No Contest: Watson Poised to Revolutionize Healthcare

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RSNA Group Billing Simplifies Renewal Process

Private practices and academic radiology groups are invited to take advantage of RSNA's membership renewal group billing option, which simplifies membership renewal by processing one check for multiple members in your group.

Under group billing, a designated contact person will receive one group invoice in September. Payment can be made by sending one check or phoning RSNA's Membership Department with credit card information. Office managers/administrators and accounting staff will appreciate the ease of using RSNA's group billing.

To take advantage of this option, contact the RSNA Membership Department by Aug. 1. Call 1-630-571-7857, fax 1-630-590-7711 or email bershipDepartment@rsna.org.
Drose presented its Memorial Hall of Fame awards posthumously to the University of Bologna in Italy.

Fowlkes is a physicist and a professor in the Departments of Radiology and Biomedical Engineering at the University of Michigan in Ann Arbor. Dr. Kleinman is a professor of clinical pediatrics at Columbia University College of Physicians and Surgeons in New York.

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CTC Use Grows Despite Reimbursement Obstacles

Although CT colonography (CTC), or virtual colonoscopy, has yet to be approved as a screening tool by the Centers for Medicare & Medicaid Services (CMS), new research shows the technique is growing in popularity and expanding its reimbursement numbers.

A study in the March issue of Journal of the American College of Radiology (JACR) revealed that the percent of U.S. hospitals offering CTC grew from 13 to 17 between 2005 and 2008. Also in that time span, nationwide use of diagnostic CTC Medicare fee-for-service beneficiaries tripled and fewer CTC claims have been denied, according to a study published in the April issue of JACR.

The April study shows that the total annual claims for diagnostic CTC for Medicare fee-for-service beneficiaries climbed from 3,660 to 10,802, or 195 percent, between 2005 and 2008, the first four complete years for which Current Procedural Terminology (CPT) tracking codes existed, according to study co-author Perry Pickhardt, M.D., a professor of radiology at the University of Wisconsin School of Medicine and Public Health in Madison.

Dr. Pickhardt's study also showed that the annual national denial rate decreased from 70 percent in 2005 to 43.4 percent in 2008.

The rapid growth of diagnostic CTC, even in the absence of Medicare coverage for screening CTC, emphasizes the need for an alternative for patients who choose not to undergo colonoscopy, Dr. Pickhardt said. And as more insurers provide CTC coverage, use will continue to expand, he said.

"Our study shows that CTC is slowly but surely gaining traction throughout the country," Dr. Pickhardt said. "More and more insurance companies are covering it for screening and diagnosis."

The technology even earned the imprimatur of the nation's highest office when President Barack Obama underwent CTC as part of his routine physical in February 2010.

CTC Offers Alternative to Invasive Technique

Of the hospital participants interviewed for the March JACR study, most cited CTC's role as an alternative screening option for frail, elderly patients and those with failed optical colonoscopies as the primary reason for adopting CTC, said lead author Megan McHugh, Ph.D., an assistant professor at Northwestern University's Feinberg School of Medicine in Chicago. Other reasons included long waits for optical colonoscopy and promising CTC study results, she said.

"There's no reason CMS shouldn't cover CT colonography. It's better, faster, safer and cheaper than optical colonoscopy."

- Perry Pickhardt, M.D.

Research continues to validate the efficacy of CT colonography (CTC), which is growing rapidly in use despite the absence of Medicare coverage.

"We've published findings specific to the Medicare population, and more research is forthcoming addressing the objections raised about CT colonography," said Dr. Pickhardt. "There's no reason CMS shouldn't cover CT colonography. It's better, faster, safer and cheaper than optical colonoscopy."

CAD Improves CTC Image Interpretation

Radiologists expect CTC use to continue growing, especially as new technological developments like computer-aided detection (CAD) software are shown to improve accuracy in interpreting CTC images.

In a study published in the September 2010 issue of Radiology, Abraham H. Dachman, M.D., a professor of radiology at the University of Chicago Medical Centers and colleagues assessed the effect of using CAD on readers' accuracy in interpreting CTC images. CAD provides locations of suspicious regions and/or quantitative analysis of these regions while each program has a unique polyp detection rate, false-positive rate and display of the CAD output. In the study, 13 of 19 radiologists demonstrated higher accuracy with CAD.

"CAD use resulted in a significant improvement in overall reader performance per polyp per patient," said Dr. Dachman, an editor of The Atlas of Virtual Colonoscopy, a 2010 comprehensive overview of CTC. Dr. Dachman received a 2009 Education Seed Grant from the RSNA Research & Education Foundation for his project, "Training Tool for Colonoscopic Insufflation and Scanning in Virtual Colonoscopy."

"There is still a large amount of work to do in this area," said Dr. Dachman, "but this study by Pickhardt and colleagues demonstrates the potential for CAD to improve accuracy in the interpretation of CTC images."
Diligence Necessary to Minimize Gadolinium-related Events

While gadolinium-based MR contrast agents are now considered very safe and nephrogenic systemic fibrosis (NSF) has virtually been eliminated, continued awareness of associated contraindications and risks will help keep immediate and long-term adverse events at a minimum, experts say.

Since the connection was made between NSF and gadolinium in 2006, a concerted effort among radiologists to screen for renal disease and use methods to lower or eliminate dose in at-risk patients—as well as to avoid use of specific types of gadolinium associated with higher incidence of NSF—has reduced the disease nearly non-existent, said Emanuel Kanal, M.D., a professor of radiology and neuroradiology and director of Magnetic Resonance Services at the University of Pittsburgh Medical Center.

Approximately 1,500 total cases have been reported worldwide and 368 proven cases are recorded in Yale University’s NSF registry, Dr. Kanal said.

“We are in a solid position right now,” Dr. Kanal said. “The number of new NSF cases is now close to—if not literally at—zero. That means that even without fully understanding NSF and what causes it, we as a medical community have done a rather impressive job of controlling it. We are not inducing new cases and yet we are still safely administering millions of doses a year.”

While the changes made in controlling NSF have positively impacted safety, radiologists should also keep in mind the more immediate risks associated with gadolinium, said Martin R. Prince, M.D., Ph.D., a professor of radiology at Cornell and Columbia Universities and chief of MR imaging at New York Hospital, and lead author of new research recently published in the February issue of the American Journal of Roentgenology (AJR), comparing reactions among different types of contrast agents.

“Focusing on NSF as the primary way to decide which gadolinium to use for all patients is a mistake,” Dr. Prince said. “Optimizing safety also requires taking into consideration the risks of allergic reactions—which can happen even in patients who are relatively healthy.”

Risk of Allergic Reactions Deserves Focus

For the AJR study, Dr. Prince and colleagues compared reactions among five types of contrast agents: gadopentetate dimeglumine, gadodiamide, gado- tericel, gadobenate dimeglumine and gadosure.

The study included 158,796 gadolinium-enhanced examinations conducted at Cornell and Columbia over 10 years. Researchers analyzed the U.S. Food and Drug Administration (FDA) Adverse Event Reporting System (AERS) database to compare local experience to national trends.

Overall, the risk for severe reactions was very low. A total of 140 adverse events were reported over this time, including one fatality. At 0.013 percent, gadolinium imaging had the highest rate of adverse events, nearly three times higher than for brain MR at 0.0045 and four times higher than for spine MR at 0.0034 percent. The rate of severe reactions was about 1 in 40,000 injections. Immediate adverse events were more likely in women and patients with a history of prior allergic reactions.

Based on the national FDA data, 40 deaths were reported out of 51 million gadolinium contrast agent administrations over a six-year period from 2004 to 2009.

“The most interesting finding is that nonionic gadolinium showed a much lower severe reaction rate than ionic gadolinium,” Dr. Prince said. “That’s something we’ve known about iso-osmolar-based contrast for a while. But when a contrast has fewer than five millies to travel in blood to medi- rate reactions. However, the risk profile for NSF is just the opposite—it appears that nonionic gadolinium carries a higher risk.”

Dr. Kanal questioned whether immediate reac- tion rates significantly differ among contrast types. He cited his own previous study published in the December 2008 issue of AJR reporting a total adverse event rate of 0.76 percent using 23,554 gadobenate dimeglumine administrations. By Sep- tember 2010 the adverse event rate from this same drug administered to almost 100,000 patients stud- ied was 0.5 percent. This compares to total reaction rate of 1.2 percent for gadobenate dimeglumine and 0.2 percent for nonionic gadolinium-based contrast agents found by Dr. Prince.

“Though it would not be fair to compare pro- spective with retrospective studies, I believe that the data suggest that adverse event rates from all the gadolinium-based agents are roughly comparable—and the package insert/product labels from prospec- tive, carefully monitored studies seem to bear this out as well,” Dr. Kanal said.

“It seems that the only significant differentiating factors among the different agents from a safety point of view are in NSF but not in the adverse events,” he continued. “All the drugs have had seri- ous adverse events or anaphylactoid reactions, and we have our practice much more carefully in patients who have had prior allergic reactions or who have allergic respiratory phenomena such as asthma.”

Dr. Kanal agrees, however, that NSF should not be the only, or perhaps even the primary, consid- eration in selecting contrast agents should be used on which patient. “The relative reliability properties of these agents, which vary dramatically, are paramount in determining the relative effectiveness of the agent and the sensitivity of the resultant images to the detection of pathology,” Dr. Kanal said. “Safety plus effectiveness—including cost effectiveness—should combine to serve as guiding parameters in determin- ing our choice of contrast agent for a given patient.”

Radiology Departments Need Safety Plans

No matter how rarely they occur, radiology depart- ments should have a plan in place for responding to a severe contrast reaction, Dr. Prince said.

“Hospital-based departments, which have a code team to call, are in a much better position to handle a severe reaction than outpatient facilities, where even if there’s a crash cart and a demand on staff, your code team is a call to 9-1-1.”

Nevertheless, “Gadolinium is very safe—much safer than iodinated contrast,” emphasized Dr. Prince. “Keep in mind that we’re talking about making improvements to a practice that’s already very low-risk. With about 60 deaths in 51 years, admin- istrations, that’s less than one-in-a-million. To put this in perspective, traveling 84 miles by car can be a one-in-a-million chance of death by car accident.”

Concurred Dr. Kanal: “Radiologists should care about objective scientific data, and the data are very strongly support that these drugs have an extremely high safety profile. Used appropriately and according to their product labeling, they are among the safest drugs of all drugs that physicians prescribe today.”

Radiologists are advised to consult the Manual on Contrast Media v7, which provides detailed recom- mendations for identifying and minimizing contrast risk. Co-authored by Dr. Kanal, who serves on the American College of Radiology (ACR) Task Force on Patient Safety, the manual is accessible at ACR.org under “Quality and Safety Resources.”

First and foremost, minimizing contrast risk requires that radiologists continue to be aware of possible contraindications and safety issues and modify their practice patterns accordingly. Dr. Kanal stressed. “We are still guided by the basic principle, ‘Above all, do no harm.’” As the wording of a gadolinium-based contrast agent ad copy used to say, “Peace of mind comes from knowing you’ve sub- jected your patient to no more risk than is absolutely necessary.”

CTC Use Grows Despite Reimbursement Obstacles

Concluded from Page 4

Dr. Dachman called extra-colonic find- ings, which can lead to expensive and inva- sive follow-up procedures, a “legitimate concern.” However, he noted that CTC, generally detects only large masses and anomalies outside the colon, especially with the very low radiation techniques now used for CTC.

Optical colonoscopy also carries risks, including the potential for bleeding and colon perforation. Regardless, many radiologists believe that patients reluctant to undergo an optical colonoscopy would consider CTC if it was covered by Medi- care. Current colorectal cancer screening adherence remains low, despite the fact that colon cancer has a five-year survival rate of about 90 percent if detected and treated early, according to ACS.

“We’re getting better at screening the average risk patient, but 40 percent still haven’t undergone screening,” Dr. Dachman said.

Radiologists, including Dr. Pickhardt, believe CTC may be the best way to increase that percentage. “CT colonography is beyond every limit test conceivable,” he said. “Within five years, it should be—a and not the—frontline screening test for colorectal cancer.”

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Emanuel Kanal, M.D.
New ACGME Standards Concern Program Directors

As revised standards to further limit resident duty-hours are set to take effect in July, a recent Mayo Clinic study shows that residency program directors still have significant concerns about the new restrictions.

In 2008, ACGME set duty hour limits across all specialties nationally to promote safe patient care and resident well-being. In response to continued concern that resident fatigue and lack of supervision is causing preventable medical errors, Congress in 2008 requested that the Institute of Medicine (IOM) establish a committee and determine strategies to optimize resident work hours and patient care. In 2010, IOM issued a report calling for further restrictions on resident duty hours, better resident supervision and new federal oversight of the ACGME in monitoring resident duty hours. After soliciting public comment from the graduate medical education community, ACGME approved the standards in September 2010.

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The survey shows a marked degree of concern about educating a competent generation of future physicians in the face of increasing duty hour standards and regulations. While the current maximum 80-hour workweek for residents averaged over four weeks remains intact, changes under the new standards include:

- Increased resident supervision
- First-year residents limited to 16-hour shifts
- Residents must have one day free of duty every seven days, averaged over four weeks
- Residents must have eight hours between duty periods and should have 10 hours between duty periods
- Residents must have at least 14 hours free of duty after 24 hours of in-house duty
- Residents must not be scheduled for more than six consecutive nights

Concern Level Related to Specialty

Although all program directors in the three specialties voiced some degree of concern about the planned changes, surgical directors expressed the strongest reservations. The response could stem from the fact that internal medicine and pediatrics residency programs adopted specialty-specific duty hour limitations prior to the 2003 ACGME limitations for all residencies and fellowships, Dr. Reed said.

While radiology program directors were not singled out in the study, changes planned for maximum shift length, minimum time off between shifts and maximum number of in-hospital night shifts will likely be most challenging to the specialty, according to Aliya Qayyum, M.D., residency program director and a professor of radiology/abdominal imaging at the University of California, San Francisco.

“Accommodating restrictions on shift length and time off between shifts is difficult to achieve without a shift-based night float system,” Dr. Qayyum said. “Such a system may require a combination of short or early evening shifts in conjunction with the night float to avoid violation of duty hours.

The limit on six days night float rather than seven days at a time increases the frequency of additional weekend night shifts required during the year which have been unenthusiastically received by residents,” Dr. Qayyum continued.

New Standards Bring Financial Challenges

Along with challenging residents’ efforts to meet core competencies, the new standards create financial concerns for institutions as well, which could be considerable according to a cost-benefit analysis of the standards commissioned by ACGME.

In the November 2010 report to ACGME, researchers at the David Geffen School of Medicine at the University of California, Los Angeles, found that the total direct annual cost of the planned changes (including both recurring costs and amortized start-up costs) would be $380,766,262 nationwide (in 2008 dollars). Researchers used a decision-analytical model to examine the net cost of the planned changes, including costs associated with preventable adverse events. In addition, the team focused on the direct annual costs associated with reducing resident duty hours and planned changes to the training environment.

To make up for the shortfall in workforce resulting from fewer resident hours, hospitals will be forced to expand residency slots to bring in more trainees, hire more faculty physicians to supervise them and fill in the gaps in care.
MDCT Angiography Effective for Ischemic Stroke, SAH Diagnosis

Two recent Radiology studies shed light on the effectiveness of multidetector CT (MDCT) angiography as a first-line exam for the etiologic workup of ischemic stroke patients and in diagnosing cerebral aneurysms in patients with acute subarachnoid hemorrhage (SAH).

MDCT allows rapid workup of ischemic stroke and may be the first-line imaging modality identifying acute ischemic stroke etiologies.

Loic Boussel, M.D., Ph.D.

"Multidetector CT angiography can be integrated as a primary examination tool into the imaging and treatment algorithm for patients with SAH at presentation," Dr. Westerlaan concluded.

"Experience has shown that the accuracy of the viewer were found to be important factors influencing the accuracy of CT angiography for the detection and depiction of intracranial aneurysms, researchers found. Of the 71 ruptured aneurysms missed at CT angiography within the meta-analysis, at least 19 could be detected retrospectively. "Measures such as double reading might make it possible to lower the false-negative rate significantly," Dr. Westerlaan said.

Unlike previous studies, this research used a newer generation of CT scanners as well as a homogeneous population, Dr. Westerlaan said. "In addition to findings at selective cerebral angiography, findings at treatment and autopsy were also used as reference standards," she said.

"CTA Highly Accurate in Detecting Cerebral Aneurysms

In the second study, also published in the January issue of Radiology, researchers systematically reviewed 50 clinical studies and calculated the sensitivity and specificity of MDCT angiography in diagnosing cerebrovascular aneurysms in patients with acute SAH. Researchers identified the clinical studies—which included 4,097 patients—through a comprehensive search of MEDLINE and EMBASE articles published between 1997 and 2009 that assessed the value of CT angiography in patients with proven SAH. Study quality was assessed using the Quality Assessment of Diagnostic Accuracy Studies (QUADAS) tool, with a minimum score of 0 and a maximum of 14. "We wanted to prove that ruptured intracranial aneurysms in patients with SAH can be diagnosed using noninvasive MDCT angiography," said lead author Henrique E. Westerlaan, M.D., of the University Medical Center Groningen in the Netherlands.

MDCT angiography proved to have a very high diagnostic value for detecting ruptured intracranial aneurysms in patients with SAH, Dr. Westerlaan said. Results showed a pooled sensitivity of 98 percent and a pooled specificity of 100 percent. The average QUADAS score for all included studies was 11.
No Contest: Watson Poised to Revolutionize Healthcare

Winning the $1 million “Jeopardy!” challenge earlier this year was just the tip of the iceberg for Watson, the IBM supercomputer that experts believe has the potential to revolutionize the healthcare industry.

Well before Watson’s game show victory, experts at the University of Maryland (UM) School of Medicine in Baltimore and Columbia University Medical Center began working with IBM to apply Watson’s analytics capabilities to healthcare. Specifically, Watson is being developed as an assistant capable of reading electronic health records (EHR) and providing instant feedback to physicians in ways not always available from doctors and nurses.

“This breakthrough in computer science will allow us to explore this technology for medical diagnosis,” said Eliot Siegel, M.D., a professor and vice-chair of imaging informatics at the University of Maryland School of Medicine (MSM), chief of imaging services for the Maryland Veterans Affairs (VA) Healthcare System at the Baltimore VA Medical Center and co-chair of RSNA’s Medical Imaging Resource Center (MIRC) committee.

“The potential for a renaissance in electronic health records really lies in the evolution of computer systems,” said Dr. Siegel, director of UM’s Maryland Imaging Research Technologies Laboratory, who was instrumental in the partnership between MSM and IBM. “I’m truly surprised it has taken this long for that renaissance to start.”

Physicians at Columbia University are helping identify critical medical issues to which Watson may be able to contribute, according to IBM.

Analytics Capability Critical to Healthcare

Powered by 90 servers and 360 computer chips, Watson was built in four years by IBM researchers seeking to develop a machine that could quickly answer complex questions. Through IBM’s Deep Question Answering, Natural Language Processing and Machine Learning statistical techniques, Watson works to understand questions and develop answers—a capability critical to the technology’s potential value to healthcare.

IBM is also working with speech-recognition software developer Nuance Communications to give Watson the analytics capabilities necessary for physician-patient consultations.

Earlier attempts at artificial intelligence required every possible question and answer to be hard-coded into the system, a time-consuming process with little value in healthcare, said Martin Kolon, M.D., Chief Medical Scientist, Care Delivery Systems, IBM Research.

“Watson uses a probabilistic, evidence-based approach,” Dr. Kolon said. “It generates and scores many hypotheses using an extensible collection of natural language processing, machine learning and reasoning algorithms. Many previous such efforts relied on programmed decision rules. Watson is a self-learning system that does not rely on such rules. It gathers and weighs evidence to refine its hypotheses.”

Decision Support Boosted to New Level

Radiology stands to benefit tremendously from Watson’s capabilities, experts say.

“The technology has the potential to provide decision support on a scale not dreamed of prior to this,” said Nancy Knight, Ph.D., the director of Academic and Research Development and a founder of the Maryland Imaging Resource Center (MIRC) committee.

Watson not only needs the general knowledge that made him so successful on “Jeopardy!” but also information from the databases specific to medicine,” Dr. Siegel said. Watson is an Assistant, not a Physician

In time, Dr. Siegel would like to see Watson function as a physician’s assistant. He envisions Watson being used for chart review, providing assistance on drug interactions or inconsistencies in prescriptions. Regardless of the technology’s potential, Dr. Siegel stresses that Watson is designed to act as an assistant to a physician, rather than a replacement.

“I don’t see this technology supplanting physicians or radiologists,” Dr. Siegel said. “It’s a tool that will gather, summarize and analyze information—very similar to the role now performed by our best residents and fellows.”

As the technology progresses and expands, it will be especially important to rural hospitals or areas where there may be fewer experts, but healthcare organizations across the board stand to benefit, he said.

“Watson’s eventual expansion into healthcare has profound implications for radiology and will certainly improve the safety, effectiveness and potentially the cost of healthcare delivery overall.”

Eliot Siegel, M.D.
**Journal Highlights**

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

### Transcatheter Intraarterial Therapies: Rationale and Overview

**Optimal Tube Potential for Radiation Dose Reduction in Pediatric CT: Principles, Clinical Implementations and Pitfalls**

While optimal tube potential may improve image quality or reduce radiation dose in pediatric CT, selecting an appropriate tube potential and determining dose reduction depend on the patient’s size and the diagnostic task being performed. The power limits of the CT scanner and the desired scanning speed also must be considered.

In the May-June issue of *RadioGraphics* (RSNA.org/RadioGraphics), Lielong Yu, Ph.D., of the Mayo Clinic College of Medicine in Rochester, Minn., and colleagues describe the basic principles of optimal tube potential for reducing radiation dose in pediatric CT examinations. Specifically, the authors:

- Provide a tutorial for optimizing tube potential
- Describe how to implement a technique chart for tube potential and tube current settings
- Discuss special considerations and common pitfalls associated with lower tube potentials

“The use of a lower tube potential and the amount by which to reduce radiation dose must be carefully evaluated for each type of examination to achieve an optimal tradeoff between contrast, noise, artifacts and scanning speed,” the authors conclude.

### RadioGraphics

This journal-based CME activity has been approved for ARAP MRA Category 1 Credit.

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- **Specifically, the authors:**
  - Provide a tutorial for optimizing tube potential
  - Describe how to implement a technique chart for tube potential and tube current settings
  - Discuss special considerations and common pitfalls associated with lower tube potentials
- **“The use of a lower tube potential and the amount by which to reduce radiation dose must be carefully evaluated for each type of examination to achieve an optimal tradeoff between contrast, noise, artifacts and scanning speed,” the authors conclude.**
RSNA Derek Harwood-Nash International Fellowship

Application Deadline
July 1

INTERNATIONAL RADIOLOGISTS three to 10 years beyond training are invited to apply for this six- to 12-week fellowship at a North American institution. One or two fellows will be selected. The application for this program is available at RSNA.org/internationalCIRE/nash.cfm. For more information, contact Fiona Miller at fmiller@rsna.org or 1-630-590-7741.

RSNA/AUR/ARRS Introduction to Academic Radiology Program

Application Deadline
June 9

• Exposes second-year residents to academic radiology
• Demonstrates the importance of research in diagnostic radiology
• Illustrates the excitement of research careers
• Introduces residents to successful clinical radiology researchers. Successful applicants will be assigned to either a seminar held during RSNA 2011 or the AARS annual meeting in 2012.

More information and an application/nomination form for this program is available at RSNA.org/Research/educational_courses.cfm. Questions can be directed to Fiona Miller at 1-630-590-7741 or fmiller@rsna.org.

RSNA Advanced Course in Grant Writing

Application Deadline
July 31

Applications are now being accepted for this course designed to assist participants, generally junior faculty members in radiology, radiation oncology or nuclear medicine programs, prepare and submit a National Institutes of Health (NIH), National Sciences Foundation (NSF) or equivalent grant application by the October 2012 deadline. The course, to be held at RSNA Headquarters in Oak Brook, Ill., will consist of four two-day sessions: October 14-15, January 27-28, 2012, March 16-17, 2012, and May 11-12, 2012.

For more information and an application, go to RSNA.org/research and click Grant Writing and Research Programs or contact Fiona Miller at 1-630-590-7741 or fmiller@rsna.org.

Medical Meetings

July–October

JULY 21-24
The American Association of Physicists in Medicine (AAPM), 53rd Annual Meeting, Van- couver Convention Center, British Columbia • www.aapm.org/meetings/2011AM
SEPTEMBER 8-11
Australasian Society for Ultrasound in Medicine (ASUM), 41st Annual Congress in Medical Ultrasound, Crown Centre Convention, Melbourne, Australia • www.asum.com.au
SEPTEMBER 14-17
American Society of Emergency Radiology (ASER), Annual Scientific Meeting, Ritz Carlton, Key Biscayne, Miami • www.asrerad.org
SEPTEMBER 21-24
International Skeletal Society (ISS), Annual Meeting, Hotel del Coronado, San Diego • www.international skeletalsociety.com
OCTOBER 13-16
North American Society for Cardiac Imaging (NASCI), 39th Annual Meeting, Hilton Balti- more Harbor, Md. • www.nasci.org
OCTOBER 14-16
International Urogynecological Radiology, joint meet- ing of European Symposium on Urogynecological Radiology (ESUR) and Society of Uroradiology, Hotel Dubrovnik Palace, Croatia • www.esur2011.com.br
OCTOBER 19-22
Radiology Business Management Association (RBMA), Fall Educational Conference, Aria Resort & Casino Las Vegas • www.rbma.org

Quality-of-Life Assessment of Fibroid Treatment Options and Outcomes

Quality of life is significantly better in all fibroid treatment groups, ranging from abdominal hysterectomy to uterine artery embolization (UAE) to MR imaging-guided focused ultrasound surgery, according to new research.

In a retrospective study, Fiona M. Fennessy, M.D., Ph.D., of Brigham and Women’s Hospital, Harvard Medical School in Boston, and colleagues used the waiting-trade-off (WTO) method, a variation on the time trade-off method, to obtain utilities for diagnostic procedures based on the fact that people wait longer to avoid various tests and/or procedures. The study included 62 patients who had undergone abdominal hysterectomy, 74 who had undergone UAE and 61 who had undergone MR imaging-guided focused ultrasound surgery.

The median WTO time was longer for hysterectomy (21.6 weeks) than for UAE or MR imaging-guided focused ultrasound surgery (14.4 weeks for both), results showed. “... the health utility values obtained in this study sug- gest that all of the evaluated treatments for uterine fibroids increased the quality of life and that the perceived morbidity of treatment procedures varied, all of which may inform more robust cost-utility analyses of fibroid treatment,” researchers concluded.

Bar chart shows the mean and median waiting time for each treatment group. Data were obtained from 60 of the 62 patients who had undergone hysterectomy, 72 of the 74 patients who had undergone UAE and 61 of the 62 patients who had undergone MR imaging-guided focused ultrasound surgery." * P < .05 versus hysterectomy with Kruskal-Wallis method with post hoc test, which indicates the significant disutility of hysterectomy as compared with the other procedures.

Identifying Cognitively Healthy Elderly Individuals with Subsequent Memory Decline by Using Automated MR Temporoparietal Volumes

Automated temporal and parietal volumes from a single baseline MR examination can be used to identify with high accu- racy cognitively healthy individuals who are at risk for future memory decline; researchers have discovered.

In a multicenter study of 149 cognitively healthy participants recruited through the Alzheimer Disease Neuroimaging Initiative, Gloria C. Chiang, M.D., of the University of California, San Francis- co, and colleagues performed a standardized baseline 1.5 T MR examination as well as neuropsychological assessment at baseline and after two years of follow-up.

Use of the most accurate region model, which included the hippocampus, parahippo- pampicul canal, amygdala, superior, middle, and inferior temporal gyrus, superior pari- etal lobe, and posterior cingulate gyrus, resulted in a fitted accuracy of 94 percent and a cross-validated accuracy of 81 percent, researchers concluded.

“The ability to identify high-risk cognitively healthy individuals may be useful in tar- geting individuals for preventative therapy and for enriching trials to maximize power, and it represents another step toward integrating imaging into the diagnosis and man- agement of Alzheimer Disease,” they concluded.

Automated segmentation of 15 temporal and parietal volumes of interest on (a) axial, (b) coronal and (c) sagittal MR images, performed by FreeSurfer software. (Shackelford 2011;259;3:785–792 ©RSNA. All rights reserved. Printed with permission.)
Rising Use of CT in Child Visits to the Emergency Department, in the United States, 1995–2008

CT use in children who visit the emergency department (ED) has increased substantially and occurs primarily at non–pediatric-focused facilities, underscoring the need to ensure that imaging is appropriately ordered, performed, and interpreted in the pediatric population, according to researchers.

Using data from the 1995–2008 National Hospital Ambulatory Medical Care Survey, David B. Larson, M.D., M.B.A., of Cincinnati Children’s Hospital Medical Center, and colleagues evaluated the number and percentage of visits associated with CT for patients younger than 18 years. The number of pediatric ED visits in that time period escalated from 0.33 to 1.65 per 100 visits. The number of pediatric CT use in children who visit the emergency department (ED) has increased substantially and occurs primarily at non–pediatric-focused facilities, underscoring the need to ensure that this occurs consistently for children, according to researchers.

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Annual Meeting Watch

News about RSNA 2011

Course Enrollment Begins July 6

Course enrollment information will be mailed in late June to all members and 2011 meeting attendees and will also be available online at RSNA2011.RSNA.org. People registering for RSNA 2011 prior to June 8 who wish to view course enrollment information online only can “opt out” of receiving the copy by mail. The Advance Registration, Housing and Course Enrollment brochure will be available online and in print starting July 6. RSNA will mail the brochure to all RSNA/AAPM members and all non-member registrants as of June 8, except those who “opted out” of a printed copy at the time of online registration. The brochure can be viewed and printed from RSNA.org/register.

Use this 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.

Guarantee Your Seat!

Tickets are required for various meeting components, including refresher, multisession, informatics workshops and RSNA tours and events. All ticketed courses must be confirmed prior to November 23 to guarantee a seat. RSNA ticketed courses fill up fast, so ensure you get the courses you need by enrolling at RSNA.org/register. Online course ticketing has been eliminated. Registrants without tickets will be allowed entrance into a course after all ticketed registrants have been seated.

RSNA 2011 Registration

How to Register

There are four ways to register for RSNA 2011:

1 INTERNET

Go to RSNA.org/register.

2 FAX: (24 hours)

1-800-521-6017
1-847-996-5401
1-847-996-5401

3 TELEPHONE

Mon–Fri, 8:00 a.m. – 5:00 p.m. (CT)
1-800-450-7018
1-847-996-5676

4 MAIL

RSNA/Exhibits/RSNA 2011
56 Airium Drive
Vernon Hills, IL 60061 USA

For more information about registering for RSNA 2011, visit RSNA2011.RSNA.org, e-mail reginfo@rsna.org or call 1-800-381-6660 x7862.

BSNIA PRS Category: 1 Credit™

RSNA 2011 Registration Fees

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<td>Hospital or Facility Executive, Commercial Research and Development Personnel, Healthcare Consultant and Industry Personnel</td>
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<tr>
<td>One-day registration to view only the technical exhibits</td>
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Important Dates

July 6 - Course enrollment opens

October 21 - International deadline to have full-conference materials mailed in advance

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

November 27 – Dec. 2 - RSNA 97th Scientific Assembly & Annual Meeting

Save on This Year’s Airfare, Enter to Win Future Travel Credit

RSNA attendees who book air travel through Gant Travel by September 30 will be entered into a drawing to receive a $500 (USD) travel credit good toward future airfare on United Airlines. Benefits of using Gant Travel for RSNA 2011 include:

• Up to a 15 percent discount on available fares on United Airlines
• Face-checker technology (checking for lower fares until your return flight home)
• Seat-checker technology (checking for the best available seats per your preference)
• Emergency assistance available by phone

For more information, contact Gant Travel at 1-877-613-1192, international +1 011 630-227-3873, or RSNAgentravel.com.

INTERNATIONAL VISITORS

International Letters Available—Act Now for Visa

Personalized letters of invitation to RSNA 2011 are available by request during online registration. In addition, the International Visitors section of RSNA2011.RSNA.org includes important information about the visa application process. Visa applicants are advised to apply as soon as they decide to travel to the U.S. and at least three to four months in advance of their travel date. International visitors are advised to begin the visa process now.

DON’T MISS “MILLION DOLLAR QUARTET,” the smash-hit musical inspired by the famed recording session that brought together Elvis Presley, Johnny Cash, Jerry Lee Lewis and Carl Perkins for the first and only time, playing at Chicago’s Apollo Theater. These four young musicians gathered on Dec. 4, 1956 at Sun Records in Memphis for what would be one of the greatest jam sessions ever. The musical features rock hits including “Blue Suede Shoes,” “That’s All Right,” “Sixteen Tons,” “Great Balls of Fire,” “Walk the Line,” “Whole Lotta Shakin’ Goin’ On,” “Folsom Prison Blues” and more.

Eye on Chicago

RSNA’s series of exciting tours and events during the annual meeting week also includes:

• “Memphis,” the Tony Award-winning musical, at the Cadillac Palace Theater
• Boris Godunov at the Lyric Opera
• Ariadne auf Naxos at the Lyric opera
• Vienna Boys Choir at the Symphony Center

The RSNA lineup will also feature city tours, shopping excursions, culinary experiences, museum exhibits and much more. Tickets go on sale July 6 when course and tour enrollment opens at RSNA2011.rsna.org.

Apollo Features One in a Million Musical

Don’t miss “Million Dollar Quartet,” the smash-hit musical inspired by the famed recording session that brought together Elvis Presley, Johnny Cash, Jerry Lee Lewis and Carl Perkins for the first and only time, playing at Chicago’s Apollo Theater.

Onsite Box Office

RSNA2011.rsna.org

Buy Bistro RSNA Tickets Now

Avoid long lines by purchasing Bistro RSNA tickets earlier this year.

Tickets to Bistro RSNA—which provides a comfortable setting for attendees to eat, meet, and network during the annual meeting—have been on sale since May. The largest variety and best value for lunch at McCormick Place is now only $19.

Bistro RSNA is located in all three Technical Exhibit Halls and the Lakeside Learning Center. The daily lunch menu includes salads, soup, entrée choices, vegetables, pasta and more. Menu price includes full meal, beverage choices and dessert.

To purchase tickets in advance, go to RSNA.org/register.
Faculty Development Workshop Expands to Membership

Continuing its charge to offer members a wide variety of opportunities to learn and earn CME, RSNA’s Education Center is opening its Faculty Development Workshop to the entire RSNA membership this year.

Scheduled for Sept. 14, the daylong course on best techniques for designing and delivering radiology education is open to all members for a fee of $150. Valerie Jackson, M.D., chairman of RSNA’s Refresher Course Committee, will lead the workshop focusing on how adults—especially physicians—best learn and how faculty can use test questions to improve their teaching.

Originally offered to RSNA Annual Meeting faculty, the workshop added instructors in preparing courses and keeping abreast of the latest developments in adult education. In 2010, for the first time RSNA opened the workshop to a limited number of radiologists who were not annual meeting faculty.

“The response was fantastic,” said Richard L. Baron, M.D., RSNA Board of Directors Liaison for Education. “Attendees were excited at having the chance to learn to use interactive education tools effectively.”

Credit Repository Offers Instant Access to Organized CME Record

RSNA automatically deposits CME and SAM credits earned through RSNA activities into the RSNA CME Credit Repository. Member Mizuki Nishino, M.D., said she appreciates the convenience of the system—it’s available whenever needed and requires minimal efforts to maintain the record.

“I probably consult it once in two to three months, when I need my CME record for credentialing and licensing purposes,” said Dr. Nishino, of the Department of Radiology, the Dana Farber Cancer Institute and the Brigham and Women’s Hospital in Boston. “The repository is very helpful in that it gives instant online access to the official CME record, with details of the courses and contents. It also has a unique feature that provides the total credits in each subspecialty, which is useful to plan future CME activity.”

The Value of Membership

The workshop provided a chance to develop questions and learn to use the electronic audience response system utilized at RSNA annual meetings.

“Research clearly shows that interactive courses are very effective for adult learners,” Dr. Baron said. “RSNA is always finding ways to not just teach the radiologist, but to teach the teacher. This workshop is a great way to hone your teaching skills.”

RSNA staff and faculty will be on hand to discuss questions with participants. To register online for the 2011 Faculty Development Workshop, go to www2.rsna.org/hmsnet/meetings/fdw2011/index.cfm. For more information, call Jennifer Comerford at 630-590-7777.

Web Page Features All Things RSNA 2011

What are the Top 5 Reasons to Attend RSNA 2011? That answer and a host of other important details about the world’s premier medical meeting are available on RSNA’s ever-expanding annual meeting page at RSNA.2011.RSNA.org.

Anchored by a video message to members from RSNA President Burton P. Drayer, M.D., the page offers separate links for attendees, technical exhibitors, the meeting program, past and future RSNA meetings and newsroom highlights. New information will be added as the meeting approaches. For example, members can now access advance registration and housing, while online course enrollment begins July 6. You’ll also find RSNA 2010 content and image highlights, a list of important dates for attendees and exhibitors, connections to RSNA’s social media portals, and more.

Log on early and often to stay on top of all things RSNA 2011.

IHE Webinar Series Begins This Month

Integrating the Healthcare Enterprise (IHE*), an initiative devoted to improving the exchange of information among healthcare systems and accelerating the adoption of electronic health records, is sponsoring its annual series of free educational webinars for health information technology (HIT) developers and users beginning in June.

The series, which runs from June 28 through September 2011, will highlight ways to engage in IHE, learn about the latest IHE Profiles and Technical Frameworks developed in IHE Domains, IHE’s National Deployment Committees, Connectathons and demonstrations. Participants will also learn how to build and implement interoperable HIT systems.

In collaboration with IHE USA and Health Information and Management Systems Society, the series includes more than 30 webinar presentations hosted each week on Tuesdays and Thursdays.

To review the full schedule for specific dates and times, visit www.IHE.net.

RSNA.org

From educating the public on radiation safety to aiding victims impacted by the devastating earthquake, radiologists continue to play a significant role in the ongoing recovery in Japan. Next month RSNA News reports on radiology’s ongoing mission—in the U.S. and abroad—to provide expertise and assistance in the wake of this overwhelming tragedy.
“ACR accreditation demonstrates that our equipment meets the highest clinical standards and our patients receive the safest and finest quality imaging available.”

— Michael J. Kelley, MD, FCR, FSIR, board-certified radiologist

Take time to prepare for accreditation … don’t delay. Apply by June 30 or you could miss the CMS accreditation deadline and put your reimbursements at risk. The ACR online application is quick and easy — with no surprises. We outline what’s needed up front and provide you every resource you need to succeed.

Only ACR delivers medical imaging accreditation from medical imaging experts. To apply, visit acr.org.

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