

Meaningful Use not Entirely Meaningful for Radiology

ALSO INSIDE:

- Brazil Awes, Enlightens Visiting Radiology Professors
- Hospitals' Ties Increasingly Risky for Radiology Groups
- Path to Clinical Excellence Paved with Ethics, Communication
- Image Gently™ Campaign Urges "Pause and Pulse" in Pediatric Fluoroscopy

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AAWR ANNOUNCES 2010 AWARDS

The American Association for Women Radiologists (AAWR) has announced its 2010 award recipients.

AAWR past-president **Ewa Kuligowska, M.D.**, a professor of radiology at Boston University School of Medicine and a radiologist at Boston Medical Center, received the Marie Sklodowska-Curie Award. Dr. Kuligowska is a contributor to *Radiology* and *RadioGraphics*.

The Lucy Frank Squire Distinguished Resident Award in Diagnostic Radiology was presented to **Hui Jenny Chen, M.D.**, of the David Geffen School of Medicine at the University of California, Los Angeles. **Yuriko Ann Minn, M.D.**, of Stanford University, received the Eleanor Montague Distinguished Resident Award in Radiation Oncology. Dr. Minn is an RSNA 2010 Roentgen Resident/Fellow Award recipient.

The AAWR Research & Education Foundation also presented awards: **Gayatri Joshi, M.D.**, Member-in-Training Award for Outstanding RSNA Presentation in Diagnostic Radiology; **Ann Likhacheva, M.D.**, Outstanding American Society for Radiation Oncology Presentation in Radiation Oncology; **Elizabeth Arleo, M.D.**, Member-in-Training Award for an Outstanding American Roentgen Ray Society Presentation in Diagnostic Radiology; **Elizabeth A. Sadowski, M.D.**, Professional Leadership and **Chi Wan Koo, M.D.**, AAWR Research & Education Foundation Seed Grant.

Letter to the Editor

Collaborative Update of Cardiac CT Criteria

We wanted to point out our disappointment at the omission of the North American Society for Cardiovascular Imaging (NASCI) in the recent announcement on the new appropriate use criteria for cardiac CT ("SCCT Collaborates on Cardiac CT Criteria Update," *RSNA News*, December 2010). Geoffrey D. Rubin, M.D., NASCI president-elect, tirelessly represented our society in this important effort to develop and communicate these latest appropriateness criteria for cardiac CT.

NASCI, founded in 1974, is one of the oldest cardiovascular subspecialty societies. Amongst subspecialty societies, NASCI uniquely strives to promote and support radiologists and radiology leadership in cardiac imaging. In addition to the aforementioned document, NASCI has also co-sponsored the following 2010 expert consensus documents related to cardiac imaging:

- Hundley WG et al. ACCF/ACR/AHA/NASCI/SCMR 2010 expert consensus document on cardiovascular magnetic resonance: a report of the American College of Cardiology Foundation Task Force on Expert Consensus Documents. *Circulation* 2010 Jun 8;121(22):2462-508.
- Mark DB et al. ACCF/ACR/AHA/NASCI/SAIP/SCAI/SCCT 2010 expert consensus document on

coronary computed tomographic angiography: a report of the American College of Cardiology Foundation Task Force on Expert Consensus Documents. *Circulation* 2010 Jun 8;121(22):2509-43.

- Stillman AE et al. Assessment of acute myocardial infarction: current status and recommendations from the North American Society for Cardiovascular Imaging and the European Society of Cardiac Radiology. *Int J Cardiovasc Imaging* 2010 Oct 24.

Respectfully yours,

VINCENT B. HO, M.D., M.B.A.

President, North American Society for Cardiovascular Imaging

PAMELA K. WOODWARD, M.D., F.A.C.R.

Immediate Past-president, North American Society for Cardiovascular Imaging

IHE® USA Incorporated

The Integrating the Healthcare Enterprise project (IHE®) USA announces its independent incorporation. The mission of IHE USA is to drive adoption of standards-based interoperability to improve patient care through innovation, standards profiling, testing, education and collaboration.

The incorporation of IHE USA coincided with the 12th annual IHE North America Connectathon Conference last month. See Page 22 for coverage of the Connectathon and Conference, which highlighted the organizations and leaders driving the adoption of standards-based health IT solutions.



Kenny

McCormick

Palmer

Levine

RANZCR Bestows Honors

The Royal Australian New Zealand College of Radiologists (RANZCR) announced several awards at its recent annual meeting.

The gold medal was awarded to former RANZCR president **Lizbeth Kenny, M.D., FRANZCR**, a senior radiation oncologist at the Royal Brisbane and Women's Hospital, clinical lead, radiology, at Queensland Health and medical director, Cancer Services Central, at Queensland Health. Dr. Kenny was named an RSNA Honorary Member in 2009 and serves on RSNA's International Advisory Committee.

The Roentgen Medal was awarded to **Clement McCormick, M.B.B.Ch.**, and **Frederick (John) Palmer, M.B.Ch.B.** Dr. McCormick is an honorary research fellow in the Department of Anatomy and Human Biology at the University of Western Australia and a visiting consultant radiologist at the Royal Perth Hospital. Retired since 1999, Dr. Palmer is world renowned for his pioneering study of non-ionic and ionic contrast media. Dr. Palmer served as head of the radiology department at Prince Henry and Prince of Wales Hospital for more than 20 years.

Honorary Fellowship was awarded to **Marc S. Levine, M.D.**, chief of gastrointestinal radiology at the Hospital of the University of Pennsylvania and a professor of radiology at the University of Pennsylvania School of Medicine. A former associate editor of *Radiology*, Dr. Levine is a frequent contributor to the journal.

VIP Group Makes Long-term R&E Commitment

Catawba Radiology, a member of the Visionaries in Practice (VIP) program of the RSNA Research & Education Foundation, has pledged to give at the silver (\$25,000) level annually through 2014.

RSNA Board Liaison for Publications and Communications William T. Thorwarth Jr., M.D., is president of Catawba Radiology, a practice of 18 physicians in Hickory, N.C. The practice has supported the VIP program at the silver level since the program's inception in 2005. Dr. Thorwarth served as chair of the VIP subcommittee of the Foundation from 2005 to 2009 and was instrumental in persuading numerous practices from North Carolina to also join.

"Developments directly related to R&E-funded research have provided my practice and yours with new tools (and reimbursable procedures) to allow us to take better care of our patients," Dr. Thorwarth said in a 2007 *RSNA News* My Turn column about the program. "The VIP program enables practices to demonstrate their vision by supporting the professions we are so fortunate to shepherd."

Created in conjunction with the start of the R&E Silver Anniversary Campaign, the VIP program is designed to promote support from private practice groups and academic institutions. Twenty-five VIP groups contributed a total of \$335,000 to the Foundation in 2010. Contributors receive a variety of benefits and recognition depending on their giving level. More information is available at RSNA.org/Foundation/vipgiving.cfm.

Numbers in the News

20

Amount, in billions of dollars, available through the Centers for Medicare & Medicaid Services as incentives for "meaningful use" of health information technology. See Page 13 to learn how radiologists can qualify.

57

Number of member medical societies in the Alliance for Safety in Pediatric Imaging. Read more on Page 11 about "Pause and Pulse," the latest phase of the alliance's Image Gently™ campaign to lower radiation dose in the imaging of children.

5,296

Miles between Chicago and Rio de Janeiro, Brazil, where a team of RSNA International Visiting Professors recently began their visit to the country. Read more about their trip starting on Page 5.

15,801

Record-setting number of radiologists who attended RSNA 2010. Read "Annual Meeting Watch" on Page 18 to learn more about who attended last year's annual meeting and how you can submit an abstract for RSNA 2011.



Thorwarth

RSNA Board of Directors Report

At its meeting during RSNA 2010, the RSNA Board of Directors celebrated the success of the Society's 96th annual meeting while looking ahead to the next annual meeting and other RSNA plans for 2011.

Imaging Biomarkers Reach Next Step

RSNA remains committed to helping radiologists prepare for increasingly quantitative practice. Two biomarkers focused on by the Quantitative Imaging and Biomarkers Alliance, volumetric CT and FDG-PET, are in the early stages of review to be qualified by the U.S. Food and Drug Administration for use in clinical trials. A two-year, \$2.4 million grant from the National Institute of Biomedical Imaging and Bioengineering is supporting RSNA's quantitative imaging efforts, which include a corporate visit program to encourage vendors to incorporate quantitative imaging biomarkers into their equipment and software algorithms.

Education Offerings Grow in Number, Variety

RSNA's education excellence continues to grow as offerings expand. A new, earlier March 31 deadline for submission of abstracts for the annual meeting enables the Scientific Program Committee to work with the Refresher Course Committee to develop more series courses—popular annual meeting offerings that combine education and science in a single session.

Original educational programming accessible throughout the year remains a priority—RSNA volunteers and staff continue to develop targeted online programming such as ethics and physics learning modules.

With regard to Maintenance of Certification, RSNA is working to increase the number of self-assessment modules (SAMs) it offers—a new Content Advisory Panel is studying how existing educational material can be converted into the SAM format. Meanwhile, RSNA's interactive education programming has been enhanced to allow for easier searching by subspecialty area, keyword and other parameters.

Technology Enhances Annual Meeting

The RSNA annual meeting remains the premier event in radiology. More than 58,000 people attended RSNA 2010, up about 2 percent from the year before. Professional registration exceeded 27,200

and international registrants made up about 35 percent of total registration.

Participating in the RSNA 2010 Technical Exhibition were 678 companies, including 108 who exhibited at the RSNA annual meeting for the first time. More than 170 members of the medical news media also attended RSNA 2010. Popular stories included a study that indicated walking slows the progression of Alzheimer disease and another reporting that belly fat puts women at risk for osteoporosis.

Technological innovations unveiled at RSNA 2010 made the meeting more user-friendly. New touch screen "wayfinders" helped attendees find their destinations within McCormick Place—more than 5,800 searches were performed by users looking for educational sessions and 300,000 searches sought the location of specific technical exhibition booths.

Also new at RSNA 2010 was help via text message. The Help Center received almost 100 messages seeking general meeting information, while another 59 messages sought shuttle information. The new RSNA annual meeting mobile site was a popular online destination, with 1,300 logins and 200,000 pageviews during the annual meeting week.

Again looking ahead to RSNA 2011 and its "Celebrate the Image" theme, RSNA is already developing more mobile applications and a "virtual meeting."

Solutions Improve Workflow, Compliance

RSNA continues to provide technological solutions to radiologists' on-the-job challenges. The Integrating the Healthcare Enterprise (IHE) Image Sharing Demonstration was a popular RSNA 2010 destination, with about 700 people stopping by to see the latest developments in this patient-controlled image



Sarah S. Donaldson, M.D.
Chairman, 2011 RSNA Board of Directors

archive poised to one day replace cumbersome, CD-based image storage. IHE, which just marked its independent incorporation (see Page 1), held its 12th annual Connectathon last month (see Page 22) and continues development of a radiation dose monitoring profile.

Meaningful use—those health information technology requirements physicians must fulfill to qualify for federal incentive payments—was an informatics hot topic at the annual meeting. See Page 13 for more on meaningful use and how radiologists are being advised to qualify.

Foundation Celebrates Successful Year

In 2010, the RSNA Research & Education Foundation awarded 70 grants totaling \$2.2 million. Helping achieve the goal were approximately 3,400 Foundation donors, who gave a combined \$2.5 million. The private practices that make up the Foundation's Visionaries in Practices (VIP) program gave \$335,000 last year (see Page 2). Individual members and friends donated more than \$1 million in 2010.

Membership Reaches New Heights

RSNA members now number a record 46,000, approximately double the membership of 20 years ago. About 20 percent are international members, up from just 5 percent in 1990. RSNA has published a list of countries included in its discounted membership dues option at RSNA.org/apply.

SARAH S. DONALDSON, M.D.
CHAIRMAN, 2011 RSNA BOARD OF DIRECTORS

My Turn

The Value of Communication

Without doubt, information technologies have transformed radiology practice. We depend on our RIS for scheduling, billing and management. PACS help us manage the explosion of CT and MR images.

RADIOLOGISTS ADD VALUE BY OBTAINING relevant clinical data, making an informed interpretation and transmitting useful information to the people who need it. Two emerging information technologies—"intelligent" order entry and structured reporting—have potential to improve communication with our referring physician colleagues, and thus improve the value of the services that we provide.

First, order entry. In most practices, referring physicians request an imaging study by writing an order on paper or through their electronic health record system. There's limited opportunity to suggest the most appropriate exam or to obtain important clinical information ("Yes, you wanted a PE CT study, but the patient's kidneys can't handle IV contrast. Can we do a V/Q study instead?").

Computer-based physician order entry systems can garner relevant clinical data and apply evidence-based guidelines (such as the American College of Radiology (ACR) Appropriateness Criteria) to improve safety and quality. These efforts reinforce the notion of radiologists as physicians who provide optimal, evidence-based care for their patients.

The second technology, "structured reporting," addresses our primary work product, the radiology report. Structured reports use consistent language, drawn from lexicons such as RSNA's RadLex® and ACR's BI-RADS® vocabularies. These reports are based on "templates" that can incorporate quantitative imaging information and prompt radiologists for information to help meet practice guidelines. Consistently organized reports are easier

for our referring physician colleagues to read. The report's structure helps information systems extract information for patient care, quality improvement, comparative effectiveness analysis and biomedical research. RSNA's Structured Reporting Subcommittee, chaired by Curtis P. Langlotz, M.D., Ph.D., is actively building the technical and clinical infrastructure to improve radiology reporting.

The evolving technologies for order entry and reporting hold the promise to help radiologists communicate more effectively and deliver better care.

Charles E. Kahn Jr., M.D., M.S., is a professor and chief of the Division of Informatics in the Department of Radiology at the Medical College of Wisconsin in Milwaukee. He serves on RSNA's Radiology Informatics Committee as vice-chair of the Structured Reporting Subcommittee.



To read about RSNA's recent IHE® North America Connectathon Conference 2011 held for users and developers of health IT systems to learn about achieving interoperability and meeting meaningful use requirements, see Technology Forum on Page 22.

To read the story, "Meaningful Use not Entirely Meaningful for Radiologists," see Page 13.

“Radiologists add value by obtaining relevant clinical data, making an informed interpretation and transmitting useful information to the people who need it.”

IN MEMORIAM

Richard E. Buenger, M.D.

1987 RSNA President **Richard E. Buenger, M.D.**, died Dec. 9, 2010 at the age of 88.

A lifelong resident of Winnetka, Ill., Dr. Buenger began his career at Presbyterian Hospital of Chicago (later Rush-Presbyterian-St. Luke's Medical Center) after service in the U.S. Army. Dr. Buenger was chair of the Department of Diagnostic Radiology and Nuclear Medicine for 20 years. He pioneered the clinical application of angiography, led the way in subspecializing radiology at his institution and helped obtain the first CT and MR units in Illinois.

Dr. Buenger also served as president of the Illinois Radiological Society and the Society of Chairs of Academic Radiology Departments. He received the RSNA Gold Medal in 1988.



1987 RSNA President **Richard E. Buenger, M.D.** (left) with 1988 President **Malcolm D. Jones, M.D.**

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Brazil Awe, Enlightens Visiting Radiology Professors

Some might have been daunted at the prospect of working deep in the jungle, but three radiology professors who visited a small clinic at the mouth of the Amazon River in Brazil say the experience was the high point of an already exciting trip to the South American country.

"THE AMAZON WAS huge, awesome, powerful and absolutely fascinating," said Erik K. Paulson, M.D., vice-chair of clinical services and chief of the Abdominal Imaging Division in the Department of Radiology at Duke University Medical Center in Durham, N.C. "We realized that despite the cultural and language differences, the Brazilian radiologists have the same thirst for knowledge and zeal for life that we have."

Dr. Paulson was one of three doctors who traveled to Brazil as part of RSNA's International Visiting Professor (IVP) Program, which annually sends teams of North American professors to lecture at national radiology society meetings and meet with radiology residency training programs at selected host institutions in developing nations. The trip was hosted by the Brazilian College of Radiology and Diagnostic Imaging.

The Amazon excursion was the last stop on the two-week trip devoted to educating Brazilian radiologists and assessing the state of healthcare in a country facing challenges much different than the U.S.

"Infectious diseases such as TB and the waterborne infection schistosomiasis are common in Brazil," Dr. Paulson said. "There's a different spectrum of diseases than we're accustomed to seeing in the U.S."

One-on-One Time is Valuable

The trip began at the Brazilian Congress of Radiology National Meeting in Rio de Janeiro, where each team member gave several lectures. Translators were provided for the Brazilian audience.

"The highlight of our time in Rio was a tour of the city, which included all of its famous sites and was delightful," Dr. Paulson said.

Next, the team traveled to Clinica da Imagem de Goiania in central Brazil, where the physicians presented lectures and case conferences to a group of residents and attending radiologists from the area.

Along with the chance to meet colleagues from other institutions, the experience offered a wonderful opportunity to present MR cases to radiology staff at the clinic, which are not widely available, according to team member Donna Blankenbaker, M.D., an associate professor of musculoskeletal imaging in the Department of Radiology at the University of Wisconsin in Madison.

"The best part was getting to know the residents and spending time on a personal level and discussing radiology training," Dr. Blankenbaker said.

Discrepancy in Care Revealed

The team's tour of government and public hospitals in Goiania revealed a huge discrepancy in the quality of care for the insured versus the non-insured. Staffed primarily by radiology residents, the public hospital was significantly underfunded compared to the private facility, according to team members.

"The private clinics generally have imaging equipment very similar to that in the U.S., while government hospitals have considerably fewer resources," according to team member Robert Hurst, M.D., director of interventional neuroradiology at the Hospital of the University of Pennsylvania in Philadelphia.

For example, there is no public health system for managing chronic disease in Brazil, he said. In terms of radiology, Brazil's public hospitals offer general radiology and limited access to CT scanners but not MR imaging, which is done in private hospitals, Dr. Blankenbaker said.

"The technology offered in private imaging hospitals is great—similar to what we have in the U.S.," Dr. Blankenbaker said. "They are right up to date."

The last stop was Belem, at the mouth of the Amazon River, where the team visited a private imaging clinic, Clinica Lobo, where team members conducted two days of talks for trainees and practicing radiologists and visited Belam's government hospital, assessing the facility's resources.

"We were able to fly over the area around Belem in a small plane piloted by a local radiologist to get an idea of the geography and some of the challenges

“The Brazilians were hungry for our teaching material and were interested in all aspects of American radiology and culture.”

Erik K. Paulson, M.D.

The Brazilian Congress of Radiology National Meeting and a small clinic at the mouth of the Amazon were two stops on the agenda for participants in RSNA's International Visiting Professor (IVP) Program during a two-week trip to Brazil. From left: Erik K. Paulson, M.D., Donna Blankenbaker, M.D., and Robert Hurst, M.D.



involved with providing medical care to areas outside of cities that make up the majority of the country but are quite isolated," Dr. Hurst said.

Cultural, Educational Exchange a Success

Despite the exotic locale, team members agree the highlight of the trip was interacting with radiology residents and attending physicians in Goiania and Belem.

"The Brazilians were hungry for our teaching material and were interested in all aspects of American radiology and culture," Dr. Paulson said. "Likewise, we were very interested in Brazilian practice patterns, expectations and culture. The trip was extremely successful as a cultural and educational exchange."

The programs and lectures were "very well received at each location we visited," according to Dr. Hurst, adding, "I would be happy to return to Brazil or other countries with similar programs."

"I would definitely go back if I ever had the opportunity," Dr. Blankenbaker concurred.

In addition to Brazil, 2010 IVP teams traveled to Mexico, the Philippines and Thailand: In 2011, IVP teams will travel to Lithuania, Malaysia, Myanmar and Mexico. Other recent trips have included Estonia, China, Nigeria and Vietnam. □



2010 IVP team members met with radiology residents during the trip hosted by the Brazilian College of Radiology and Diagnostic Imaging. Team member Erik K. Paulson, M.D. (center) is flanked by a group of radiology residents. Dr. Paulson and team members flew to Belem, at the mouth of the Amazon River, in a small plane piloted by a local radiologist.



Path to Clinical Excellence Paved with Ethics, Communication

The national conversation about using Transportation Security Administration (TSA) scanners in airports should serve as a reminder to radiologists about the responsibility that goes along with everyday access to sensitive, private patient information, presenters of an RSNA 2010 session stressed.

THE TYPICAL AIR TRAVELER'S DECISION whether to be scanned or patted down should also cause radiologists to reflect on their own actions related to patient privacy, said Nabile Safdar, M.D., a presenter of the Associated Sciences session called "Ethical Dilemmas: The Vital Role of Ethics in Clinical Excellence."

"This dialogue reminds radiologists that we have a much more invasive view of our patients and research subjects than TSA screeners do," Dr. Safdar said. "However, the process is obscured, meaning that often the patients don't realize someone has access to their private, sensitive information. We've been privileged over the years to have been entrusted us with that data. It is something we should take seriously."

Hazards Emerge as Technology Evolves

Dr. Safdar is principal investigator of the Bioengineering Initiative at Children's National Medical Center's Sheikh Zayed Institute for Pediatric Surgical Innovation in Washington, D.C. A musculoskeletal radiologist and imaging informaticist, Dr. Safdar participates in the institute's interdisciplinary bioengineering team. The research team's collective experience, he said, has taught them that moral hazards in medicine and radiology evolve as technology changes.

Dr. Safdar cited the work of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research done in the mid 1970s, which led to the Department of Health and Human Services (HHS) revising and expanding its regulations for the protection of human subjects.

Issued in 1978 as "Ethical Principles and Guidelines for the Protection of Human Subjects of Research," the HHS report offered three guiding principles, Dr. Safdar said. "Researchers must respect patients' autonomy and maintain the principles of beneficence and justice," he said.

For example, these principles come into play when obtaining informed patient consent, Dr. Safdar said. "Informed consent is not the signature at the bottom of the page which allows you to do research or allows you to do a procedure. Informed consent is a conversation, at a level a patient can understand, about risks and benefits to make sure people are truly aware of what it means to be



Radiologists need to be mindful of privacy guidelines and norms related to access to patient medical information, said Nabile Safdar, M.D., (left) during his RSNA 2010 presentation. Expanding on a similar message at a separate session, presenters (above, from left) Richard Gunderman, M.D., Ph.D., Constance Lehman, M.D., Ph.D., and Joseph Tashjian, M.D., stressed that radiologists may also need to develop skills in delivering difficult information directly to patients and their families.



involved in that research or to undergo a procedure."

Even in a retrospective study involving case review, physicians need to be mindful of privacy guidelines and norms related to access to patient medical information, Dr. Safdar said. With mounting economic pressures to attract and keep research dollars, he added, ethical dilemmas can arise in the areas of fabrication, falsification and plagiarism.

"You would think that people wouldn't even approach fabricating or falsifying data but there are some subtleties and certainly people in radiology research and the larger scientific community have done these things," he said. "There's a lot of pressure for researchers to produce, and that can lead to things like self-plagiarism where researchers use the same material over and over."

Prepare to Deliver Difficult News

Along with sensitivity to privacy, radiologists may also need to develop skills in another delicate area of patient care: delivering difficult information directly to patients and their families.

Radiologists who are becoming increasingly visible in the healthcare process could find themselves in the situation of delivering cancer diagnoses to patients and their families, said Richard Gunderman, M.D., Ph.D., during the RSNA 2010 refresher course, "Difficult Conversations in Medicine: Practical Tips to Enhance Your Practice." The course was sponsored by the RSNA Professionalism Committee.

"Some would say radiologists should just keep their noses to the grindstone and avoid interacting with patients," said Dr. Gunderman, vice-chair of radiology at Indiana University-Purdue University Indianapolis.

"I count myself in the other group of people who think the future of radiology probably will involve more interaction with patients. Radiologists may become important patient educators."

Radiologists can prepare by rehearsing what to say when delivering unwanted news, Dr. Gunderman said. At the meeting, physicians should: introduce themselves to the patient; help the patient understand the role a radiologist plays in their healthcare; notify the patient of what was discovered through the imaging process; and explain the next steps.

RSNA's Patient-centered Radiology courses and campaigns such as the American College of Radiology's "Face of Radiology" have created momentum toward bringing radiologists into more frequent contact with patients and other professionals. "Radiologists have been in the shadows for a long time. Now we're acknowledging our responsibilities

to patients are no different from those of any other physician," said Stephen Brown, M.D., an assistant professor of radiology at Harvard Medical School. "If it's in the best interest to communicate something directly to the patient, that's what radiologists should be doing."

That includes addressing medical errors directly with the patient, Dr. Brown stressed.

The ethics of such disclosures were addressed by Constance Lehman, M.D., Ph.D., a professor and vice-chair of the Department of Radiology at the University of Washington School of Medicine and director of imaging at the Seattle Cancer Care Alliance. "Patients need truthful and accurate information," she said. "They also need a sincere apology when an error has been made."

Avoid Bad Workplace Situations

Other so-called "difficult conversations" can crop up between colleagues or partners, and effective communication can help radiologists avoid inadvertent adverse workplace situations, said Joseph Tashjian, M.D., past-president of St. Paul Radiology in St. Paul, Minn.

One example was of a radiologist buying a pastry for a certain technologist every morning in an attempt to be friendly and collaborative. Unexpected consequences resulted from the action, including speculation among colleagues that the two were having an affair.

Other types of potentially challenging conversations that can occur with colleagues include informing a co-worker about a mistake, admitting to a mistake you made yourself or challenging the judgment of a requested exam or procedure you feel is inappropriate, said Donald Bachman, M.D., director of Women's Imaging at MetroWest Medical Center in Framingham, Mass.

"You are placing your career on the line," Dr. Bachman said. "Sometimes you believe you are right and if, for whatever reason, it turns out you are wrong, then you're going to feel foolish. Your emotions get in the way."

Keep communication professional, even in uncomfortable situations, by controlling your temper and taking time to compose proper responses, he said. □

Note: This article was adapted from stories that appeared in the RSNA 2010 Daily Bulletin. Newspapers from the annual meeting are available online at RSNA.org/bulletin.

“Radiologists have been in the shadows for a long time. Now we’re acknowledging our responsibilities to patients are no different from those of any other physician.”

Stephen Brown, M.D.

Hospitals' Ties Increasingly Risky for Radiology Groups

It was one of the most enduring partnerships in radiology—for more than 80 years, Radiological Associates of Sacramento (RAS) provided radiology services to Sutter Health, a large network of hospitals and physicians in northern California.

BUT THE PARTNERSHIP ended abruptly on April 1, 2010, when Sutter officials chose to let their contract with RAS expire. Despite a unanimous vote of confidence from the medical staff at Sutter Roseville Medical Center, RAS was replaced by the hospital's newly formed radiology group along with a teleradiology firm hired to pick up the slack.

"This was an issue of control," said Fred Gaschen, M.B.A., executive vice-president of RAS. "The physicians were very happy with our work, but the administration was trying to tell us how to staff a clinic. Eventually, they got tired of negotiating with us."

The decision was based not on control but on improved integration of medical care, according to Patrick D. Browning, M.D., chief of the division of medical imaging for the Sutter Medical Group.

"RAS and Sutter had different PACS, and transferring images either way could be very problematic," said Dr. Browning, who was not involved in Sutter's decision to end its contract with RAS. "I don't feel controlled at all by Sutter. The idea here is to take imaging into the next millennium by integrating care for patients."

The breakup is just one notable example of the changing dynamic between community-based radiology groups and hospitals. Other groups, including Florida Radiology Associates and Consulting Radiologists Corporation, have also seen longstanding relationships come to an end as hospitals opt to form their own radiology groups and/or contract with teleradiology companies.

"Radiologists don't have the same security and stability that they had in the past," said Cynthia S. Sherry, M.D., chair of the Radiology Department at Presbyterian Hospital in Dallas, who also served on the American College of Radiology's (ACR) Task Force on Relationships Between Radiology Groups and Hospitals and Other Healthcare Organizations. "Some radiology groups are finding out the hard way that it's easier than ever before for a hospital to replace them."

Teleradiology "Snuck in the Back Door"

Community-based radiology groups sprang up within a decade of the 1895 discovery of X-rays and became fixtures in hospitals across the U.S. and Canada during the 20th century.

The new millennium ushered in a teleradiology boom that, along with increased imaging volume

and lower reimbursements, dramatically changed the practice of radiology. In 2001, Nighthawk Radiology began offering teleradiology services from Australia to cover night shifts at U.S. facilities. New companies like Radisphere and Imaging Advantage added onsite radiologists to their teleradiology services and hospitals began taking them up on their offers of lower costs and around-the-clock access to subspecialists.

"At times, radiologists were their own worst enemies," said Steven R. Renard, president and CEO of Diagnostic Radiology and Oncology Services, a consulting firm based in Roseville, Calif. "When older members of the group didn't want to handle night calls or emergency room cases, teleradiology snuck in the back door. Some hospitals liked the change. Fast-forward five to 10 years later and you see hospitals looking at teleradiology as a way to pare down expenses."

Proactivity Equals Protection

This trend has hardly gone unnoticed among leaders in the radiology community. Based on her work with the ACR task force, Dr. Sherry recommends that radiology groups be proactive in order to protect their position in the hospital. (See sidebar)

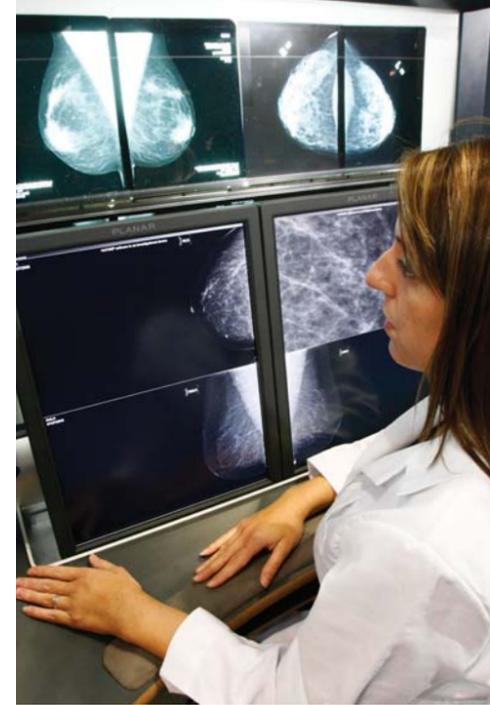
"The most important thing we must do is increase our understanding of the situation," she said. "Radiology education poorly equips radiolo-

“Some radiology groups are finding out the hard way that it's easier than ever before for a hospital to replace them.”

Cynthia S. Sherry, M.D.



Cynthia S. Sherry, M.D.



Community-based radiology groups have seen longstanding relationships come to an end as hospitals opt to form their own radiology groups and/or contract with teleradiology companies.

"Radiology groups are going to have to think outside the box," he said. "The ones that have been successful acknowledge that they are a commodity and can be sold down the river at any time. They have to constantly prove themselves. The days of sitting back and letting hospitals develop ideas are over."

Personal Interaction Still Unbeatable

While there are anecdotal reports of substandard care from radiology services companies, the long-term effects on patient care remain to be seen. But as Dr. Sherry points out, teleradiology services and locum tenens radiologists are no substitute for the interaction between radiologists and referring physicians for the benefit of patients in a hospital setting.

"Say a person shows up at the hospital with right lower quadrant pain and we need to know if this is appendicitis or not, or if it's a perforation or an abscess," she said. "In this situation, it is really valuable when the surgeon can talk with the radiologist he or she is used to working with and has confidence in."

Patient care, along with all the other services onsite radiologists provide—from tailoring exams for specific patients to providing input on expensive equipment purchases—make Dr. Sherry and others in the field confident that reports on the demise of community-based radiology groups are greatly exaggerated.

"I'm an optimist and I think the pendulum is swinging back toward radiology groups," she said. "Radiologists have gotten wiser and are improving the level of service they provide and hospitals have a growing appreciation of the value added by radiologists." □

gists to run a practice. We need more leadership training to interact with hospitals and administrators and weave ourselves into the social and political environments of a hospital."

This process will require a concerted effort from radiologists who have a tendency to spend their workdays interpreting images and reading reports in their offices, according to Dr. Sherry.

"Radiologists do a good job of spreading work out evenly within their groups, but they need to make time to allow their group members to go to meetings, be on medical staff committees and just mingle and build rapport with the other hospital staff," she advised.

Besides making an effort to interact, Dr. Sherry said that radiology groups should strive to improve their level of service wherever possible, including in terms of report turnaround time and the number of hours onsite in a department.

Renard suggests that radiology groups make themselves more indispensable by ending their contracts with teleradiology groups and enabling their own teleradiology capabilities. He also recommends that groups make exclusive arrangements with hospitals for night calls and generate extra money for the hospital through outpatient services and women's imaging.

LEARN MORE

The American College of Radiology's (ACR) Task Force on Relationships Between Radiology Groups and Hospitals and Other Healthcare Organizations has proposed several steps that can help improve relationships between radiologists and the healthcare systems they service. Among the initiatives radiologists should consider:

- Being responsive to the legitimate service needs of referring physicians and their patients.
- Striving to see hospitals' perspectives and to deeply understand the needs of hospitals and clinicians.
- Integrating themselves into the medical, political and social structures of their hospitals and communities

To read an abstract of the article by Cynthia S. Sherry, M.D., and colleagues, in the June 2010 issue of the *Journal of the American College of Radiology*, go to [www.jacr.org/article/S1546-1440\(10\)00092-X/abstract](http://www.jacr.org/article/S1546-1440(10)00092-X/abstract)

Image Gently™ Campaign Advises “Pause and Pulse” in Pediatric Fluoroscopy

The Alliance for Radiation Safety in Pediatric Imaging has launched the fourth phase of the Image Gently™ campaign. “Pause and Pulse” focuses on diagnostic procedures that use fluoroscopy.

“The Pause and Pulse Campaign reminds medical professionals to pause—for careful planning and preparation before starting the study—and to pulse at the lowest possible frame rate, which also means using dose-saving features whenever possible, such as last-image hold, instead of taking radiographic exposures,” said Marta Hernanz-Schulman, M.D., a professor of radiology and pediatrics at Vanderbilt University Medical Center and chair of the fluoroscopy campaign. Dr. Hernanz-Schulman is a member of the Pediatric Radiology Subcommittee of the RSNA Scientific Program Committee.

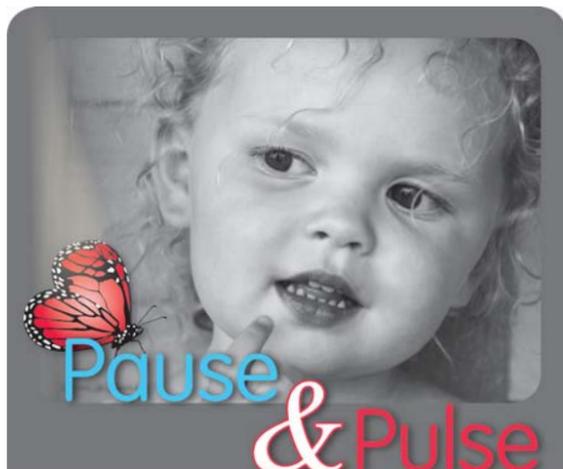
The availability of endoscopy and CT has reduced the number of fluoroscopic procedures, but fluoroscopy sometimes provides the only noninvasive method of making a diagnosis or monitoring treatment. The international push to lower radiation dose has spurred tremendous innovation, Dr. Hernanz-Schulman said, with the latest equipment often achieving significant reductions in dose while maintaining—and sometimes significantly improving—image quality.

“Pulsing the X-ray is one of the greatest dose-saving measures in fluoroscopy and is especially important to children with smaller bodies and greater vulnerability to radiation,” Dr. Hernanz-Schulman said. “But even before this, radiologists need to pause and make sure the study is indicated for the clinical problem. As with any test, there should be clear reasons to request fluoroscopy. In some situations ultrasound, or occasionally MR, could provide similar information without exposing a child to radiation.”

Understanding Goals, Limiting Study Time are Among Suggested Techniques

Campaign leaders suggest numerous techniques radiologists can use to significantly decrease the amount of radiation to which children are exposed, while still allowing diagnostic-quality images:

- Have a clear initial understanding of the patient’s medical problems and goals of the study
- Limit fluoroscopic time in general and use of magnification mode in particular
- Carefully collimate to the area of interest and use appropriate shielding
- Match tube output (kVp and mAs) to the size of the child
- Utilize pulsed digital fluoroscopic equipment with adjustable frame speeds as well as last image hold and capture capability



www.imagegently.org

Image Gently representatives note that for referring physicians and parents, the key is ensuring that a qualified, experienced and credentialed medical team is performing the fluoroscopic examination with equipment suitable to children:

- Is the facility accredited by the American College of Radiology?
- Are the technologists certified?
- How frequently does the facility perform the requested fluoroscopic study in children?
- Is a board-certified radiologist with pediatric experience or a pediatric radiologist performing and interpreting the study?

“Pulsing the X-ray is one of the greatest dose-saving measures in fluoroscopy and is especially important to children with smaller bodies and greater vulnerability to radiation.”

Marta Hernanz-Schulman, M.D.

Physicist, Technologist also Key to Reduction Success

A medical physicist, having a background in physical sciences as applied to medicine, is uniquely positioned to help optimize the fluoroscopic procedure, including radiation safety, said Ishtiaq Hussain Bercha, M.Sc., lead medical physicist on the fluoroscopy phase of Image Gently and a medical physicist at The Children’s Hospital in Aurora, Colo.

“The bottom line is that the physicist should work very closely with all of the professionals involved,” Dr. Bercha said. What must also be considered, he said, is potential radiation exposure to the fluoroscopist and other personnel, such as those who assist when child is being immobilized and positioned for a procedure.

The radiologic technologist also has a key role in the team effort to reduce dose, said Greg Morrison, M.A., RT(R), CNMT, CAE, chief operating officer of the American Society of Radiologic Technologists (ASRT) and a member of the alli-

ance steering committee. “Acquiring an optimal pediatric fluoroscopic exam with minimal radiation dose to the patient must be a coordinated effort between the radiologist, physicist and the radiologic technologist,” he said.

Since its inception three years ago, the Alliance for Safety in Pediatric Imaging has grown into an international coalition of 57 member medical societies. In previous campaign phases, Image Gently reached out to radiologists, referring physicians, medical physicists, radiologic technologists, and parents, to spotlight benefits and potential risks related to medical imaging in CT (January 2007) and interventional radiology (August 2009), and to promote medical literacy among parents (January 2008). □

LEARN MORE
More information is available at www.imagegently.org.



The Image Gently website offers additional information and resources for pediatric radiologists.

DOSE REDUCTION IN PEDIATRIC CARDIAC CT PRESENTED AT RSNA 2010

Organ doses lower than 1 mSv are possible for high-pitch, dual-source cardiac CT in pediatric patients without compromising the image quality, according to research presented during the last RSNA annual meeting.

Researchers at the Radiological Institute at the University Hospital of Erlangen in Germany investigated the dose and image quality of pediatric cardiac protocols by varying the tube voltage and pitch factor. Using pediatric phantoms and a 3D dose calculation software tool, researchers attempted to determine organ and effective dose for children who were 0, 1, 5, 10, and 15 years old.

“The aim of our work was to provide a fundamental study on the effective dose assessment and optimization in pediatric cardiac examinations,” said lead author Yulia Smal, M.Sc. “By evaluating dose dependence on pitch and

tube voltage factors for different pediatric cardiac examinations we tried to find the optimal combination of these parameters. We performed an image quality evaluation and calculation of the effective dose values and proposed a figure of merit for overall performance measured by contrast-to-noise ratio per effective dose.”

For each age group, researchers observed a reduction in effective dose of up to 92 percent when increasing the pitch factor from 0.17 to 3.4 for constant voltage. Researchers also found that for all age groups, effective dose increased by up to a factor of 5 with the increase of tube voltage from 80 kV to 140 kV for constant pitch, and that doses decreased with increasing child age.

Smal presented results showing that scanning with 100 kV and a pitch of 0.22 resulted in effective dose of

7.7 and 3.0 mSv for neonates and 15-year-olds, respectively; doses in lung, heart and breast (females only) were equivalent to 24.4, 25.7, and 22.8 mGy, respectively, for neonates, and 10.5, 13.8, and 10.0 mGy, respectively, for 15-year-olds.

While improved technology allows multislice CT to provide noninvasive heart studies in a single breath-hold, physicians must not lose sight of the drawbacks, Smal said. “Patient sedation and administration of beta-blockers may become a thing of the past,” she said. “Nevertheless, the improved diagnostic capabilities have resulted in an increasing number of CT examinations both in adults and children.

Knowing dose ranges in pediatric cardiac examinations is critical and in keeping with efforts such as the Image Gently campaign, Smal said.

“With modern technology we can work at low



Knowing dose ranges in pediatric cardiac examinations is critical and in keeping with efforts such as the Image Gently campaign, said lead author Yulia Smal, M.Sc., who presented her research during an RSNA 2010 session.

doses even in traditionally ‘high dose’ examinations,” she said. “By varying a few parameters to reduce radiation dose, a radiologist shows that she or he really cares about a patient.”

Meaningful Use not Entirely Meaningful for Radiology

While the vast majority of radiologists are eligible for federal “meaningful use” incentives for adopting health information technology (HIT), organized radiology contends the provisions are not directed at the specialty and is urging federal agencies to revisit the recommendations.

MORE THAN 90 percent of all radiologists are considered eligible for the more than \$20 billion in health information technology (HIT) incentives up for grabs under the meaningful use policy issued by Centers for Medicare & Medicaid Services (CMS) as part of the 2009 American Reinvestment and Recovery Act. Registration for meaningful use got under way Jan. 3 in the first of a three-phase rollout of the program.

However, radiologists have “a big hill to climb” in qualifying for incentives under the current rules, according to Keith Dreyer, D.O., Ph.D., vice-chair of radiology for informatics at Massachusetts General Hospital and an associate professor of radiology at Harvard Medical School in Boston.

Meaningful use provisions are geared primarily toward primary care physicians, according to Dr. Dreyer, a member of RSNA’s RadLex® Steering Committee and chair of the American College of Radiology (ACR) IT and Informatics Committee-Government Relations Subcommittee. Since the program’s inception in 2009—and most recently in January—ACR has urged the Office of National Coordinator for (ONC) HIT Policy Subcommittee to revisit the meaningful use vision for radiology.

“Because the first phase of the provision does not apply to radiology in any meaningful way, we requested a number of changes that we hope will redirect the focus of meaningful use as it applies to the daily practice of radiology,” Dr. Dreyer said.

For example, under Phase 1, which requires physicians to have a certified electronic health record (EHR) that meets federal eligibility requirements, criteria include meeting the 15 “core” measures, five of 10 “menu” measures and six of 44 “quality” measures, each with specific objectives. Even though radiologists may be excluded from a number of these measures, they are still required to possess certified EHR technology that meets all 25 meaningful use objectives—even those from which they’re excluded.

“Why buy IT-based equipment you are not going to use?” Dr. Dreyer asked. “Practitioners should be allowed to only purchase certified technology for the measures they are not excluded from. That is one of the issues that several specialties, including radiology, are pushing hardest on.”

Criteria Present Obstacle to Funding

The money at stake is not insignificant. Qualifying physicians who meet the requirements stand to receive



Keith Dreyer, D.O., Ph.D. (clockwise from top left), David Mendelson, M.D., Ramin Khorasani, M.D.



LISTEN IN

Dreyer Discusses Meaningful Use Requirements

In an interview with *RSNA News*, Keith Dreyer, D.O., Ph.D., discusses meaningful use requirements, the impact on radiology, working with vendors, potential revisions to the rules and the timeline for participation in the program. Go to www.rsna.org.

“While the law did not exclude radiologists, it turns out that these measures are not necessarily friendly to radiologists.”

David Mendelson, M.D.

as much as \$44,000 in incentive package dollars. Panelists at the RSNA 2010 informatics session, “Healthcare Reform Through Meaningful Use of Healthcare IT: Implications for Radiologists,” also spoke of how radiologists are at something of a disadvantage in terms of meeting criteria required to receive that funding.

“While the law did not exclude radiologists, it turns out that these measures are not necessarily friendly to radiologists,” said presenter David Mendelson, M.D., a professor of radiology and director of radiology information systems at Mount Sinai Medical Center in New York City. “They are not really directly relevant to the things we do on a daily basis.”

“It is highly unlikely this money will go into the pockets of individual radiologists,” said presenter Ramin Khorasani, M.D., director, information management systems at Brigham and Women’s Hospital. “How the dollars will be spent is going to be very much determined by your employer. You may need to spend those dollars to meet the meaningful use requirements.”

EHRs are one example of where radiologists face more of a challenge in meeting the criteria, Dr. Mendelson said. “The traditional electronic medical record systems that are going to get certified for the internists and the surgeons are different than the systems we use, which are RIS and PACS generally,” he said. “You have to have a certified system to qualify.”

Radiologists should be working with vendors to get their current systems certified or to purchase new IT equipment that meets federal standards, Dr. Dreyer said. Products that don’t meet certification criteria can be submitted on a modular basis, he added. “Any IT technology can be submitted for certification,” Dr. Dreyer added.

Another clause in the law states that hospital-based physicians do not qualify for the incentives, which could exclude many radiologists working at academic centers. Place of service billing codes are essential in determining whether or not a physician is considered hospital-based—if 90 percent of a physician’s work is coded with 21 (inpatient) or 23 (emergency room), that physician is considered hospital-based.

This formula has interesting ramifications for radiologists, Dr. Mendelson said. “In many academic centers, interpretations are made in both inpatient and ambulatory settings,” he said. “The key is to make sure you’ve documented that correctly, because if you fall below that 90 percent cutoff, you may qualify for the stimulus money.”

Radiologists should also be aware of which criteria they are not expected to meet, Dr. Mendelson said. For example, a



Panelists at an RSNA 2010 informatics session addressed the ways in which radiologists are at a disadvantage in terms of meeting criteria required to receive meaningful use funding. One solution, they said, is working with vendors to get their current information systems certified or to purchase new equipment that meets federal standards.

measure in the law calls for electronically prescribing at least 40 percent of the prescriptions written. The requirement does not apply, however, to physicians who write fewer than 100 prescriptions per year.

“Most radiologists will not be writing 100 prescriptions per year,” Dr. Mendelson said. “So there’s a measure we might be able to exclude.”

Phases Increasingly Complex

While the details are still being worked out, Dr. Dreyer cautions that Phases 2 and 3, set to begin in 2013 and 2015 respectively, will add more requirements to the progressively challenging program.

Although it is technically a voluntary program, noncompliance in 2015 and beyond will result in payment reductions for those who are eligible, Dr. Dreyer said.

“We are hoping to be able to include more radiology-related measures by the time they release rules for Phase 2,” Dr. Dreyer said. “And there could be more phases added after Phase 3. This is not going to go away.”

On the bright side, radiology’s early involvement in HIT puts the specialty at something of an advantage over those physicians just beginning to implement the process.

“Radiologists have historically been at the forefront of HIT,” said RSNA 2010 presenter David Avrin, M.D., Ph.D., vice-chair of informatics in the Department of Radiology at the University of California, San Francisco. “We are the solution, not the problem.” □

WEBSITES HELP DECIPHER MEANINGFUL USE

Meaningful Use for Radiologists (radiologyMU.org) is an online tool that provides objective information about meaningful use criteria and quality measures as they relate to medical imaging. Features include Meaningful Use Practice Analyzers to help determine eligibility, practice-specific technical requirements and provide a better understanding of the financial impact of the incentive programs on an individual practice.

Other websites offering meaningful use information include:

- Centers for Medicare & Medicaid Services (www.cms.gov/EHRIncentivePrograms)
- Office of the National Coordinator for Health Information Technology (www.healthit.hhs.gov)
- American College of Radiology (www.acr.org)

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See Technology Forum on Page 22.

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Clement J. Grassi, M.D.

Valerie T. Greco-Hunt, M.D.

Jeffrey J. Greenberg, M.D.

Mark Greenberg, M.D.

Lyn R. & Stephen M. Greenberg, M.D.

Dietrich H. Groenemeyer, M.D.

Pawel P. Gruca, D.O.

Susan & Adam R. Guttentag, M.D.

Cynthia W. Hanemann, M.D.

Christopher J. Hanrahan, M.D., Ph.D.

Rachel F. Gerson, M.D. & Brett Hanscom

Katherine & Jonathan M. Hard, M.D.

Mary & Donald P. Harrington, M.D.

Julia & Robert D. Harris, M.D.

Anita E. Hawkins, M.D.

Karen & Douglas Heintzelman, M.D.

Jorge Herrera Cantillo, M.D.

In memory of Dr. Jorge L. LL. Herrera

Stanley M. Hicks, M.D.

Samuel Hill IV, M.D.

William V. Hindle Jr., M.D.

Nicole M. Hindman, M.D.

Thomas M. Hoess, M.D.

Christopher K. Hoffman, M.D.

Mary S. Hollister, M.D. & Mark C. Hollister, M.D.

Charlene A. Sennett, M.D. & H.R. Holmes

Ryan M. Holthaus, M.D.

Harold O. Horsfall, M.B.B.S.

Abi Raymer & Brooks A. Horsley, M.D.

Brian A. Howard, M.D.

Minho Huang

Kathleen T. Hudson, M.D.

Laurie & Joe M. Hulsey, M.D.

Chien-Fu Hung, M.D.

Kim Hwang, M.D.

Yutaka Imai, M.D.

Nichole K. & Jerrell L. Ingalls, M.D.

David J. Ingle, D.O.

Valorie L. & Christopher A. Jackson, M.D.

Edward F. Jackson, Ph.D.

Nina & Shrinivas B. Desai, M.D.

Mary Ellen Jafari, M.S.

Elisabeth & Jarl A. Jakobsen, M.D., Ph.D.

Sharada Jayagopal, M.D. & Salem G. Jayagopal, M.D.

Pamela G. & James S. Jelinek, M.D.

Mohammad I. Jilani, M.D.

Michael J. Johnson, M.D.

Janet L. & Raleigh F. Johnson III, M.D.

J. Daniel Jones, M.D.

Debra Lueck-Justin & Eric P. Justin, M.D., M.P.H.

Daniel P. Justus, M.D.

Brian T. Kaineg, M.D.

Rachel & Shalom Kalnicki, M.D.

Vidya Kamath, M.D. & Suren Kamath

Surabhi Bajpai, M.B.B.S., D.M.R.D. & Avinash R. Kambadakone, M.D.

Shotaro Kanao, M.D.

Teresa J. Karcnik, M.D.

Laura & Monty P. Karoll, M.D.

Haruko & Toru Kashiwagi, M.D., Ph.D.

Leena M. Ketonen, M.D., Ph.D.

Pawandeep Khanna, M.B.B.S.

Nathalie Boileau, M.D. & Ramin Khorasani, M.D.

Anne C. Kim, M.D.

Donald L. Klippenstein, M.D.

Karel P. Kocandrl, M.D.

Nadine Koff, M.D. & David A. Koff, M.D.

Kenneth J. Kolbeck, M.D., Ph.D.

Srinivas Kolla, M.D.

Suzanne Freitag & Philip D. Kousoubris, M.D.

Alexander M. Kowal, M.D.

Judy & Mark J. Kransdorf, M.D.

Reinhard Kubale, M.D., Ph.D.

Andreea & Gregory B. Kugel, M.D.

Laraine & Stanley D. Kurisko, M.D.

Shinko & Masatomo Kuwabara, M.D.

Journal Highlights

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

Principles of and Advances in Percutaneous Ablation

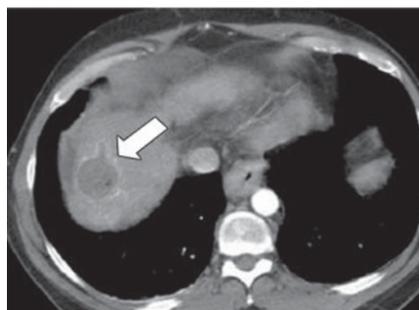
INCREASING INTEREST in tumor ablation has been accompanied by advances in energy delivery, application technique and therapeutic combinations with the intent to improve the efficacy and/or specificity of ablative therapies.

Radiology

In an article in the February issue of *Radiology* (RSNA.org/Radiology), Muneeb Ahmed, M.D., of Beth Israel Deaconess Medical Center and Harvard Medical School in Boston, and colleagues provide a conceptual framework for the broad basic principles and underlying rationale that govern focal tumor therapies and percutaneous oncologic intervention.

Specifically, the authors discuss methods such as chemical ablation, cryoablation, high temperature ablation (radiofrequency, microwave, laser and ultrasound) and irreversible electroporation and detail advances in techniques including combination therapies, tissue property modulation and the role of computer modeling for treatment optimization.

This article meets the criteria for 1.0 AMA PRA Category 1 Credit™. CME is available online only.



CT image obtained three months after ethanol instillation shows focal tumor necrosis with minimal peripheral enhancement (arrow). (*Radiology* 2011;258;2:351-369) ©RSNA, 2011. All rights reserved. Printed with permission.

The authors also outline future goals in percutaneous tumor ablation.

“Ablative technologies that are in development have the potential to improve upon current therapies by improving treatment of perivascular tumor tissue and reducing heat-related injuries (i.e., irreversible electroporation) or making ablative procedures even less invasive (i.e., high-intensity focused ultrasound),” the authors conclude.

FOLLOW RSNA JOURNALS ON SOCIAL MEDIA

Be among the first to know about upcoming content and new features in *Radiology* and *RadioGraphics* by following them on Twitter:

Facebook:

facebook.com/
Radiology-RSNA-Journal and
facebook.com/Radiographics

Twitter:

radiology_rsna and radiographics

Imaging of Cancer Predisposition Syndromes in Children

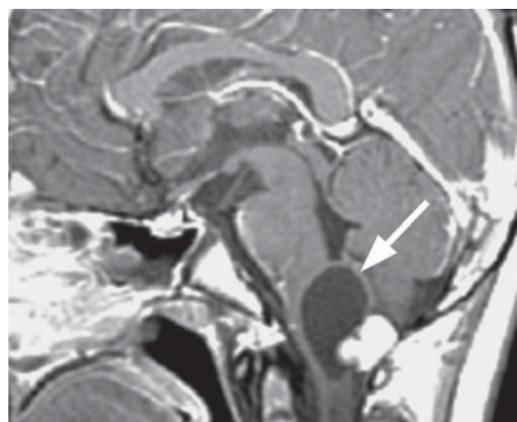
ADVANCES IN GENETICS and the development of new imaging techniques have led to better understanding and early detection of cancer predisposition syndromes (CPSs) and offer the potential for preclinical diagnosis of any associated tumors. As a result, imaging has become an essential component of the clinical approach to CPSs and the care of children suspected of having such a syndrome or with a confirmed diagnosis.

In an article in the January-February issue of *RadioGraphics* (RSNA.org/RadioGraphics), Johanna Monsalve, M.D., and colleagues at the Hospital for Sick Children and University of Toronto in Ontario, present the most common CPSs of childhood with emphasis on genetics, specific clinical scenarios, new imaging techniques and current recommendations for screening and surveillance.

- Specifically, the authors discuss:
- Neurofibromatosis type 1
 - Beckwith-Wiedemann syndrome
 - Multiple endocrine neoplasia
 - Li-Fraumeni syndrome
 - von Hippel-Lindau syndrome
 - Familial adenomatous polyposis

“Radiologists should be familiar with these syndromes, their common associated tumors, the new imaging techniques that are available, and current screening and surveillance recommendations to optimize the assessment of affected children,” the authors conclude.

This article meets the criteria for 1.0 AMA PRA Category 1 Credit™. CME is available online and in print.



Von Hippel-Lindau syndrome in an 11-year-old girl with vision loss. Funduscopy revealed a lesion in the left optic nerve. Sagittal gadolinium-enhanced T1-weighted MR image shows a cystic lesion (arrow) with an enhancing mural nodule in the dorsal aspect of the medulla oblongata, a finding consistent with a hemangioblastoma. (*RadioGraphics* 2011;30;2:263-280) ©RSNA, 2011. All rights reserved. Printed with permission.

Radiology in Public Focus

FEBRUARY PUBLIC INFORMATION ACTIVITIES FOCUS ON HEART HEALTH

In February, RSNA distributed the “60-Second Checkup” audio program to nearly 100 radio stations across the U.S. The segments focused on the use of CT to diagnose and predict the course of cardiac disease.

Media Coverage of RSNA

In December 2010, media outlets carried 1,426 RSNA-related news stories reaching an estimated 979 million people.

December print coverage included *The New York Times*, *TIME*, *Los Angeles Times*, *Chicago Tribune*, *Newsday*, *Orlando Sentinel*, *South Florida Sun-Sentinel*, *Pittsburgh Post-Gazette*, *San Jose Mercury News*, *Cincinnati Enquirer*, *Plain Dealer*, *Baltimore Sun*, *Houston Chronicle*, *Detroit Free Press*, *The New York Times Magazine*, *Modern Healthcare*, *Daily Mail* (London), *Daily Telegraph* (London), *The Herald* (Glasgow), *The Globe and Mail* (Toronto), *Montreal Gazette*, *Vancouver Sun* and *Edmonton Journal*.

Broadcast coverage included *Today*, *The Dr. Oz Show*, CNN, CNN Headline News, BBC World, BBC America, NPR, CBS Radio Network, USA Radio Network, WABC-TV (New York), KABC-TV (Los Angeles), New England Cable News, WLS-TV (Chicago), WGN-TV (Chicago), WMAQ-TV (Chicago), WBBM-TV (Chicago), WFLD-TV (Chicago), WCVB-TV (Boston) and WPVI-TV (Philadelphia).

Online coverage included Yahoo! News, Google News, MSN Health, AOL Health, *The Wall Street Journal* – Online Edition, *NYTimes.com*, *LATimes.com*, *WashingtonPost.com*, *Newsday.com*, *ChicagoTribune.com*, *MiamiHerald.com*, *MSNBC.com*, ABC News Online, *Businessweek.com*, *Forbes.com*, *TIME.com*, *USNews.com*, *Huffingtonpost.com* and WebMD.

Annual Meeting Watch

News about RSNA 2011

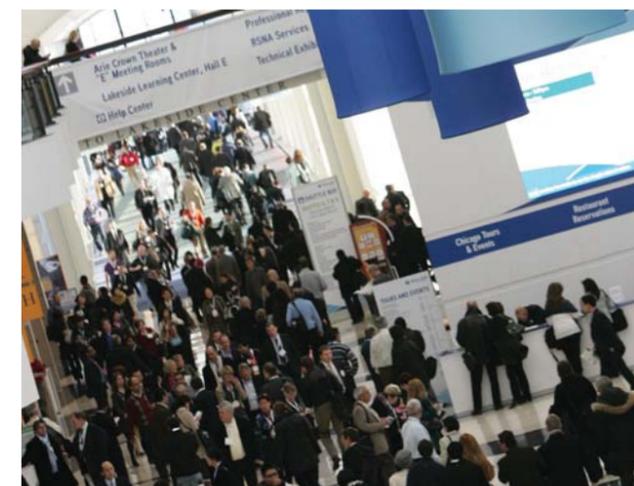
Submit RSNA 2011 Abstracts Now; Deadline Moved to March

The online system to submit abstracts for RSNA 2011 is now active. 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.

Receiving abstract submissions earlier will allow the RSNA Scientific Program Committee to work with the Refresher Course Committee to build more Series Courses. These courses, which have continued to grow in popularity since being introduced several years ago, combine education and research on related topics. Series course participants gain immediately useful, “take home” knowledge while also getting a sense of what’s on the horizon in a particular area.

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.



RSNA 2010 Attendance Stays Strong

Despite a sluggish economy, attendance at RSNA 2010 remained very strong, even setting a new record for the number of radiologists in attendance.

Member attendance was 11,465, a 2 percent increase over 2009, while 15,801 radiologists at the meeting set an all-time record for the number of radiologists attending. The overall attendance of 58,044 marked a 2 percent increase over the 2009 annual meeting.

Annual Meeting Watch

Media Coverage of RSNA 2010

RSNA 2010 Media Coverage Summary as of 1/20/2011

Research showing the effectiveness of CT in uncovering drug mule payloads and that belly fat puts women at risk for osteoporosis were among the news-conferences that drew the most media attending during RSNA 2010.

More than 6,000 stories about RSNA 2010 have been carried by print, broadcast and online media outlets reaching more than 4 billion people.

News conferences at the annual meeting results in coverage in publications such as *The New York Times*, the *Los Angeles Times*, *The Daily Mail* and *The Daily Telegraph*, as well as broadcast outlets including CNN Headline News, NPR, BBC World and the CBS Radio Network. Stories also appeared on Web sites including *The New York Times*, *TIME*, *WebMD* and *The Wall Street Journal*.



Preliminary Coverage Summary of RSNA 2010

Print:

- *The New York Times*
- *Los Angeles Times*
- *The Daily Mail*
- *The Daily Telegraph*
- *The Globe and Mail* (Toronto)
- *Vancouver Sun*
- *The Edmonton Journal*

Broadcast:

- *Today*
- CNN
- CNN Headline News
- NPR
- BBC World
- CBS Radio Network
- USA Radio Network

- WABC-TV (New York)
- KABC-TV (Los Angeles)
- New England Cable News
- WLS-TV (Chicago)
- WMAQ-TV (Chicago)
- WBBM-TV (Chicago)
- WFLD-TV (Chicago)
- WGN-TV (Chicago Superstation)

Wire:

- Associated Press
- Reuters
- United Press International
- Targeted News Service
- Asian News International
- Dow Jones News Service
- States News Service

Online:

- *The New York Times*
- *TIME*
- WebMD
- *The Wall Street Journal*
- *Los Angeles Times*
- *Washington Post*
- *Chicago Tribune*
- *Newsday*
- *MSNBC*
- *Miami Herald*
- *U.S. News & World Report*
- AOL Health
- MSN Health
- Google News
- Yahoo! News

Drayer Featured in Online Meeting Video

Visitors to the annual meeting website at RSNA.2011.RSNA.org can view a message to members from 2011 RSNA President Burton P. Drayer, M.D.



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 Open at 8:30 a.m. CT
- July 6:** Course Enrollment Opens at 8:30 a.m. CT
- 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
- Nov. 27 – Dec. 2:** 97th Scientific Assembly & Annual Meeting



DIGITAL PRESENTATIONS ARE INTERACTIVE, ENGAGING

Responding to a call for RSNA 2010 attendees' reports of their best meeting experiences, Mindy M. Horrow, M.D., director of body imaging in the Department of Radiology at Albert Einstein Medical Center in Philadelphia noted:

"The best session I attended was the genitourinary (digital scientific presentations in the Lakeside Learning Center) during the lunch hour on Wednesday. I am on the Genitourinary Radiology Subcommittee of the Scientific Program Committee and the person who was supposed to oversee this session had to cancel at the last minute. I thought that all I had to do was make sure the monitors were working and collect CME tickets. Instead, I attended the most interactive session of the meeting. Small groups of attendees and presenters talked about their work and discussed protocols and different ways of working up cases. We had medical students, radiology residents and many other radiologists, some of whom are well published in academic circles. People asked questions and voiced their opinions. It was just what a meeting should be about."



Horrow

For Your Benefit

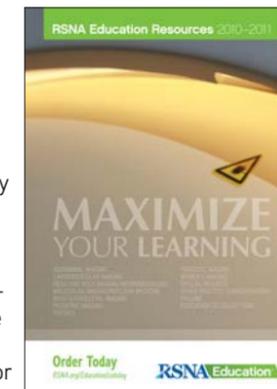
RSNA Education Product Catalog Now Online

The RSNA Education Center's new 2010-2011 product catalog is now accessible online. The catalog includes complete descriptions of refresher courses recorded from previous RSNA meetings available on CD-ROM

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. The collections were among the most popular catalog items at RSNA 2010.

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 easy reference. *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.

For more information or to purchase the CD-ROM collections, go to RSNA.org/Education/catalog or call the Education Center at 1-800-272-2920.



The Value of Membership

Graduated Dues Ease Transition for Resident Members

Not only do members-in-training receive free RSNA membership, they are also given the opportunity to transition into a paid membership through RSNA's Graduated Dues Program.

The program gives resident members time to settle into the profession before paying full membership dues.

"The graduated dues program is essential in encouraging senior residents to maintain their involvement," said program participant Junzo Chino, M.D., an assistant professor in the Department of Radiation Oncology at Duke University Medical Center in Durham, N.C. "The first year out of residency there are many competing interests vying for one's attention,



Chino

and the reduced fees make it easier to commit to maintaining RSNA membership."

Beginning with the first full year after residency or fellowship, dues for existing resident members are \$100; in the second year, \$200. Resident members do not remit full dues until their third year of full membership.

Under the program, residents receive all the benefits of full membership, including subscriptions to *Radiology*, *RadioGraphics* and *RSNA News*, free admission to the annual meeting and free access to CME credit on InteractED®.

For more information about graduated dues, contact the Membership Department at 1-877-RSNA-MEM (1-877-776-2636) or membership@rsna.org.

Residents & Fellows Corner

"Business of Radiology" Course Tailored to Trainees

A new, free online course helps prepare radiology trainees for the economic, financial, and leadership challenges they will face in the private practice or academic setting after graduation.

"Residents and fellows enter their new careers vulnerable to and ignorant of pitfalls in establishing a radiology office, purchasing equipment, negotiating contracts, ensuring accurate billing and collection and evading potential medicolegal entanglements," wrote David M. Yousem, M.D., M.B.A., in his application for RSNA Research & Education Foundation funding to develop the program. Dr. Yousem, a professor in the Department of Radiology, vice-chair of program development and director of neuroradiology at Johns Hopkins Hos-



Yousem

pital in Baltimore, received a Philips Healthcare/RSNA Education Scholar Grant.

The more than two dozen interactive lectures in the "Business of Radiology" online course include:

- Resource Based Relative Value Unit (RBRVU) System
- I Want to Make Money in Radiology
- Vernacular of Accounting
- Improving Physician Performance: Strategies for Squeezing the Most Out of Your Human Resources

- Demystifying Credentialing, Accreditation and Certification
- Malpractice Mitigation

The online course fills a gap in trainees' education that is evident in most academic institutions, Dr. Yousem said in his final report to the R&E Foundation. "It will be a legacy of teaching that will likely be relevant for many years and which can be updated," he said.

Access the course by going to RSNA.org/Education/archive/residents.cfm and clicking "The Business of Radiology."



November 27 – December 2 | McCormick Place, Chicago

Education and Funding Opportunities



RSNA Introduction to Research for International Young Academics

The RSNA Committee on International Relations and Education (CIRE) seeks nominations for this program that encourages young radiologists from countries outside North America to pursue careers in academic radiology by:

- Introducing residents and fellows to research early in their training
- Demonstrating the importance of research to the practice and future of radiology
- Sharing the excitement and satisfaction of research careers in radiology
- Introducing residents to successful radiology researchers, future colleagues and potential mentors

The program consists of a special four-day seminar held during the RSNA Scientific Assembly and Annual Meeting. CIRE recommends 15 international young academics for consideration by the RSNA Board of Directors each year. Complimentary registration, shared hotel accommodation for the duration of the program and a stipend to help defray travel expenses are awarded to successful candidates.

Eligible candidates are residents and fellows currently in radiology training programs or radiologists not more than two years out of training who are beginning or considering an academic career. Nominations must be made by the candidate's department chairperson or training director. Fluency in English is required.

Nomination forms are available at RSNA.org/IRIYA.

RSNA Eyler Editorial Fellowship

Application Deadline—**May 1** Candidates are sought for the RSNA Eyler Editorial Fellowship, sponsored by the RSNA Publications Council and the Committee on International Relations and Education (CIRE).

Named after William R. Eyler, M.D., a former editor of *Radiology*, the fellowship is designed to provide an opportunity for a mid-career radiologist to further his/her experience in radiologic journalism. Working with *Radiology* and *RadioGraphics* editors and RSNA publications staff, the fellow will learn about manuscript preparation, peer review, manuscript editing, journal production, printing and electronic publishing.

For more information regarding eligibility requirements and to apply, go to RSNA.org/Publications/editorial_fellowships.cfm.

Medical Meetings

March – May 2011

MARCH 3-7

VISIT THE RSNA BOOTH

European Society of Radiology (ESR), European Congress of Radiology (ECR), Austria Center, Vienna • www.myesr.org

MARCH 6-9

Society of Thoracic Radiology, Annual Meeting, Hyatt Regency Coconut Point, Bonita Springs, Fla. • www.thoracicrad.org

MARCH 20-25

Society of Gastrointestinal Radiologists (SGR) and Society of Uroradiology (SUR), Abdominal Radiology Course, Four Seasons Resort-Aviara, Carlsbad, Calif. • www.sgr.org

MARCH 26-31

VISIT THE RSNA BOOTH

Society of Interventional Radiology (SIR), 36th Annual Scientific Meeting, Chicago • www.sirweb.org

APRIL 3-8

IDKD's 43rd International Diagnostic Course, Davos, Switzerland. Main Course Topics: Diseases of the heart and chest, including breast satellite courses • www.idkd.org

APRIL 7-10

Japan Radiological Society (JRS), 70th Annual Meeting, Yokohama, Japan • www.secretariat.ne.jp/jrs70/eng/index.html

APRIL 12-15

VISIT THE RSNA BOOTH

Association of University Radiologists (AUR), 59th Annual Meeting, Westin Boston Waterfront Hotel • www.aur.org

APRIL 14-16

American Brachytherapy Society (ABS) Annual Conference, Manchester Grand Hyatt San Diego • www.americanbrachytherapy.org

APRIL 14-17

American Institute of Ultrasound in Medicine (AIUM), Annual Meeting, New York Marriott Marquis Hotel • www.aium.org

APRIL 28-MAY 1

Canadian Association of Radiologist (CAR), 74th Annual Scientific Meeting, Hyatt Regency Hotel, Montréal • www.car.ca

APRIL 29-30

RSNA, ASTRO, Cancer Imaging and Radiation Therapy Symposium: A Multidisciplinary Approach, Atlanta Marriott Marquis • www.cancerimagingandrtssymposium.org



Technology Forum

2011 IHE Connectathon Offers Unique Testing Opportunity

Offering an ideal opportunity for users and developers of health information technology (HIT) systems to learn about achieving interoperability and meeting meaningful use requirements, the 13th annual Integrating the Healthcare Enterprise (IHE)[®] North America Connectathon Conference 2011, was held Jan. 18 in Chicago.

Keynote speaker Doug Fridsma, M.D., Ph.D., (above) director of the Office of Standards and Interoperability in the Office of the National Coordinator for Health Information Technology, spoke on topics including:

- Considerations and challenges for planning and launching a health information exchange
- Solving interoperability challenges using IHE
- Using IHE to achieve meaningful use
- Enabling patient control with IHE

New this year, industry leaders led breakout sessions on: Creating an IHE Profile, Solving Interoperability Challenges Using IHE and Enabling Patient Control. The 2011 event featured 350 engineers and 120 attendees.



Education and Funding Opportunities

RSNA, SNM Co-Sponsor Breast Cancer Imaging Symposium

APRIL 21-22

National Institutes of Health, Bethesda, Md.

RSNA and SNM will co-sponsor "Breast Cancer Imaging: State of the Art 2011: Diagnosis, Therapy and Beyond," a two-day symposium addressing the need for synergism between diagnostic radiology, nuclear medicine and new molecular imaging modalities as applied to the care of breast cancer patients.

Speakers will include expert diagnostic radiologists, nuclear medicine physicians and scientists, medical oncologists, surgeons, economists and radiation oncologists. Experts will review the current state of imaging in breast cancer, from the screening mammography controversy and advanced screening technology to local and distant staging and response to treatment.

For more information, go www.molecularimagingcenter.org.

RSNA.org

Join Army of RSNA Volunteers

The backbone of RSNA, the many dedicated volunteers who donate their time and expertise to help RSNA carry out its mission are always in demand. Currently, 892 volunteers serve on RSNA's 89 committees and subcommittees with subjects ranging from molecular imaging and scientific programming to professionalism and public relations.



Volunteers must be an RSNA or American Association of Physicists in Medicine member to serve on an RSNA committee. Applications are submitted to the RSNA Board of Directors for consideration.

Make 2011 the year you make a difference. For the full roster of RSNA committees and subcommittees and to apply online, go to RSNA.org.



Pediatrics Focus of Website

Curated by Michael P. D'Alessandro, M.D., of the Division of Pediatric Radiology at the University of Iowa Children's Hospital, PediatricRadiology.com offers a digital library where users can search, learn, communicate and more. Along with accessing separate search engines for peer-reviewed pediatric and general radiology information, users can connect to the Pediatric Commons blog which offers a community of pediatric learning, teaching sharing and collaborating.

COMING NEXT MONTH

Despite uncertainty in healthcare reform, radiologists need to prepare for changes including increased mandatory utilization rates and self-referral prohibitions. Next month, experts from the RSNA 2010 presentation, "When the Dust Settles: Radiology After Health Care Reform," decipher the new law and extract changes most likely to affect radiology.



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— Vaden Padgett, MD, board-certified radiologist

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And there are just as many reasons you will want to join the more than 800 healthcare institutions that rely on InSite One's **InDex® Intelligent Enterprise Archive Solutions**.

Maybe you acquired a new facility or are transitioning your PACS and you are ready to simplify and consolidate with the industry's only intelligent data management solution.

Maybe you need to image enable your HIE or enterprise data sharing initiative and want the only patient-centric, clinically intelligent solution available today.

Maybe you need a partner who has always been standards-based and **vendor neutral**. We support DICOM, IHE XDS/XDS-I, HL7 and emerging standards.

Maybe you're tired of updating your storage systems every few years and want automatic migration to the latest technologies.

Maybe you're looking at a new imaging initiative and need the industry's best total cost of ownership to make it work.

Whatever your reason, whatever road you are trying to cross, there's a reason why nearly every one of our customers have stayed with InSite One for the last 10 years, so it stands to reason that we're worth a closer look.

Need a reason to contact us? How about a free whitepaper on "Leveraging The Enterprise Archive"? If that sounds good, contact us at www.insiteone.com/free.

