larger workload typical of many modern catheterization suites, a lack of training in radiation protection, and unavailability or nonuse of radiation protection for the face and head may result in doses to the eye sufficient to cause cataracts,” researchers reported.

To-date, cataract formation has been considered a deterministic effect with threshold. The International Commission on Radiological Protection (ICRP) and the U.S. National Council on Radiation Protection & Measurements (NCRP) have published threshold values for detectable opacities of 5 Sv for chronic exposure and 0.5 to 2 Sv for acute exposure.

Interventional radiologists/carдиologists work in situations where radiation doses are high enough to cause lens opacity after a few years if protection is not used, according to study coordinator Madan M. Rehani, Ph.D., radiation safety specialist with the International Atomic Energy Agency in Vienna, Austria.

“We anticipated an increased incidence of opacities in interventional staff due to earlier, preliminary studies, but data needed to be verified through scientifically planned, detailed research,” Dr. Rehani said. The study comprised 67 physicians and nurses working in interventional cardiology and a control group of 22 age- and sex-matched healthcare professionals who had no reported occupational or medical history of ionizing radiation exposure to the head or neck.

After examining the prevalence of radiation-associated lens opacities among interventional cardiologists and nurses, Dr. Rehani and colleagues correlated the exam results with cumulative radiation exposure. They calculated from responses to a questionnaire and personal interviews with each subject. Researchers carefully examined the eyes of the interventional cardiologists and nurses, as well as the age- and sex-matched unexposed controls, using a slit lamp examination.

Because researchers felt that past studies of interventional radiologists did not include satisfactory dose assessment, Dr. Rehani and colleagues estimated the lens dose from data gathered through personal interviews.

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Madan M. Rehani, Ph.D.

“...these details included the number of procedures performed per week, type of machine used, typical times for fluoroscopy, protection used and assuming dose-per-procedure without protection, as established in earlier publications,” Dr. Rehani said.

Findings Show Need for Protection Tools

Results showed lens changes in 34 subjects, including 29 interventional cardiologists and five nurses. A strong dose-response relationship was found between exposure and the prevalence of radiation-associated posterior lens changes. The prevalence of radiation-associated posterior lens opacities peaked at 52 percent for interventional cardiologists, 45 percent for nurses and 9 percent for controls.

The findings in this small cohort “suggest that X-ray exposures to the lenses of interventional cardiologists are sufficient to result in radiation-associated, posterior lens opacities after several years of work if ocular radiation protection devices are not utilized,” researchers reported. These findings do not support the currently assumed 5 Sv threshold for ‘detectable opacities’ from protected exposures, but point to a significantly lower dose-effect threshold.

One key finding demonstrated by the research is the increased incidence of opacities in nurses. Dr. Rehani said. “While we were not surprised by the results we found for interventional cardiologists, we were surprised by values for nurses because distance was thought to be a good protector.” Dr. Rehani said. “We didn’t think nurses would have higher risks, but they did.” Based on study results, Dr. Rehani and colleagues suggest interventional radiologists and support staff take the following protective measures:

• Properly utilize ceiling suspended (or similar) lead glass protective screens.
• Use three protective screens in the interventional radiology suite rather than just one. In addition to the main operator, nurses and the supporting operator should also be protected by the screens.
• Staff should wear lead glass eyewear, especially when dealing with large workloads.

Researchers also urge manufacturers to develop better methods of monitoring eye lens dose. Possibilities include wireless devices that provide online displays of radiation dose, Dr. Rehani said.

Study Shows Need for Eye Shielding

Two studies conducted at Memorial Sloan-Kettering Cancer Center (MSKCC) in New York, presented at the Society of Interventional Radiologists in 2009 and published online in the Journal of Vascular Interventional Radiology offer results similar to findings in the Malaysia research. Working as a team on both research projects, Raymond H. Thornton, M.D., an interventional radiologist and vice-chair for quality, safety and performance improvement at MSKCC’s radiology department, served as lead author of the first study, and Laurence T. Dauer, Ph.D., a physicist at MSKCC, served as lead author on the second study.

In both studies, researchers found that unprotected operator eye lens dose can be clinically significant, and called for the use of scatter-shielding drapes or leaded glasses to prevent vision problems in radiologists.

“After recognizing the importance of dose reduction strategies in eye safety, we wanted to understand the efficacy of various shielding strategies for protection of the physician’s eyes in the interventional radiology suite,” Dr. Thornton explained. “We examined leaded glasses, scatter-shielding drapes and lead shields in various combinations and in different (characteristic) operator positions.”

Results of the first study showed that the dose-effect threshold for cataract information could be surpassed for some physicians within 11 years of lens dose-mitigating strategies were not routinely followed. In the second study, researchers found that the use of leaded shields alone reduced the lens dose rate by a factor of five to 10, while scatter-shielding drapes alone reduced the dose rate by a factor of five to 25. Using both eye-shielding implements together reduced the dose rate by a factor of 25 or more and always proved more protective than either used alone, according to researchers. Lens dose was routinely underestimable when a suspended shield was the only barrier used during low-dose fluoroscopy.

Sloan-Kettering researchers concluded that patient-delivered skin doses directly correlated to operator eye lens doses and that using scatter-shielding drapes and leaded glasses together—or using leaded shields—provides maximum protection to the interventional radiologist’s eye.

Dr. Rehani said. “While we were not surprised by the results we found for interventional cardiologists, we were surprised by values for nurses because distance was thought to be a good protector.” Dr. Rehani said. “We didn’t think nurses would have higher risks, but they did.” Based on study results, Dr. Rehani and colleagues suggest interventional radiologists and support staff take the following protective measures:

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Education Upgrades Key to Evolution of myRSNA®

Ever more sophisticated upgrades to myRSNA®, the personalized online portal for RSNA members, enable radiologists to instantly access information when and where they need it most and even claim continuing medical education (CME) credit in the process.

“The interface has been enhanced and performance has been improved,” said Paul Chang, M.D., professor and vice-chair of radiology informatics at the University of Chicago School of Medicine and member of the RSNA Radiology Informatics Committee. “It’s a more responsive site.”

By providing users search results through radiology-specific search engine Yottalook™ and—new this year—a subset of resources identified on the point of care (PoC) CME tab—myRSNA lowers the “boble factor” for radiologists who want keep up with the newest techniques and discoveries, Dr. Chang said.

Earn CME Using PoC

Addressing increasing demand from users, education-related upgrades and new features are among the most significant changes to the site. In fact, education-related terms—self-assessment modules (SAMs) and CME—took the top two spots in a survey of the top 100 terms searched on myRSNA since November 2007. (See sidebar)

Recently incorporated into the mySearch feature, PoC CME allows members to research procedures while earning CME credit at the same time—a feature that is already gaining in popularity, according to Dr. Chang.

“Right now, for example, I’m looking at a case with an interesting splenic lesion,” Dr. Chang said. “By using PoC CME when I’m caring for the patient—the time I’m most motivated to learn—I can claim credit for the article right after I review it. I use it every day.”

Entirely self-directed and driven by the needs of the individual physician’s practice, PoC learning also conforms to American Medical Association standards. The structure tracks the original clinical questions, relevant sources identified from among those consulted and the application of the findings to practice.

While a simple query on a search engine such as Google yields many sources of no use to the physician learner, myRSNA’s search tool “pre-filters” results by listing first those from appropriate, evidence-based, peer-reviewed literature. myRSNA’s PoC tool also offers a step-by-step form to ensure credit can be claimed, enables the user to instantly print a CME certificate and files the credit in the RSNA CME Credit Repository for access at any time.

“I encourage people to try this myRSNA feature,” Dr. Chang said. “It’s right there on your PACS workstation, so you can quickly go to the portal, get the information you need, apply it to your patient care, and get credit for it right on the spot.”

Another new feature, myEducation, allows members to customize, organize and track education resources and content from one easy-to-access location. Users can also track SAMs, Refresher Courses and Cases of the Day from RSNA annual meetings, current and completed CME courses and view, print or generate reports of CME from multiple societies using CME Gateway.

“myRSNA really is a one-stop portal now,” Dr. Chang said. “It makes it more efficient to meet maintenance of certification (MOC) and SAMs requirements.”

View Files Without the Software

The myRSNA feature called myFiles was recently upgraded to offer a higher level of user responsiveness. Dr. Chang said. Users are now able to upload, store and access their files—everything from images and documents to videos and PowerPoint presentations—from any computer with an Internet connection.

“The nice thing about myFiles is that you can access files without having to worry about whether you have the software to open them,” Dr. Chang said. “All the viewers, including video viewers, are built into the portal—and that’s a big thing because of security issues. While other portals may require a PowerPoint or video viewer application to be installed, with myRSNA, all the viewers are built in.”

Extending the Value of RSNA Annual Meetings

As many attendees are discovering, myRSNA is becoming more valuable with each RSNA annual meeting.

Using myRSNA and a laptop, participants in select refresher courses at RSNA 2009 were able to follow along with the presentation, take notes and save slides for later viewing. For the past three years, attendees have used myRSNA to bookmark education exhibits, caring them to the user portal for viewing throughout the year.

“I use that function every day—when I want to show my residents a particularly good presentation, it’s right here,” Dr. Chang said. “Often on the last day of the meeting, I’ll bookmark the award-winning presentations, so I’ll have them all year. We’re extending the value of the meeting through the myRSNA portal.”

At RSNA 2010, participants in several informatics courses experienced a new level of interactivity between the audience and the presenters.

“Typically the audience response system is a little device that lets you select different options that are basically a multiple choice question,” said Dr. Chang. “With myRSNA you can do much more—you can actually point to images and discuss where the abnormality is located.”

MyRSNA is becoming more valuable every year for attendees who took advantage of the hands-on workshops led by RSNA staff at RSNA 2010. Above: Attendees are able to extend the value of the meeting through the portal.

“By using PoC CME when I’m caring for the patient—the time I’m most motivated to learn—I can claim credit for the article right after I review it. I use it every day.”

Paul Chang, M.D.
Biopsy Load Shifting to Radiologists

As a result of the dramatic shift toward image-guided biopsies in the past decade, radiologists are performing an increasing share of biopsies across all anatomic regions, according to researchers, who added the trend is likely to continue.

Analyzing Medicare claims data from 1997 to 2008 for 10 anatomical regions, researchers found that the number of image-guided biopsies increased at a compound annual growth rate (CAGR) of about 3 percent, while the total number of all biopsies performed by radiologists increased at an 8 percent CAGR in that time period, according to a study published in the September issue of Radiology. Those increases are tied to the relatively recent proliferation of imaging techniques that have impacted the overall approach to performing biopsies, according to lead author Sharon Kwan, M.D., a fellow at the University of California, San Francisco.

“The development of CT, ultrasound and MR imaging ushered in the era of imaging-guided percutaneous needle biopsies (IGPNBs), which enabled greater precision in targeting lesions, while improving diagnostic accuracy and reducing complication rates,” Dr. Kwan said. “Breast core biopsy is one example of where this especially holds true.”

The shift from surgical to noninvasive biopsy is tied not only to technology but cost, according to Jonathan B. Kruskal, M.D., Ph.D., a professor of radiology at Harvard Medical School and chair of the Department of Radiology at Beth Israel Deaconess Hospital, both in Boston.

“Not surprisingly, radiologists have performed an increasing number of biopsies, largely because more and more of these are being performed with image guidance, avoiding the expenses and additional resources required for surgical biopsies,” said Dr. Kruskal, who serves on the RSNA News Editorial Board.

Nevertheless, biopsy trends are still evolving and in terms of image-guided fine needle aspirations (FNA), nonradiologists are increasing their share of biopsies, researchers found.

Trend Shifts to Noninvasive Biopsies

While previous research has primarily focused on radiologists and their biopsy work in specific organ systems, Dr. Kwan and colleagues analyzed overall biopsy trends and the impact of new imaging technology on the performance of a variety of biopsy procedures in and outside radiology.

Researchers focused on biopsy trends in the abdomen and retroperitoneum, bone, breast, chest, kidney, liver, musculoskeletal soft tissue, pancreas, superficial lymph node and thyroid.

In that time, biopsy procedures per 100,000 Medicare enrollees increased from 1,580 in 1997 to 1,945 for a 3 percent CAGR, which Dr. Kwan describes as a “relatively modest growth.”

Also during that time, the number of IGPNBs as a percentage of all approaches increased in six of 10 anatomical areas: breast, chest, liver, lymph node, pancreas and musculoskeletal soft tissue. Excluding breast biopsies, which underwent a coding change in 2003 that affected the reported distribution of open and percutaneous biopsies, IGPNBs increased from 59 to 67 percent of all biopsies during that time period.

Use of IGPNBs was particularly prevalent in the kidney and liver, representing 96 and 90 percent of all biopsy approaches, respectively, in 2008, the study showed.

IGPNBs did not represent the majority of biopsies for only two areas, superficial lymph nodes and musculoskeletal soft tissues. Open biopsies are more feasible for these superficial regions, and the areas of concern are more likely to be palpable and less in need of imaging guidance during biopsy, Dr. Kwan said.

Biopsy Role Evolves for Non-Radiologists

Describing it as “robust growth,” researchers found that the share of all biopsies performed by radiologists increased from 35 to 56 percent and the total number of biopsies performed by radiologists increased at a CAGR of 8 percent between 1997 and 2008. However, the CAGR fell off to 6 percent in the second half of the study as certain specialties performed a larger percentage of biopsies, Dr. Kwan said.

After radiology, the top specialties involved in performing all biopsy procedures from 1997 to 2008 were general surgery and pulmonology, researchers found.

The increasing share of certain biopsies performed by some specialties, such as fine needle aspirations (FNAs) performed by endocrinologists, is likely due to a combination of factors, Dr. Kwan said. “First, specialists are acquiring imaging tools such as ultrasound and are becoming more comfortable using them. Second, specialists control the referral of their patients, in contrast to radiologists who depend solely on referrals from other physicians.”

These findings could also be at least partly linked to healthcare regulations, Dr. Kwan said. Possibly related to stricter regulatory rules for mammography, the share of IGPNBs performed by radiologists increased from 70 to 75 percent between 2002 and 2008, she said. Facilities must go through a rigorous accreditation process to perform mammography, and accreditation for breast biopsy may become mandatory in the near future.

In contrast, the more lenient regulations for ultrasound—the modality used most often for FNA guidance—played a significant role in the trend toward endocrinologists performing more of the image-guided FNAs, Dr. Kwan said.

Another factor impacting the increasing number of biopsies performed by non-radiologists is the high reimbursement rates for many image-guided procedures, coupled with lower costs for purchasing equipment such as portable ultrasound, Dr. Kruskal said.

“This encourages non-radiologists to do an increasing number of these biopsies, especially ultrasound-guided thyroid and other superficial biopsies, as well as small biopsies,” Dr. Kruskal said.

Even as non-radiologists perform more biopsies, Dr. Kwan said she does not expect to see a major impact on the overall role of radiologists in the biopsy field.

“If the shift continues toward IGPNB as a preferred route of tissue sampling, radiologists most likely will continue playing an important role in the provision of these services,” she said.

Concurred Dr. Kruskal: “Deeper, more challenging biopsies such as targeted liver biopsies will still rely on the radiologist’s expertise, as long as we continue to provide a high quality of care and service. Maintaining this high quality of care is where our focus should be right now.”

Graph shows relative share of all biopsies performed according to specialty from 1997 to 2008. Data in 2003 were affected by a coding discrepancy for fine needle aspirations. (Radiology 2010;256;751–758 All rights reserved. Reprinted with permission.)
**Radiology in Public Focus**

Press releases were sent to the medical news media for the following articles appearing in the latest issue of *Radiology*.

**MR Imaging Helps Predict Time from Symptom Onset in Patients with Acute Stroke: Implications for Patients with Unknown Onset Time**

MR images can be used as a surrogate marker of stroke age, whether patients were imaged within the first three hours after stroke onset, potentially increasing the number of patients who can be eligible for thrombolysis.

**Cerebral Microhemorrhage and Iron Deposition in Mild Cognitive Impairment: Susceptibility-weighted MR Imaging Assessment**

Analysis of iron deposition at baseline performed with a support vector machine (SVM) might help identify individual patients with mild cognitive impairment (MCI) at risk for cognitive decline. A prospective study of 35 healthy controls and 69 patients with MCI to determine whether susceptibility-weighted MR imaging at baseline may help predict cognitive decline. In a prospective study of 35 healthy controls and 69 patients with MCI to determine whether susceptibility-weighted MR imaging at baseline may help predict cognitive decline. This suggests that MR imaging might be used as a ‘clock’ for determining stroke age in patients with an unknown onset time, potentially increasing the number of patients who can be eligible for thrombolysis.

**Media Coverage of RSNA**


**December Outreach Activities Focus on Abdominal Aortic Aneurysms**

In December, RSNA’s “60-Second Checkup” radio program focused on the diagnosis and course of treatment for abdominal aortic aneurysms.
**Journal Highlights**

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

### Imaging in Interventional Oncology

Astrocytoma medical imaging plays key roles in image-guided therapy—and interventional oncology in particular—these roles are rapidly evolving as a result of new technology and innovative treatment methods.

In a State of the Art review article in the December issue of *Radiology (RSNA.org/Radiology)*, Stephen B. Solomon, M.D., of Memorial Sloan-Kettering Cancer Center in New York, and Stuart G. Silverman, M.D., of Brigham and Women’s Hospital in Boston, describe the current state of medical imaging for intervention in oncology and examine directions for future development. In addition, authors discuss key roles medical imaging plays in interventional oncology:

- Preprocedure planning
- Intraprocedural targeting, monitoring and control
- Postprocedure assessment

“Although many of these roles are still not fully established, as research and development in medical imaging focus on interventional needs, it is likely that the role of medical imaging in intervention will become even more integral and widely applied,” Drs. Solomon and Silverman concluded.

### Intraoperative Ultrasonography of the Pancreas

A versatile technique that provides excellent spatial and contrast resolution and real-time imaging, intraoperative ultrasound is useful for diagnostic imaging as well as for guidance of laparoscopic and open operative procedures.

In an article in the November–December issue of *Radiographics (RSNA.org/Radiographics)*, Maryellen R.M. Sun, R.S.M., M.D., of Beth Israel Deaconess Medical Center in Boston, and colleagues provide an overview of intraoperative ultrasound based on more than 20 years of experience performing open surgical and laparoscopic ultrasound examinations. Along with reviewing pancreatic surgical procedures commonly performed with ultrasound guidance and describing and illustrating appearances of the normal pancreas and pancreatic lesions commonly seen at intraoperative ultrasound, the authors discuss:

- Transducer selection and machine requirements
- Sterilization techniques
- Scanning methods
- Potential pitfalls

“With increasing clinical demands for intraoperative ultrasound, it is essential that radiologists be familiar with its uses and techniques,” the authors concluded. “In addition, to properly perform intraoperative ultrasound and accurately interpret the images, knowledge of normal and variant pancreatic and vascular anatomy and relevant landmarks is needed.”

### CME DEBUTS IN JANUARY RADIOLOGY

Beginning in January, up to one article in *Radiology* will be designated for CME activity. Readers who successfully complete a CME test associated with a review-style (“Thrivey”), “State of the Art” article in *Radiology* will be given 10 AMA PRA Category 1 Credits. The test will be accessible through the Education Center portal at RSNA.org. A CME fee is free of membership, nonmembers will be charged a $15 fee.

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**IHE® Connection 2011 Conference**

This 2011 Integrating the Healthcare Enterprise (IHE®) Connection will include a one-day conference including presentations by leaders in the movement to adopt electronic health records, personal health record systems and national health information networks. Attendees will also learn about IHE’s support for these critical improvements and receive introduction to the IHE interoperability testing process. Attendees will have the opportunity to observe the IHE Connection, to be held January 17–23, as it takes place and learn about its significance in enabling the connected health system.

Companies at the Connection test the interoperability of their health information systems by exchanging information with complementary systems of multiple vendors. Thousands of vendor-to-vendor connections have been tested since the first Connection was held in 1998.

Many of the capabilities tested at the Connection are closely aligned with the criteria for achieving “meaningful use” of electronic health records as recently published by the U.S. Department of Health and Human Services. More than 3,500 tests of IHE Integration Profiles were successfully completed by more than 150 health information technology systems at last year’s event.

Registration is limited; the fee is $50 per conference attendee. For more information, go to [www.the.net/connection/](http://www.the.net/connection/)

**CD-ROM COLLECTIONS AVAILABLE IN RSNA EDUCATION CENTER 2010-2011 PRODUCT CATALOG**

Made available for the first time at RSNA 2010, the new assortment of CD-ROM collections of recorded refresher courses from previous RSNA meetings are among the items included in the RSNA Education Center’s new 2010-2011 product catalog.

Bundled into topical sets and sold at significant savings, the collections offer a cost-effective way for radiologists to build a library of the best educational content.

Each course is offered on CD-ROM and can be viewed on most PCs or laptop computers. Audio recordings of speakers and their slides are accompanied by optional written transcripts for enhanced learning. AMA PRA Category 1 credits are available for all recorded refresher courses. This year, the collection has expanded to more than a dozen sets available for purchase.

Those who did not get a catalog in their RSNA bag this year, or for more information or to purchase the CD-ROM collections, go to [RSNA.org/Education/catalog](http://www.rsna.org/Education/catalog) or call the Education Center at 1-800-272-2920.

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**Medical Meetings**

**January – April 2011**

**JANUARY 17-21**

Integrating the Healthcare Enterprise (IHE)’ North American Connection, Hyatt Regency Chicago

[www.the.net/Connection](http://www.the.net/Connection)

**JANUARY 28-31**

Indian Radiological & Imaging Association (IRIA), 63rd Annual Congress, Hotel Ashok, Chaitya Puri, New Delhi, India


**FEBRUARY 29––MARCH 4**

Society of Breast Imaging (SBI), Applications and Interpretation of Breast MRI, Fairfax, Miami

[www.sbi-online.org](http://www.sbi-online.org)

**FEBRUARY 12–17**

International Society for Optics and Photonics (SPIE), Medical Imaging 2011, Lake Buena Vista Orlando, Fla.

[www.spie.org](http://www.spie.org)

**FEBRUARY 20–24**

Healthcare Information and Management Systems Society (HIMSS), Annual Conference and Exhibition, Orlando, Fla.

[www.himssconference.org](http://www.himssconference.org)

**MARCH 6–9**

Society of Thoracic Radiology, Annual Meeting, Hyatt Regency, Coral Gables, Florida

[www.sav.org](http://www.sav.org)

**MARCH 8–12**

Society of Gastrointestinal Radiologists (SGIR) and Society of Uroradiology (SUR), Abdominal Radiology Course, Four Seasons Resort-Avalon, California

[www.sgr.org](http://www.sgr.org)

**MARCH 13–25**

Society of Interventional Radiology (SIR), 36th Annual Scientific Meeting, Hyatt Regency, San Antonio, Texas

**APRIL 3–8**

DGK’s 43rd International Diagnostic Course, Davos, Switzerland

**APRIL 13–23**

SPIE Photonics (SPIE), Medical Imaging 2011, Lake Buena Vista Orlando, Fla.

**APRIL 13–24**

Society for Imaging Informatics in Medicine (SIIM), 2011 Annual Conference, Hyatt Regency, Orlando, Fla.

**APRIL 15–17**

SSR, International Congress, Four Seasons Resort-Avalon, California

**MAY 6–9**

American Association of Women’s Radiology (AAWR), AAWR Educational Symposium, Four Seasons Resort-Avalon, California

**MAY 23–26**

American Association of Physicists in Medicine (AAPM), 54th Annual Meeting, Chicago, Ill.

[www.aapm.org](http://www.aapm.org)

**JUNE 27–29**

American Society for Radiation Oncology (ASTRO), 51st Annual Meeting, Las Vegas, Nev.

[www.astro.org](http://www.astro.org)

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**IOM News | December 2010**

19

December 2010 | RSNA News 20

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**Image** RadioGraphics

A transverse ultrasound image shows a dilated pancreatic duct side branch (white arrowheads) that contains a small mural nodule (arrow). The side branch courses parallel to the nondilated main pancreatic duct (black arrowheads) for a short distance. After the lesion was localized, a distal pancreatectomy was performed. At pathologic analysis, IPMN with low-grade dysplasia was found.

RadioGraphics 2010; 30; 1935–1953 ©RSNA, 2010. All rights reserved. Printed with permission.
Writing a Competitive Grant Proposal

Registrations are being accepted for the 2011 RSNA Writing a Competitive Grant Proposal program, a grant writing session for researchers in radiology, radiation oncology, nuclear medicine and related sciences who are interested in actively pursuing federal funding.

A limited number of slots are available for this 1½-day intermediate-level course that combines didactic and small group interactive sessions and is designed to help radiologic researchers understand and apply the key components of writing a competitive grant proposal. Topics to be covered are the NIH grant review process, developing specific aims and funding opportunities. Guided by a faculty of leading researchers with extensive experience in all aspects of grant applications and funding, the program will focus on developing realistic expectations of and tools for getting started on the grant process. Faculty includes G. Scott Gazelle, M.D., Ph.D., M.P.H., of Massachusetts General Hospital in Boston, Robert Nordstrom, Ph.D., of the National Cancer Institute in Bethesda, Md., Ruth Carlos, M.D., of the University of Michigan Health System in Ann Arbor, and Elizabeth Burnsise, M.D., M.P.H., of the University of Wisconsin in Madison.

The course fee is $175. Registration forms can be found at RSNA.org/CGP. Contact Fiona Miller at 1-630-590-7741 or fmiller@rsna.org for further information.

Annual Meeting Watch

News about RSNA 2011

RSNA 2011 Abstract Deadline Moved to March 31

The online system to submit abstracts for RSNA 2011 will be activated in mid-January. New this year, the submission deadline is 12:00 p.m. Central Time on March 31, 2011. Abstracts are required for scientific presentations, education exhibits, applied science and quality storyboards. To submit an abstract online, go to RSNA.org/abstracts. The easy-to-use online system helps the Scientific Program Committee and Education Exhibits Committee evaluate submissions more efficiently. For more information about the abstract submission process, contact the RSNA Program Services Department at 1-877-776-2227 within the U.S., or 1-630-590-7774 outside the U.S.

Other Important Dates for RSNA 2011

May 4 - Member Registration and Housing Opens at 8:30 a.m. CT

June 1 - Non-Member Registration and Housing Opens at 8:30 a.m. CT

Course Enrollment Opens at 8:30 a.m. CT

July 6 - Final advance discounted registration, housing and course enrollment deadline to have full conference badge mailed

October 21 - International deadline to have full conference badge mailed

November 4 - Final advance discounted registration, housing and course enrollment deadline to have full conference badge mailed

November 27 - December 2 - 97th Scientific Assembly & Annual Meeting

For Your Benefit

Renew Your RSNA Membership Now

RSNA membership renewal by December 31 avoids interruption of your subscription to RSNA News and many other benefits:

- Subscription to Radiology and RadioGraphics
- Access to the myRSNA personalized Web portal
- Free tools to help with continuing medical education
- Free advance registration to the RSNA annual meeting

Renew online at RSNA.org/renew or by mail with the invoice sent to you early in October. For more information, please contact membership@rsna.org or 1-877-RSNA-MEM (1-877-776-2636) or 1-630-571-7873 outside the U.S. and Canada.

The Value of Membership

Members Know It’s Better to Belong

RSNA 2010 attendees were happy to give input when asked to name the best part of RSNA membership during this year’s annual meeting. Below is a sampling of responses from RSNA 2010 attendees.

“I don’t think members are taking enough advantage of all the things RSNA has to offer.”

1. Liliane Gibbs, M.D., Orange, Calif.

“It’s an amazing community, and I enjoy being able to collaborate with radiologists all across the globe.”

2. Naimi Ali Ba, Marlboro, N.J., first year member-in-training

“RSNA fosters, promotes, sponsors and encourages the intellectual advances in radiology, which leads to our ability to improve the quality of care we give our patients.”

3. David Dershaw, M.D., New York, 25-year member

“RSNAs got excellent online education facilities. And this is an awesome meeting.”

4. Kate Colquhoun, M.B.B.S., Hampshire, United Kingdom

Members Question of the Month

What was the best session you attended at RSNA 2010? Why?

E-mail us your answer at tellus@rsna.org. Respondents featured in an upcoming issue of RSNA News will receive a small gift featuring the new RSNA logo.
Submit RSNA 2011 Abstracts Online

New Deadline: March 31, 2011

Submitting abstracts for RSNA 2011 is as easy as logging onto RSNA.org/abstracts.

Those planning to submit abstracts should note that this year’s submission deadline has been moved to 12:00 p.m. Central Time on March 31, 2011. As always, the online system to submit abstracts for RSNA 2011 will be activated in mid-January.

Abstracts are required for scientific presentations, education exhibits, applied science and quality storyboards. The easy-to-use online system helps the Scientific Program Committee and Education Exhibits Committee evaluate submissions more efficiently. Researchers will be notified in mid-June about the status of abstracts submitted for education exhibits and in mid-July about those submitted for scientific papers and posters. Once you have submitted your abstract, you can also log onto RSNA.org to check the status of your abstract.

For more information about the abstract submission process, contact the RSNA Program Services Department at 1-877-776-2227 within the U.S. or 1-630-590-7774 outside the U.S.

Site Offers Extensive Imaging Database

A library of more than 52,948 approved images is among the features on MedPix®, medpix.usuhs.edu/index.html, the free online medical image database. Content on MedPix is organized by disease location (organ system), pathology category and patient profiles and by image classification and caption. The fully Web-enabled cross-platform database integrates images and textual information and primarily targets physicians and nurses, allied health professionals, medical students, graduate nursing students and other post-graduate trainees.

COMING IN JANUARY

Released in early November, researchers continue to analyze the impact of the National Lung Screening Trial (NLST) results showing 20 percent fewer lung cancer deaths among those screened with low-dose spiral CT versus with chest X-rays. Next month, RSNA News will report on the trial that was also the subject of an RSNA 2010 special interest session.

Retrospective

Celebrating 20 Years of RSNA News

Headlines

Remembering radiologic topics that made the news. This month’s feature: some of the most accessed stories from RSNA News online.

JUNE 2006: Uterine Fibroid Findings Support Radiology-Based Treatments

OCTOBER 2005: Radiologist Shortage Over? Survey Says Yes

DECEMBER 2009: iPhone Application Tracks Radiation Exposure, Risk

SEPTEMBER 2006: Virtual Autopsy Offers Noninvasive Postmortem Exam

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JULY 2009: Malpractice Fears in Mammography Overestimated

MAY 2006: Imaging Reimbursement Cuts May Harm Rural Practices, Patients

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Your colleagues at ACR are the imaging experts—and the only CMS-approved partner you’ll need to meet the 2012 accreditation deadline.

That’s peace of mind for you and your patients.

Apply for ACR accreditation today at acr.org or 800-770-0145.