First National Children’s Dose Registry to Ensure Necessary, Safe Imaging

ALSO INSIDE:
- The Big Hurt: Ergonomics Linked to Radiologists’ Pain
- Chinese Radiology Rides Economic Development Wave
- Guidelines Pivotal in Timely Communication of Critical Results
- Take in Chicago’s Heights, Sights at RSNA 2010

Register now for RSNA 2010 courses at RSNA2010.RSNA.org
Training Radiologists to See a Telltale Sign of Breast Cancer

Thanks to an RSNA R&E Foundation education grant, Dr. Georgian-Smith developed software that analyzes the differences in the search patterns of trainees versus expert mammography readers who can identify architectural distortion, a difficult-to-spot mammographic sign that’s highly specific for breast cancer. The data collected will help to develop a tutorial that trains readers to “see” the finding and deliver more comprehensive diagnoses to women worldwide.
Quality CE. Quickly. "Technologists work hard and are required to earn continuing education credits on top of everything else," Lipman said. "With a full load of cutting-edge classes this year, ASRT@RSNA 2010 is an opportunity for FRTs to secure up to 10 Category A+ CE credits in only one-and-a-half days.”

Nonstop Networking. "ASRT@RSNA 2010 is a great way for FRTs to exchange information with their fellow technologists—RSNA annual meeting attendees return to the workplace with fresh ideas that can be applied immediately to improving patient care.”

Late-breaking Learning. "This year’s dynamic courses are specifically designed to provide FRTs with in-depth knowledge about the latest and most significant trends in the field.”

"Today’s Technology. "With hundreds of exhibitors spanning three halls in McCormick Place, there are boundless opportunities for FRTs to get ready for what’s new.”

RSNA2010.RSNA.org.

Annual Oration in Radiation Oncology—
WEDNESDAY, DECEMBER 1 • 1:30 P.M.
Zvi Fuls, M.D.

*Tickets required. Tickets will be available starting Sept. 1 at RSNA2010.RSNA.org. Tickets will be offered to professional registrants on first-come, first-served basis. Professional registrants without tickets, as well as registrants in other categories, will be able to view the lecture via simulcast in one of 10 overflow rooms at McCormick Place.

My Turn

Global Expansion Makes Us All Wiser

A palpable feeling of excitement always pervades the RSNA annual meeting. It’s not just because of the vast numbers of attendees, exhibitions and cutting-edge research presentations. It’s also because when walking through the halls, one hears names like Chinese, Spanish, German, Russian, French, Swedish, Arabic, Korean, Portuguese and many other languages and knows immediately that this is an important international event. Each year, beginning radiologists and established practitioners, academic leaders and those with aspirations to lead in the future, come from across the world to learn, teach and meet. One third of RSNA meeting attendees and about 60 percent of journal submissions come from outside North America.

RSNA aims to advance radiology around the world through education and research. As participants in the annual meeting and on committees, our international members give us a chance to learn about what resources are needed and how and how we can help each other. RSNA initiatives for educational outreach include the Introduction to Research for International Young Academics program, the International Visiting Professor Program, fellowships, Research & Education Foundation seed grants, and a promising pilot “e-mentoring” program. These initiatives provide wonderful learning experiences for trainees and educators alike.

Equally importantly, as speakers, authors and editorial board members and reviewers, RSNA members from around the world open our eyes to countless innovative scientific and technological developments. They also provide fresh perspectives on everyday dilemmas. Depending partly on cultural norms, different countries may handle the same disease in radically different ways—for example, favoring aggressive treatment over watchful waiting or vice versa, medical versus surgical treatment or relying on different imaging modalities for diagnosis or staging. Similarly, one nation may emphasize broader training where another pours its resources into specialization. We all grow wiser as we compare international data and ideas.

We are fortunate to live in a time of relatively easy travel and rapid global communication. Under these circumstances, by comparing, strengthening and perhaps even unifying educational systems and practice standards around the world, we can accelerate data collection, exchange of knowledge and advances in medicine to an unprecedented degree.

RSNA members take actions necessary to allow our field of biomedical imaging to advance and thrive in the future. The more RSNA becomes a global educational and scientific society, the more we have to offer the worldwide radiology community.

RSNA 2010 Lecture Schedule Set

SUNDAY, NOVEMBER 28 • 8:30 A.M.
Special Lecture—John Mendelsohn, M.D.
Annual Oration in Diagnostic Radiology—
Christian J. Hendl, M.D.

MONDAY, NOVEMBER 29 • 1:30 P.M.
Eugene P. Pendergrass New Horizons Lecture—
Sanjiv S. Gambhir, M.D., Ph.D.
Special Lecture—Anil Gaware, M.D., M.P.H.

TUESDAY, NOVEMBER 30 • 1:30 P.M.
Special Address—President Bill Clinton*

White House Appoints First Radiologist Fellow

Pat Basu, M.D., M.B.A., attending radiologist at Stanford University and the VA Palo Alto Health Care System, both in California, has been appointed a White House fellow and special assistant to the President. Dr. Basu is the first radiologist to receive such an appointment and one of only a few physicians to serve in this role.

A national and international lecturer, Dr. Basu in Stanford’s course director of health policy, finance and economics. Dr. Basu is also a former American College of Radiology (ACR) Rutherford Fellow and served on ACR’s President and Fellow Section.

The full-time, paid position typically involves spending a year working as a fellow with senior White House staff, cabinet secretaries and other top-ranking government officials, participating in roundtable discussions with renowned leaders from private and public sectors and traveling domestically and internationally to study U.S. policy.

Read about "China Presents," a special RSNA 2010 session devoted to radiologic studies from the world’s most populous nation and fastest growing economy, on Page 7. The September 2010 issue of RSNA News will feature a story on the Latin America Presents’ session also scheduled for RSNA 2010.

To learn more about RSNA’s international initiatives, go to RSNA.org and click International in the top navigation bar.
RSNA Board of Directors Report

At its June meeting, the RSNA Board of Directors approved the Society’s 2010-2011 budget, continued planning for RSNA 2010 and looked to the future of peer-reviewed publications and intersoctry collaborations.

Our Society is Financially Healthy

Amid challenges posed by a weak economy, RSNA has remained in an overall growth mode as measured by membership, annual meeting registration, subscriptions to the new Radiology Legacy Collection and other indicators.

Additional Lectures Announced for Annual Meeting

RSNA looks forward to offering additional lectures during RSNA 2010. Arul Gargwee, M.D., author of The Checkpoint Manifesto, will speak Monday, November 29, on “Real Reform: Facing the Complexity of Health Care.” President Bill Clinton will deliver a special address on Tuesday, November 30. More details about these lectures and the New Horizons Lecture and annual orations in diagnostic radiology and radiation oncology will be provided in the upcoming issue of RSNA News.

RSNA will dedicate this year’s Annual Oration in Radiation Oncology to the memory of leading radiation oncologist and 1993 RSNA gold medalist Frank L. Hussey, M.D., who died April 26 at the age of 84. Also to be honored at the annual meeting are the 2010 RSNA Outstanding Researcher, Charles A. Mistretta, Ph.D., of the University of Wisconsin, and the recipients of the 2010 RSNA Outstanding Educator Award, Gillian Lieberman, M.D., of Beth Israel Deaconess Medical Center and Kim Shaffer, M.D., Ph.D., of Harvard Medical School.

A China Medical Engineering Forum, co-sponsored by the Chinese Medical Engineering Society, will be offered at RSNA 2010. More information about the forum will be available at RSNA.org.

The Associated Sciences Consortium, charged with planning annual meeting content for radiologic technologists, nurses and other allied professionals, welcomes the U.K. Society of Radiographers as a new member.

Changes for RSNA 2011 will facilitate development of even more series courses, a popular annual meeting offering that blends core course material and cutting-edge science on select topics. Starting with the 2011 annual meeting, the abstract submission deadline will be March 31. In addition, the Advance Registratipon, Housing and Course Enrollment brochure for the meeting will be mailed at the end of June, about two weeks later than in the past.

Collaborations Address International Cooperation, Continuing Education

RSNA has been busy in 2010 strengthening its ties with radiology societies and their members worldwide.

At the European Congress of Radiology, Asian Oceania Congress of Radiology, International Congress of Radiology, Societies of Nuclear Medicine, European Congress of Radiology Congress and Japan Radiological Society annual meeting, RSNA officers and staff discussed how radiologists around the globe can benefit from shared knowledge. Read more about RSNA’s global focus in the My Turn column by 2010 RSNA President Hedvig K. Hricak, M.D., Ph.D., Dr. h.c., on Page 2.

RSNA recently became a member of the International Society of Radiology (ISR) and will be represented on the ISR executive committee by Richard L. Baron, M.D., MS, RSNA Board Liaison for Education. Increasing its cooperative relationships domestically as well as internationally, RSNA has endorsed the Council of Medical Specialty Societies code of conduct governing physician interactions with corporations. The Society also has endorsed the American Medical Association Health Insurer Code of Conduct Principles.

Publications Celebrate Gains, Look to Future

RSNA recently learned that its peer-reviewed science journal, Radiology, had a 2009 impact factor of 6.341, an almost 6 percent increase over 2008. Read more about the 2009 Journal Citation Reports at RSNA.org/Radiology.

Contributing to the success of Radiology and RSNA’s peer-reviewed education journal, RadioGraphics, are ever-developing online versions offering many features— including podcasts, images, videos— above and beyond the print counterparts. Starting with the 2011 membership renewal process later this year, RSNA members can choose whether to access Radiology and RadioGraphics online only or continue to receive them in print, with no difference in dues.

Making their debut last month in the online version of RadioGraphics were full imaging datasets for select articles. See Page 19 for more information about this new feature.

William W. Olmstead, M.D., the editor of RadioGraphics, retires from this role in 2011. The search committee appointed to find his replacement is continuing to interview candidates, with a goal of naming the new editor early in 2011.

In other communications news, content from Radiology.org will now be included in HealthyAdvise.com, a directory of programming that is broadcast in physician waiting rooms across the U.S. The Healthy Advice Network reaches 53,000 physicians and impacts 429 million patient and caregiver visits. Radiology.org content will help to educate patients about medical imaging procedures, including what they are used for and how they are performed.

In response to increasing media coverage of radiology, RSNA has created position statements to assist members in responding to inquiries they may receive regarding medical radiation errors, appropriate utilization of medical imaging, radiation dose and screening mammography. See RSNA.org on Page 27 to learn how to access these statements via myRSNA.

American Institute for Radiologic Pathology Course to Replace Familiar AFIP

According to the U.S. Department of Defense, the Armed Forces Institute of Pathology (AFIP) will be discontinued later this year, coinciding with the closure of the Walter Reed Army Medical Center. In response, the American College of Radiology (ACR) plans to launch the American Institute for Radiologic Pathology (AIRP) in January 2011.

The AFIP course has been held since 1947 and more than 90 percent of all radiology residents have attended the AFIP at some point during their residency, according to ACR. The AFIP program is a unique combination of abnormal human biology, clinical pathology and medical imaging, and is considered by the radiology community to play a vital role in preparing radiologists-in-training for advanced medical practice.

The new four-week AIRP Course will be offered five times per year at an education center in Silver Spring, Md., just a couple miles from the current AFIP site. Residency program directors are assured that the new course will fulfill the requirements that over 310 programs come to rely upon to sanction attendance at the AFIP course.

Numbers in the News

43.9

Percentage of office-based physicians using any type of electronic health record (EHR) system in 2009, up from 29.2 percent in 2006, according to the Centers for Disease Control and Prevention (CDC). Just 6.3 percent of physicians were using a fully functional EHR system in 2009, up from 31 percent in 2006, the CDC reported.

6,000

CT units in China, which works out to 4.5 units for each million people. MR units total 1,500, or 0.9 unit for each million people. (China Radiology Rides Economic Development Wave,” Page 7)

4,000,000

CT scans, out of the 62 million total performed each year in the U.S., that are performed on children. (See, “First National Children’s Dose Registry to Ensure Necessary, Safe Imaging,” Page 9)

LETTER TO THE

EDITOR

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LETTER TO THE

EDITOR

LETTER TO THE

EDITOR
Researchers found that job-related musculoskeletal symptoms are common in radiologists working in digital departments, according to lead author Anand M. Prabhakar, M.D., a radiologist at MGH who was inspired to study the issue after hearing colleagues complaining of aches and pains due to cramped and outdated workspaces. "I was quite surprised at the high prevalence of complaints," Dr. Prabhakar said. "There is a mismatch between our research and the attention given to this problem.

In a questionnaire completed by 28 radiologists from various divisions of one radiology department at a large tertiary care hospital, 80 percent reported experiencing some sort of musculoskeletal problem in the last 12 months, according to the study presented at the 2010 American Roentgen Ray Society annual meeting.

The most frequent complaints were neck pain (42.8 percent), back pain (39.2 percent), shoulder pain (32.1 percent), headaches (32.1 percent) and wrist pain (7.2 percent), according to the survey. In addition, 96 percent of respondents reported using two to three computer monitors at their workstations. "This problem was compounded when many PACS were simply added on to existing radiology information systems rather than being fully integrated into the work environment," Dr. Prabhakar said.

Although it follows that better ergonomics would benefit both doctors and patients, hospitals have been slow to meet the changing demands of the radiology workplace. "This is essentially not a problem that people take seriously," he said. "There is definitely a dearth of information in this area.

Hospitals often pay too much attention to the time and cost savings of PACS and not enough to the potential deleterious effects on the radiologists using these systems, Dr. Harisinghani added.

"Over time, technology like voice recognition has added to the impact burden, again with no thought to integrating various solutions and making them ergonomically friendlier to end users," he said. The cascade effect has now resulted in an ergonomic disaster for radiologists.

"There is a mismatch between our research and the attention given to this problem."

Anand M. Prabhakar, M.D.

Because job-related musculoskeletal symptoms are common among radiologists working in digital departments, experts agree that hospitals should create healthy workstations from an ergonomics perspective. Above, left: Standing liberates the technician, making height, depth, tilt and pan adjustments to the screen and keyboard quicker and easier; right: An extendable keyboard tray allows the radiologist to maintain sufficient distance between his eyes and the screen.

"Radiologists need to understand what a healthy workstation is and to have an ergonomic assessment," he said. "We can do something to improve the situation, but we need more research, information and education."
**Features**

**China Presents**

郑氏成立中国放射学会，作为中国放射学界的代表，自20世纪50年代以来，它已经发展成为世界上最大的放射学会之一。1979年，中国放射学会首次参加RSNA会议。自那以后，中国放射学会成为了RSNA重要的国际合作伙伴。中国放射学会已经成为放射学领域的重要参与者，其成员遍布全球，包括中国和中国以外的国家。中国放射学会为中国放射学的发展做出了重要贡献。

中国放射学的快速发展

中国的放射学在过去的几十年里取得了巨大的进步。从最初的CT机安装到今天，中国的放射学设备和技术已经得到了显著的提升。中国放射学会的成立和壮大，以及与中国放射学会的交流合作，使得中国放射学在国际上的地位得到提升。

China Presents session

The China Presents session is one part of the country hosted the International Congress of Radiology earlier this year, and the specialty took a special place on the world stage when renowned neuroradiologist Jian-Ping Dai, M.D., served as vice-minister of the Games Services Department for the Beijing Organizing Committee of the 2008 Olympic Games. Dr. Dai serves as the principal advisor for radiology to the Chinese Ministry of Health and is a regular attendee of RSNA annual meetings.

China's history of organized radiology dates back to 1928, when the first CT machine was installed in 1979. But Dr. Li also understood that progress is about people, and saw that various sources funded international training for many of today's Chinese leaders. "Dr. Li is a story of a remarkable leader who understood Chinese culture and global development and who through her devotion and unfettered energy has helped bring worldwide attention to Chinese radiology," Dr. Hricak said.

**Knowledge of breast imaging has grown dramatically over the past decade, and the field is changing rapidly." Dr. Li wrote in her grant application.** However, breast imaging in China has not kept pace with the field. Limited educational resources, a lack of specialty training in breast imaging and language barriers have opened up a large gap between Chinese radiologists and the international breast imaging community with regard to knowledge and information, interpreting skill and clinical research. Dr. Li envisions a nationwide CME program with invited U.S. experts and an educational website. "It is expected that the program will strengthen the clinical skills of Chinese radiologists in breast cancer detection and diagnosis, help to build up quality assurance systems for breast imaging in China, stimulate research and international communication, and ultimately improve clinical practice and research in breast cancer care in China," she wrote.

**China Presents**

Mon, Nov 29, 10:30 a.m.–12:00 p.m.

- MR Imaging of Prostate Cancer with Multiple Functional Techniques
- Peripheral Nerve Imaging from Head to Toe: Role of 3D High Resolution Diffusion-weighted MR Imaging
- Outcome after Wingspan Stenting of Severe Intracranial Stenosis at a High-Volume Center
- Acupuncture Research by MR Imaging
- Cervical-related Liver Nodes and MR Imaging Strategy
- Radiology Study of SARS in China
- MR Cellular Imaging in Cell Transplantation

**China Presents session is just one part. The country hosted the International Congress of Radiology earlier this year, and the specialty took a special place on the world stage when renowned neuroradiologist Jian-Ping Dai, M.D., served as vice-minister of the Games Services Department for the Beijing Organizing Committee of the 2008 Olympic Games. Dr. Dai serves as the principal advisor for radiology to the Chinese Ministry of Health and is a regular attendee of RSNA annual meetings.**

“Thirty years ago, the Chinese people resolvedly embarked on the historic journey of reform and an opening up to the international community," Dr. Dai said upon receiving the RSNA Honorary Membership in 2008. "This new policy afforded me the opportunity to travel abroad and start my ‘personal learning in the global community’ and to work with international colleagues towards universal standards of quality care for our patients.”

**China Presents session is just one part. The country hosted the International Congress of Radiology earlier this year, and the specialty took a special place on the world stage when renowned neuroradiologist Jian-Ping Dai, M.D., served as vice-minister of the Games Services Department for the Beijing Organizing Committee of the 2008 Olympic Games. Dr. Dai serves as the principal advisor for radiology to the Chinese Ministry of Health and is a regular attendee of RSNA annual meetings.**

“Chinese Breast Cancer Researcher Receives First R&E International Education Grant The RSNA Research & Education Foundation awarded its first international education grant this year, to Jie Li, M.D., of the Beijing Cancer Hospital & Beijing Institute of Cancer Research at the Peking University School of Oncology. With her project, “Developing an Educational Program on Breast Imaging for the Chinese Radiology Society with International Cooperation,” Dr. Li will work with faculty at the Memorial Sloan-Kettering Cancer Center in New York to implement the Breast Imaging Reporting and Data System (BIRADS) in medical practice, create a quality assurance system, establish a clinical fellow-ship training program and ultimately develop a clinical training center for breast imaging in China.”

**China Presents**

Mon, Oct 25, 8:00 a.m.–8:30 a.m.

- Chinese Breast Cancer Researcher Receives First R&E International Education Grant

- The RSNA Research & Education Foundation awarded its first international education grant this year, to Jie Li, M.D., of the Beijing Cancer Hospital & Beijing Institute of Cancer Research at the Peking University School of Oncology. With her project, “Developing an Educational Program on Breast Imaging for the Chinese Radiology Society with International Cooperation,” Dr. Li will work with faculty at the Memorial Sloan-Kettering Cancer Center in New York to implement the Breast Imaging Reporting and Data System (BIRADS) in medical practice, create a quality assurance system, establish a clinical fellowship training program and ultimately develop a clinical training center for breast imaging in China.”
First National Children’s Dose Registry to Ensure Necessary, Safe Imaging

Increasing concern over the rising number of CT scans and the potential impact of cumulative radiation dose has inspired pediatric radiologists to create a national CT dose registry for that segment of the population most sensitive to radiation exposure: children.

“Currently, there are few national databases in radiology, let alone in pediatric radiology,” said Marilyn J. Goske, M.D., who, along with her co-investigators, is developing the Quality Improvement Registry for CT Scans in Children, funded through a 2009-2011 RSNA Research & Education (R&E) Foundation Scholar Grant. This project is supported by the Derek Harwood-Nash grant endowment and Harvey and Jean Picker. This prototype national registry, coupled with the educational interventions being developed, will create awareness within pediatric radiology as to the power of population-based data banks and records.

The need to develop such a registry for children stems from one essential question, according to Dr. Goske, Silverman Chair for Radiology Education at Cincinnati Children’s Hospital Medical Center and past-president of the Society for Pediatric Radiology (SPR). “How do we lower the radiation dosage and still make the diagnosis? The challenge for pediatric radiology is determining the optimal quality of CT scans for children.”

That challenge is also central to Dr. Goske’s work as chair and founder of the Alliance for Radiation Safety in Pediatric Imaging, which in 2008 launched Image Gently, a national campaign aimed at raising awareness of the opportunities to lower radiation dose in the imaging of children. While the Image Gently campaign is separate from the national CT dose registry project, the campaign’s central messages—reduce the amount of radiation used, scan only when necessary, scan only the indicated region and scan once—are at the core of this project, Dr. Goske said.

Asthma Registry is the Inspiration

The idea for creating a national pediatric CT dose registry came to Dr. Goske during a presentation on a regional asthma improvement initiative led by her colleague Keith Mandel, M.D., vice president of medical affairs for the Physicians-Hospital Organization at Cincinnati Children’s Hospital Medical Center. Among the key interventions driving significant improvement in population-based outcomes is an innovative, web-based registry that was recently recognized as “best practice” by the Agency for Healthcare Research and Quality. Dr. Mandel, Goske and Laura Coombs, Ph.D., past director of data registries at the American College of Radiology (ACR), are working to incorporate findings from the asthma initiative and other large-scale improvement projects into the design of the national CT dose registry.

Using a quality improvement model similar to the one used for the asthma database, Dr. Goske assembled a team of national pediatric radiology experts to evaluate a consortium of six hospitals collecting pilot data on CT scanning practices for children to establish benchmarks in best practice for administering CT scans. Of the approximately 62 million CT scans performed each year in the U.S., at least 4 million are performed on children.

“We plan a retrospective review of abdominal CT scans performed on pediatric patients at the six hospitals in our consortium to establish baseline values of typical techniques and estimates of radiation dose associated with a common CT study and an abdominal/pelvis CT with IV contrast,” Dr. Goske said. Using data gathered over three months in late 2009, researchers are comparing a new pediatric dose index developed by medical physicist Keith Strauss, M.S., and Tom York, D.Sc., former chief CT physicist at GE Healthcare. They will compare this new patient dose index with the standard adult dose indices, Dr. Goske explained. “From select de-identified images representing the average estimated radiation dose from each institution for five age groups, we will also evaluate image quality subjectively and objectively,” she said. “This will establish interobserver preference for diagnostic quality and acceptability compared to a reference sample of CT images with a known amount of image noise.”

These data will serve as a baseline for a future prospective study in which the coalition will use quality improvement methods to optimize and standardize CT practice across the six sites, she said.

“Ultimately, the goal is to identify an ‘optimal’ CT technique and target radiation dose indices for common CT procedures and share this via a national registry using quality improvement methodology,” Dr. Goske said.

Optimal Use of Radiation is the Goal of Registries

Although not focused on children, a similar initiative is being developed through ACR’s National Radiology Data Registry (NRDR), which launched its Dose Index Registry Pilot Project in 2004. CT became the pilot’s focus in 2008, according to Richard L. Morin, Ph.D., chair of ACR’s Dose Index Registry, who said he expects the pilot phase to finish this year with the rollout of the national dose registry tentatively planned for 2011.

Dr. Goske and colleagues are creating a prototype registry tentatively planned for 2011. CT REGISTRY PROJECT IS TEAM EFFORT

Other investigators on the Quality Improvement Registry for CT Scans in Children project are:
• David Larson, M.D., quality metrics lead, Cincinnati Children’s Hospital Medical Center
• Keith White, M.D., informatics lead, Primary Children’s Hospital in Salt Lake City, Utah
• Keith Strauss, M.S., medical physicist, Boston Children’s Hospital Participating Hospitals and Site Primary Investigators:
• Michael Callahan, M.D. Boston Children’s Hospital
• Kassa Darge, M.D., Ph.D., Children’s Hospital of Philadelphia
• Daniel Padbergs, M.D., Cincinnati Children’s Hospital Medical Center
• Donald P. Frush, M.D., Duke University Medical Center, Durham, N.C.
• Sjirk Westra, M.D., Massachusetts General Hospital in Boston
• Jeffrey Prince, M.D., Primary Children’s Medical in Salt Lake City, Utah

How do we lower the radiation dosage and still make the diagnosis? The challenge for pediatric radiology is determining the optimal quality of CT scans for children.

Marilyn J. Goske, M.D.

Determining the optimal quality of CT scans for children is the goal of Marilyn J. Goske, M.D., and colleagues in developing the Quality Improvement Registry for CT Scans in Children, an RSNA Research & Education (R&E) funded project. Right? A radiology technologist prepares a pediatric patient for a CT scan.

ON THE COVER

A child is prepared for a CT scan in this image from RadiologyInfo.org, the public information website sponsored by RSNA and the American College of Radiology, that offers images and information on pediatric CT scans.
Guidelines Pivotal in Timely Communication of Critical Results

When a Virginia radiologist reading a woman’s sonogram discovered a deep vein thrombosis in the patient’s leg, he knew that no healthcare professionals would consider to be the appropriate next step: He attempted to call the referring physician to relay the potentially life-threatening discovery.

Unable to reach the physician or the physician’s nurse or receptionist by phone, the radiologist instructed his secretary to fax the report to his office. The referring physician, however, was not in the office and the fax was not seen until the following day, when his nurse read the report and called the patient to schedule an appointment for two days after that. That appointment was never kept. The day after he spoke with the nurse, the patient suffered an acute pulmonary embolism and died.

When the patient’s family filed a malpractice lawsuit against both doctors, the physician settled out of court but the case against the radiologist proceeded to a jury trial. Although the jury found the radiologist not liable, the Virginia Supreme Court reversed the verdict and remanded the case back to a hearing court where it was settled prior to a second trial.

The scenario demonstrates the urgent need for healthcare facilities to develop a standardized protocol for ensuring that critical results are not only communicated, but received, documented, monitored and measured for every patient, according to Leonard Berlin, M.D., a professor of radiology at Rush Medical College in Chicago and vice-chair of the Department of Radiology at NorthShore University HealthSystem, Skokie Hospital. Dr. Berlin is a presenter for the RSNA 2010 course, “Quality Improvement: Controversies and Opportunities for Communicating Results.” (See sidebar.)

“Because radiologists are expected to foresee that reports occasionally get lost in transmission, they have a duty, independent of any action or lack thereof on the part of the referring physician, to obtain reasonable assurance that a radiologic report of a significant and unexpected abnormality that can adversely affect the life of the patient—whether it be within a matter of hours or months—is successfully communicated to the referring physician,” Dr. Berlin said.

Communication Isn’t One-Size-Fits All

Although national standards do not exist for communicating critical test results, the Joint Commission requires facilities to develop and implement a policy and demonstrate a mechanism for documenting and monitoring the delivery of results. Regulatory agencies, malpractice concerns and patient-safety issues have heightened the need for hospitals to craft a set of communication guidelines, said Ramin Khorasani, M.D., M.P.H., also a presenter at the RSNA 2010 course.

“In terms of policy, there is no one-size-fits-all protocol for communicating critical results,” said Dr. Khorasani, vice-chair of the Department of Radiology at Brigham & Women’s Hospital, associate professor of radiology at Harvard Medical School and part of a team who developed standards for communicating critical findings for the hospital in 2006. “Each facility should define by critical findings and establishing urgency levels for various categories of critical results to help determine the optimum communication mechanism. That was the process adopted by Scott Gazelle, M.D., M.P.H., Ph.D., and colleagues in crafting standards for communicating critical findings for hospitals within the Partners Healthcare System (PHS), including Massachusetts General Hospital and Brigham and Women’s Hospital, in Boston. As director of Partners Radiology for PHS, Dr. Gazelle met with researchers from radiology departments at all PHS hospitals, including Dr. Khorasani, to develop the standards following American College of Radiology Practice Guidelines for Communication of Diagnostic/Test Results, which were updated in 2005, and the Joint Commission’s National Patient Safety Goals. After defining three levels of urgency, the team created a subset of criteria for communicating, documenting and monitoring results.

In Level 1, for example, results are defined as any new or unexpected findings that suggest conditions that are life-threatening or would require an immediate change in patient management. Six findings are always defined as Level 1: tension pneumothorax, evidence of ischemic bowel, intraabdominal hemorrhage, leaking of ruptured aortic aneurysm, significantly misplaced tubes or catheters and unstable spine fracture.

Under Level 1, communication is required to be immediate and interruptive to the ordering physician or other caregiver and this communication must be clearly documented in the final radiology report.

The standards, in place since January 2009, provide a necessary structure for physicians, said Dr. Gazelle, a professor of radiology at MGH and Harvard Medical School and a professor in the Department of Health Policy and Management at the Harvard School of Public Health.

“This isn’t a foolproof, of course, but it gives physicians something to hang their hat on so they know what is expected,” said Dr. Gazelle, who is moderating the RSNA 2010 course. “In a system where radiologists could easily avoid creating a judgment call on communications issues, these guidelines are extremely important.”

Compliance Increases Over Time

Although such standards are relatively new for many hospitals, Dr. Gazelle was able to gauge the effectiveness of the communication process in place at Brigham in the RSNA 2009 presentation, “The Impact of a 3-Year Quality Improvement Initiative of Departmental Performance on Communication of Critical Findings.”

Instead of different levels, Dr. Khorasani and colleagues created a color-coding system for categorizing levels of communicating test results. The policy also outlines the escalation process to assure timely communication, the mode of communication (depending on the urgency level), and the documentation, monitoring and improvement and evaluation processes.

Using a Web-based dashboard to extract data, researchers analyzed 12,193 critical test results to measure adherence to the policy. Although the new process didn’t immediately take hold, the one-month compliance rate of 28.6 percent quickly rose to 68 percent by the third month and reached 90 percent by the seventeenth month. Compliance has since leveled off at 90-95 percent, Dr. Khorasani said.

The next step is to implement an automated critical alarm management system, according to Dr. Khorasani. “IT tools help integrate the communication methods into the workflow of the radiologist and referring physician to document, audit and measure performance as part of a quality improvement program. Because some facilities have yet to begin to craft communication guidelines, Dr. Gazelle said he plans to outline the process used to establish MGH standards during the RSNA symposium. “We feel that our process could become a model for other networks—including giant ones—to create their own guidelines,” he said.

First National Children’s Dose Registry to Ensure Necessary, Safe Imaging

Continued from Page 10

CT dose registry through ACR. "Once the pilot program and evaluation were completed, we hope to expand this into a nationwide CT registry," Dr. Goske said.

Both registries are designed to “broaden the optimal use of radiation throughout the U.S.,” said Dr. Morin, the Brooks-Holliman Professor of Radiology at the Mayo Clinic in Jacksonville, Fl.

“Ideally, Dr. Goske would like all facilities who perform CT scans in children to use the registry as an ongoing tool to evaluate optimal use of radiation,” Dr. Morin said. "It provides a barometer for one facility to measure dose index relative to that of another facility."

The movement to raise awareness about radiation dose continues to expand. The Department of Radiology at the Mayo Clinic in Jackson ville, Fla.

"That is the catalyst for these measures."

In 2006, Brigham and Women’s Hospital adopted standards for communicating critical test results that utilized a color-coded system for categorizing the urgency of those results. One of the policy’s developers, Ramin Khorasani, M.D., M.P.H., reported on the program’s effectiveness in the RSNA 2009 presentation, “The Impact of a 3-Year Quality Improvement Initiative of Departmental Performance on Communication of Critical Test Results.”

FOCUS OF RSNA 2010 COURSE

The course, “Quality Improvement: Controversies and Opportunities for Communicating Results,” is part of the RSNA 2010 Quality Improvement Symposium to be held on Tuesday, Nov. 30, at RSNA 2010.

• Moderator Scott Gazelle, M.D., M.P.H., Ph.D., “What Should We Be Doing? How Can It Be Achieved?”

• Ramin Khorasani, M.D., M.P.H., “What Lies Ahead?: Leveraging IT to Improve Results Communication”

• Leonard Berlin, M.D., “What Are the Real Implications of Failure to Communicate Abnormal Results?”

To register for this and other RSNA 2010 courses, go to RSNA.org/register.

In 2006, Bringham and Women’s Hospital adopted standards for communicating critical test results that utilized a color-coded system for categorizing the urgency of those results. One of the policy’s developers, Ramin Khorasani, M.D., M.P.H., reported on the program’s effectiveness in the RSNA 2009 presentation, “The Impact of a 3-Year Quality Improvement Initiative of Departmental Performance on Communication of Critical Test Results.”

“Each facility should begin by defining what is critical and then establishing urgency levels around findings that are immediately life threatening.”

Ramin Khorasani, M.D., M.P.H.
Take in Chicago's Heights, Sights at RSNA 2010

From the spectacular view offered by the tallest building in the Western Hemisphere to the stunning array of art, theater, and music, Chicago offers a myriad of events and attractions sure to please everyone attending RSNA 2010.

RSNA Tours & Events
RSNA is sponsoring a series of tours and events during RSNA 2010. The RSNA Tours & Events brochure is available at RSNA2010 RSNA.org. Please look for the RSNA Tour icon next to event listings in this article, signifying that a pre-arranged RSNA package is available. Email for tours and events online when registering for the annual meeting or while adding courses.

Save Money. Avoid Ticket Lines with CityPass
A CityPass ticket booklet containing admission tickets to the Shedd Aquarium, Adler Planetarium, Field Museum and Museum of Science and Industry, as well as the Hancock Observatory or Skydeck Chicago, is available for $69 and can save you up to 49 percent on admissions and allows you to skip ticket lines at each venue. Once you start using the CityPass, you have nine days to visit all of the included attractions. Visit www.citypasschicago.org/ for details.

BE SURE TO CHECK OUT OUR INSIDER’S GUIDE TO CHICAGO’S BEST DEALS ON PAGE 16.

Museums
Art Institute of Chicago
The Art Institute’s world-renowned permanent collection includes a noted-worthy exhibition of surrealist paintings and impressionist art not showcased in the stunning Modern Wing, which opened in 2009. The 254,000 square foot addition elevates the Art Institute of Chicago to the position of second-largest U.S. art museum and allows the museum to exhibit a larger portion of its vast collection. The special winter exhibitions include Ancient Chinese Bronzes from the Shouyang Studio: The Katherine and George Fan Collection and Looking after Louis Sullivan: Photographs, Drawings, and Fragments.

Field Museum
While visiting The Field Museum, say hello to Sue, the largest, most complete and best preserved Tyrannosaurus rex fossil ever discovered. Favorite Field exhibits include Evolving Planet, the Crown Family Play Lab for children and the Eisele & Young 3-D Theater. • 1400 S. Lake Shore Dr. • 1-312-922-9410 • www.fieldmuseum.org

Smith Museum of Stained Glass Windows
Located on the east end of Navy Pier, this free museum houses the nation’s largest permanent collection of Tiffany stained glass windows. The museum has more than 150 stained glass works by artists including John LaFarge, Louis Sullivan, Louis Comfort Tiffany, Frank Lloyd Wright, Franz Mayer and F.X. Zettler. Admission is free and public tours are offered at no extra charge most Thursdays at 2 p.m. • 680 E. Grand Ave. • 1-312-595-7437 • www.navypier.com

Museum of Contemporary Art
The MCA’s permanent collection represents trends in art after 1945, with a special emphasis on Surrealism (1940s and 1950s), Minimalism (1960s), conceptual art and photography (1960s to the present), installation art and art by local artists. The collection includes paintings, sculpture, photography, video, film and installations. This winter, MCA will feature two special exhibitions—Susan Philipsz: We Shall Be Aland and Luc Tuymans: + Wired. Museum of Contemporary Art • 220 E. Chicago Ave. • 1-312-280-2660 • www.mcaHAM.org

Shedd Aquarium
The Shedd Aquarium is home to aquatic life from around the world, with a special emphasis on crowd favorites such as sharks, Belugas whales, dolphins, seahorses, otters and seals. Penguin petting is a must. The Shedd, a principal part of the Museum Campus, is a tasteful blend of contemporary and 1930s architecture situated on the shore of Lake Michigan. • 1200 S. Lake Shore Dr. • 1-312-939-2488 • www.shedd aquarium.org

Adler Planetarium
Planetarium visitors now can view the newly restored Gemini 12 spacecraft in the Shorer for the Moon exhibit, where cutting-edge technology helps tell the story of America’s part in the space race. Planetarium shows play continuously throughout the day in two theaters. The Adler Planetarium is located on a scenic section of the Museum Campus jutting into Lake Michigan. • 1300 S. Lake Shore Dr. • 1-312-922-7827 • www.adler planetarium.org

Peggy Notebaert Nature Museum
Perched on the edge of a Lincoln Park lagoon, this Chicago museum welcomes children of all ages to explore nature in unusual and innovative ways. Notebaert visitors love the majestic beauty of the Butterfly Haven. • 2430 N. Cannon Dr. • 1-773-755-5100 • www.chisot.org

Museum of Science and Industry
The Museum of Science and Industry is one of Chicago’s most popular tourist destinations and ranks among the seven most visited museums in the U.S. It is the only remaining building from the 1893 World’s Columbian Exposition. Permanent exhibits include the US-505 World War II submarine, the Coal Mine, Colleen Moore’s Fairy Castle and the Henry Crown Space Center. In Smart Home: Green & Wired, eco-friendly living is demonstrated that has been erected on the museum’s property. Annual seasonal exhibits include the Christmas Around the World and Holidays of Light. • 57th St. and Lake Shore Dr. • 1-773-684-1414 • www.msichicago.org

Chicago History Museum
The Chicago Historical Society has created an urban museum that presents the fascinating multicultural heritage of the region in creative, up-to-date exhibits. The museum’s collection includes over 22 million artifacts and documents. Check the website for neighborhood tours, lectures, performances and events. • 1601 N. Clark St. • 1-312-642-4600 • www.chicagohs.org

Lincoln Park Conservatory
A tropical oasis features greenery from around the world. Seasonal features include a Christmas show in December. • 2391 N. Stockton Dr. • 1-312-742-7776 • www.chicagoparkdistrict.com/index.cfm

Garfield Park Conservatory
A holiday flower show is presented by the Garfield Park Conservatory, built in 1907. The conservatory was designed by architect Jens Jensen and is one of the world’s largest gardens under glass. • 900 N. Central Park Ave. • 1-312-746-7100 • www.garfield conservatory.org

Millennium Park Ice Rink
After strolling through stunning Millennium Park, take a spin on the ice rink. Skating is free and skate rental is $9. • East side of Michigan Avenue Between Washington and Madison streets • 1-312-742-1168 • www.millenniumpuck.org

Theater
Aurélia’s Oratorio
Performance art in the spirit of French cirque nouveau. • Chicago Shakespeare Theater • 800 E. Grand Ave. • 1-312-595-5600 • www.chicagoshakes.com

Billy Elliot
Eilon John’s musical about a boy from an English mining town with passion and flair for ballet. • Fund Center for the Performing Arts • 24 W. Randolph St. • 1-312-902-1400 • www.tickemaster.com

Global Rhythms VI
The Chicago Human Rhythm Project brings their dynamic vitality to the stage. • Harris Theater • 205 E. Randolph Dr. • 1-312-337-7777 • www.harristheaterchicago.org

From the spectacular view offered by the tallest building in the Western Hemisphere to the stunning array of art, theater, and music, Chicago offers a myriad of events and attractions sure to please everyone attending RSNA 2010.
Family Activities

American Girl Place
Shoppers at American Girl Place may choose among the beautiful dolls. Call to make a reservation for lunch, tea or dinner.

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

Wicked
The world renowned Lyric Opera of Chicago performs in one of North America’s most beautiful opera houses, the Civic Opera House, which opened in 1929. Tickets go on sale in August. Productions include:

- A Masked Ball
  November 10

- Politics and infidelity meet head on as the plot to assassinate the Swedish king unfolds. By Giuseppe Verdi; Conductor: Asher Fisch, with Mark Delavan, Frank Lopardo and Sondra Radvanovsky.

- 20 N. Wacker Dr.
  1-312-332-2244 x1600
  www.lyricopera.org

The Insider's Guide to Chicago's Best Deals
Take advantage of the many great deals and free activities available at many of the city's most popular destinations. Here is a rundown of the best free attractions in town along with their “free” days and times.

- Chicago History Museum (Monday)
- Museum of Contemporary Art, 220 E. Chicago (Tuesday)
- Burnley-Persky House Museum, 1363 N. Astor St. (Wednesday)
- Clarke House Museum, 1827 S. Indiana Ave. (Thursday)
- Glessner House Museum, 1363 N. Astor St. (Wednesday)
- Art Institute of Chicago, 111 S. Michigan Ave. (Thursday evenings, 5-9 p.m.)
- Chicago Children's Museum (Tuesday)
- 220 S. Michigan Ave.
  1-312-294-3000
  www.icultural.org

Lyric Opera of Chicago
The world renowned Lyric Opera of Chicago performs in one of North America’s most beautiful opera houses, the Civic Opera House, which opened in 1929. Tickets go on sale in August. Productions include:

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- 20 N. Wacker Dr.
  1-312-332-2244 x1600
  www.lyricopera.org

Chicago Children’s Museum
This museum is committed to creating a community where play and learning connect. More than 12 interactive exhibits and new programs offer hours of creative play. Hands-on exhibits are creatively focused on science, literacy, humanities and the arts.

- 700 E. Grand Ave. (on Navy Pier)
  1-312-464-7732
  www.childrens Museum.org

Wicked: A Masked Ball
The Navy Pier IMAX theatre will announce its complete holiday film schedule in late autumn.

- 700 E. Grand Ave.
  1-312-599-SMAX
  www.imax.com/chicago

Macy's Holiday Windows A winter favorite for many is taking the family to view the animated window displays installed for the holidays at the Macy's store at 111 N. State Street.

- McDonald's Thanksgiving Parade Santa Claus, Ronald McDonald and many other characters and personalities will march down State Street on Thanksgiving Day for the annual parade from 8:30–11 a.m. Watch gigantic inflatables in the sky, wave at floats and join in with marching bands.

- Christkindlmarket Chicago and the Santa House
Christkindlmarket Chicago is the largest and most renowned German winter holiday market in the U.S., attracting visitors from the city and around the world. Santa is available for wish lists and pictures every day at the Santa House. Christkindlmarket is located on Daley Plaza between Washington and Dearborn Streets.

- Lincoln Park Zoo
The Lincoln Park Zoo is the oldest zoological garden in the country, as well as one of the most modern. Casting a festive glow over the zoo grounds, the ZooLights Festival is a popular nighttime attraction. This event is open Friday through Sunday evenings.

- 2200 N. Cannon Dr.
  1-312-742-2000
  www.jspoco.com

- Willis Tower Skydeck
Thrill-seekers are invited to experience the Skydeck and glass-enclosed Skydeck Ledges with glass floors and stunning view of the city. The Willis Tower, formerly the Sears Tower, is the tallest building in the Western Hemisphere.

- 335 S. Wacker Dr.
  Enter Skydeck on Jackson Boulevard
  312-875-9447

- Shedd Aquarium, 1200 S. Lake Shore Dr. (Shore Dr. (Nov. 22, 23, 29, 30)

- Navy Pier, 700 E. Grand Ave. (Thursday, 5–8 p.m. and first Wednesday)

- Lincoln Park, 2200 N. Cannon Dr.

- Great Basin, 2200 N. Cannon Dr.

- Pilsen, 2200 N. Cannon Dr.

- 875 N. Michigan Ave.

- Navy Pier, 700 E. Grand Ave.

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RESEARCH & EDUCATION FOUNDATION DONORS
The RSNA Research & Education Foundation thanks the following donors for gifts made May 11 – June 11, 2010.

Visionaries in Practice
A giving program for private practices and academic departments

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PRIORITY TAX혜러
In appreciation for funding support, the R&E Foundation provides special recognition and benefits to VIP practices and practice members. RSNA 2010 includes:
- Access to the R&E Donor Lounge
- Practice name and logo recognition in the R&E Pavilion
- Discounts at the RSNA Education Store
- Priority tax benefits

For more information to share with your practice, see the VIP video at RSNA.org/VIPgiving Crowley & 1-630-590-7760 or rswalter@rsna.org.

VIPS Invest in R&D for the Specialty
Sign Up by September 30 to Receive Full Benefits at RSNA 2010

More than 20 private practices and academic departments across the country are investing in RSNA Research & Education (R&E) Foundation grant programs to fund a critical research and development pipeline for the specialty. The Visionaries in Practice (VIP) Program recognizes the link between today’s research and tomorrow’s practice, as well as the importance of strong residency and fellowship training programs to build tomorrow’s workforce. By investing in the R&E Foundation, groups fund radiologic research to sustain the advancements that built their practices.

In appreciation for funding support, the R&E Foundation provides special recognition and benefits to VIP practices and practice members. RSNA 2010 includes:
- Access to the R&E Donor Lounge
- Practice name and logo recognition in the R&E Pavilion
- Discounts at the RSNA Education Store
- Priority tax benefits

For more information to share with your practice, see the VIP video at RSNA.org/VIPgiving Crowley & 1-630-590-7760 or rswalter@rsna.org.

11-2012 R&E GRANT APPLICATION PROCESS OPENS SOON
People interested in obtaining RSNA Research & Education (R&E) Foundation grants for 2011-2012 can begin submitting their applications starting in October. For more information, go to RSNA.org/Foundation or contact Scott Walter, M.S., Assistant Director, Grant Administration at 1-630-571-7816 or swalter@rsna.org.

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Journal Highlights

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

Imaging Evaluation of Penetrating Neck Injuries

Selective surgical management based on results of physical examination and CT angiography (CTA) is the current approach to penetrating neck injuries, which is a significant source of morbidity and mortality. Because the CTA results often help determine the need for surgery or further evaluation with endoscopy, esophagography and conventional angiography, radiologists should be prepared to provide management recommendations on the basis of CTA findings.

In a review in the July-August issue of RadioGraphics, RSNA.org/RadioGraphics, Scott D. Stenzel, M.D., and colleagues from the University of Maryland Medical Center and R. Adams Cowley Shock Trauma Center in Baltimore discuss the evolution of the diagnosis and management of acute penetrating neck injuries. Specifically, the authors:

• Review historical and current management
• Discuss the role of imaging in evaluation
• Present the imaging appearances of various injuries with a special focus on multidetector CTA

“At an appreciation of the value, roles, and limitations of multidetector CTA and other imaging modalities can position the radiologist as a vital participant in the care of patients with penetrating trauma to the neck,” the authors write.

Online Datasets Featured in RadioGraphics Articles

In the July issue of RadioGraphics (RSNA.org/RadioGraphics), online readers can access a new feature, interactive datasets, in two articles: “Imaging Evaluation of Penetrating Neck Injuries” (see above) and “Acute Traumatic Aortic Injuries: Posttherapy Multidetector CT Findings.”

Online readers who click the interactive Image Dataset links can explore the article’s original image data, including multiplanar reformations and even prebuilt volume-rendered models, for selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures. Users can adjust window/level/zoom and imaging plane as selected figures.

Done in the reading room. The RadioGraphics’ image above is featured in one of the datasets. RadioGraphics welcomes your comments. Send them to reprints@rsna.org.

Early-Stage Invasive Breast Cancers: Potential Role of Optical Tomography with US Localization in Assisting Diagnosis

US-guided optical tomography holds promise as an adjunct to diagnostic mammography and ultrasound for distinguishing early-stage invasive breast cancers from benign lesions, researchers have found.

In the study of 178 women ages 21-89 who underwent US-guided biopsy with a handheld probe consisting of a co-registered US transducer and an near-infrared (NIR) imager, Quing Zhu, Ph.D., of the University of Connecticut Fairfield, and colleagues assessed tumor angiogenesis based on calculated total hemoglobin concentration (tHb) correlated with core biopsy results. The maximum and average tHb levels were significantly higher in the malignant groups, the proliferative lesion group and the other benign group than those in the control group, results showed.

“ImanisIR tHb contrast holds promise as an adjunct to diagnostic mammography and US for distinguishing early-stage invasive breast cancers from benign lesions,” the authors write. “The tHb contrast may also help to distinguish some high-risk proliferative lesions from nonproliferative lesions.”

Continued on next page

RadioGraphics in Public Focus

A news release promoting grants awarded by the R&E Foundation in 2010 was distributed to the media. Press releases have been sent to the medical news media for the following articles appearing in the latest issue of RadioGraphics.

Localized Development of Knee Osteoarthritis Can Be Predicted from MR Imaging Findings a Decade Earlier

Localized knee osteoarthritis (OA) developed from risk factors identified from MR imaging findings performed a decade ago in patients with subacute knee symptoms and did not depend on the surgical treatment of those findings, according to researchers.

Using a mean follow-up period of 10 years, Kasper Huetink, M.D., and colleagues from Leiden University Medical Center in the Netherlands, conducted a follow-up study of 326 patients from a previously reported series of 855 patients regarding the effect of MR imaging–guided treatment for subacute knee problems. Researchers compared initial findings and treatment with the follow-up radiograph and 3.0-T MR image findings. Odds ratios, with corresponding 95 percent confidence intervals, were used to identify the effects between variables.

Treatment of meniscal tears, particularly partial meniscectomy, does not decrease the risk of developing the features of OA demonstrated on radiographs or 3.0-T MR images, researchers found.

“In summary, irrespective of treatment, the risk factors seen on knee MR images resulted in localized development of OA 10 years later,” the authors write. “The different patterns of developing OA are determined according to the initial ACL and meniscal injuries and can be explained by musing changes in biomechanical loading.”
Radiology in Public Focus

Continued from previous page

Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2,003 Patients

Although CT angiography (CTA) is currently the modality of choice to diagnose pulmonary embolism (PE), researchers have found that CTA may be unnecessary in patients with no thromboembolic risk factors.

In a retrospective study of 2,003 patients who underwent CTA for possible PE between July 2004 and February 2006 for thromboembolic risk factors, results showed that CTA was negative for PE in 1,806 (90.16 percent) of 2,003 patients. Among the 197 patients with CTA positive for PE, 192 (97.46 percent) had one or more risk factors. When combined with negative D-dimer test results, researchers found the risk for a CTA positive for PE to be even lower.

“The setting of no risk factors, it is extraordinarily unlikely (0.95 percent chance) to have a CT angiogram positive for PE,” the authors conclude. “This selectivity and triage step should help reduce current costs and radiation exposure to patients.

Journal Highlights

Multiparametric Imaging of Tumor Response to Therapy

Continued from Page 19

of the Clinical Imaging Sciences Centre, Brighton and Sussex Medical School at the University of Sussex, England, appraised the current evidence on multiparametric imaging for assessing tumor biology and therapy response and discuss challenges to widespread clinical use. Specifically, the authors discuss:

• Multiparametric imaging for assessing therapy response
• Use of multifunctional imaging approaches
• Imaging depiction of tumor biology

RadiologyInf.org Debuts on Facebook

RadiologyInf.org, the public information website sponsored by the RSNA and the American College of Radiology, recently launched a Facebook page that offers announcements about new content, notifications about the latest radiology news and updates on other additions to the site. Go to Facebook.com/radiologyinf.

Media Coverage of RSNA

In June 2010, media outlets carried 398 RSNA-related news stories. These stories reached an estimated 321 million people.

A story about radiation from medical imaging procedures carried on the Associated Press newswire mentioned a previously published study on reducing cardiac CT radiation exposure from coronary CT angiography (Radiology 2010;254:498-506) and cited the RSNA-American College of Radiology patient information website, RadiologyInf.org, as a resource for consumer information on the topic.


August Outreach Activities Focus on Imaging During Pregnancy

In August, the RSNA will distribute the “60-Second Checkup” audio program to nearly 100 radio stations across the U.S. The segments will focus on imaging of pregnant women.

RadiologyInf.org Debuts on Facebook

RadiologyInf.org, the public information website sponsored by the RSNA and the American College of Radiology, recently launched a Facebook page that offers announcements about new content, notifications about the latest radiology news and updates on other additions to the site. Go to Facebook.com/radiologyinf.

RADIOLOGY, RADIOGRAPHICS ABSTRACTS AVAILABLE FOR KINDLE

Abstracts of articles from current Radiology and Radiographics issues are now available exclusively at the Amazon Kindle Store www.amazon.com/kindlstore.

The monthly subscription rate is $19.99 and includes a 14-day free trial and automatic wireless delivery.

Both RSNA titles are featured as “Kindle Blogs,” which offer abstracts from the journals’ latest research. Separate feeds will soon become available for published ahead of print and subabstracts exclusively from both journals. For more information, go to RSNA.org/journals.

For Your Benefit

Discounts Available on Refresher Course Bundles

RSNA 2009 refresher courses CD-ROMs are now available.

Refresher courses range from discussions of current-edge technology and techniques to reviews of standardized imaging protocols. Examples include “Renal Artery Disease,” “Sinus Imaging,” “Advanced Neurovascular MR Angiography,” “Emerging Techniques in Musculoskeletal Imaging” and “CT Imaging—Advanced Applications.”

For a limited time, RSNA is offering discount pricing on select refresher courses from past annual meetings. The three CD Pancreas Collection (BUN01) and Thyroid Collection (BUN03) are specially discounted at 25 percent off the original bundled price. The discounted price is $90 for members; $130 for non-members. The offer expires October 31.

To browse refresher courses by sub specialty, go to RSNA.org/Education. To order CD online, go to RSNA.org/orderCDs and enter the appropriate bun number into the Product Code area. For more information, contact the RSNA Education Center at 1-800-272-2900.

Member Question of the Month

What’s the best Chicago tourist attraction you’ve visited while in town for the RSNA annual meeting?

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

Fellowship Provides Needed Non-vascular Interventional Exposure

Temiopo Bello, M.B.B.S., of Osogbo, Osun State, Nigeria, recently completed a Derek Harwood-Nash International Fellowship at the Mallinckrodt Institute of Radiology at Washington University in St. Louis.

“On my return back home, the area of my training that will have immediate maximal impact is non-vascular interventional procedures under CT or ultrasound guidance,” he said. “This will include biopsies, percutaneous drainages, ultrasound-guided sclero therapy and some musculoskeletal procedures, especially those for pain relief. My exposure to these procedures has been excellent.”

Dr. Bello’s experience will help him develop a vascular interventional radiology section in his hospital back home and also improve his teaching and research capabilities and clinical practice.

“It has been an opportunity for me, and I want to thank the RSNA for the opportunity.”

Real Estate, Retirement Focus of RSNA 2010

Financial Seminars

Navigating challenging economic times requires an evolving financial strategy and updated tools to stay ahead of the curve, according to two experts scheduled to present financial seminars at RSNA 2010.

“Effective Real Estate Investment Strategies,” to be presented by J. Michael Mcdy, M.B.A., an investor and commercial real estate developer for more than 15 years, on Saturday, Nov. 27 at McCormick Place. The course is designed to provide a strong foundation and working knowledge of real estate, including finding, evaluating, financing, acquiring and selling investment properties.

The second seminar, “Asset Protection and Retirement Planning in the New Era,” offering information on dealing with retirement and real estate plans and protecting assets from creditors, will be presented by Barry Rubenstein, B.S., J.D., L.L.M., a practicing attorney and former adjunct professor of taxation at the College of Business at the University of Oregon, on Monday, Nov. 29.

These seminars do not qualify for AMA PRA Category 1 Credit™. Additional fees apply and you must be registered for RSNA 2010 to enroll.

To register, go to RSNA.org/register. For more information, contact the RSNA Education Center at 1-800-381-6640 x772 or e-mail Samantha Comerford at scomerford@rsna.org.
Annual Meeting Watch

Enroll Now for Courses
Course enrollment for RSNA 2010 is under way. Online enrollment occurs instantly, while faxed or mailed registration forms are processed in the order they are received. The RSNA 2010 Advance Registration, Housing and Course Enrollment brochure was mailed in late June and is also available at RSNA.org/register. Use this brochure to make the most of your RSNA 2010 experience. RSNA has organized the information in the course brochure to help you complete your enrollment in just a few steps. Find the courses you need, build your schedule and enroll quickly and easily online or via the print form.

Guarantee Your Seat!
Tickets are required for various meeting components, including refresher, multisession and financial courses, informatics workshops and RSNA tours and events.

NEW AT RSNA 2010: Onsite course ticketing has been eliminated. All ticketed courses must be confirmed prior to November 24 to guarantee a seat. RSNA ticketed courses fill up fast, so ensure you get the courses you need by enrolling at RSNA.org/register. Registrants without tickets will be allowed entrance into a course after all ticketed registrants have been seated.

Early Sessions Offered
Some Controversy, Hot Topic and Special Interest sessions (formerly known as special focus sessions) will be offered at 7:15 a.m. Information about these sessions is available in the RSNA Meeting Program online. Tickets are not required. RSNA provides complimentary sunrise inbound shuttle services to McCormick Place Sun-rise Park Monday through Friday. Shuttles leave beginning at 6:30 am from designated pick-up locations for each hotel.

City of Chicago Offers “Sweet Deals”
The City of Chicago offers RSNA 2010 attendees amazing deals on everything from restaurants and shopping to entertainment and attractions. Take advantage of Sweet Deals, Chicago, and enjoy these exclusive offers when you use any American Express® Card at participating merchants. For more information, go to www.choosechicago.com.

Receive Registration Materials Prior to the Meeting
RSNA will mail registration materials in advance of the annual meeting to all North American attendees who register by November 5. RSNA will mail materials in advance to international attendees whose registration was received by October 22.

See New Technologies at RSNA 2010
The Technical Exhibition at the RSNA annual meeting will span three exhibit halls and feature nearly 600 exhibitors representing the best in radiologic technology around the world.

RSNA 2010 Registration
How to Register
There are four ways to register for RSNA 2010: 1 INTERNET Go to RSNA.org/register 2 FAX (24 hours) 1-800-521-6017 3 TELEPHONE (Mon.-Fri. 8:00 a.m. - 5:00 p.m. CT) 1-800-381-6660 x7862 4 MAIL Expirient/RSNA 2010 568 Aurium Drive Vernon Hills, IL 60061 USA

Use Visa or MC only. Payment in US funds only.,
Bring your existing RSNA Annual Meeting Watch for the 2011 Annual Meeting for a chance to win complimentary registration. A limited number of watches will be available. See you in Chicago for the 2011 Annual Meeting and Exhibition.

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**Writing a Competitive Grant Proposal**

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

A limited number of seats are available for this 15-day intermediate-level course that combines didactic and small group interactive sessions and is designed to help radiologic researchers understand and apply the key components of writing a competitive grant proposal. Topics to be covered are the NIH grant review process, developing specific aims, and funding opportunities.

Guided by a faculty of leading researchers with extensive experience in all aspects of grant applications and funding, the program will focus on developing realistic expectations of and tools for getting started on the grant process. Faculty includes: G. Scott Gazelle, M.D., M.P.H., Ph.D., Massachusetts General Hospital in Boston, Robert Nordstrom, Ph.D., of the National Cancer Institute, Ruth Carlos, M.D., of the University of Michigan Health System in Ann Arbor, and Elizabeth Barnes, M.D., M.P.H., of the University of Wisconsin in Madison.

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

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**Mobile Guide for iPhone Tracks Exam Information**

Dolbey’s Fusion Suite is a fully integrated, enterprise-wide set of products that address the more than 60 exhibiting companies at-
tending the RSNA Technical Exhibit. Dolbey’s Fusion Suite* of enterprise-wide products. Through integration with MRS, radiologists can use Fusion Expert to dictate and the recognized text automatically populates the MRS reporting segments, eliminating the need for manual entry and speeding up the reporting process. Fusion Suite is a fully integrated, enterprise-wide set of products that include innovative software and hardware for dictation, speech recognition and computer-assisted coding.

Fusion Suite has a quick-fetch technique that allows the user to quickly review only the fields within the individual exam pages, the information is compiled into a quick-fetch technique that allows the user to quickly review only tech-
Access RSNA Position Statements on myRSNA®

With continuing media scrutiny on issues like radiation dose and mammography screening guidelines, radiology professionals need to know how to respond to the press and/or the public about these sensitive topics.

To aid that process, RSNA now offers members point-by-point position statements on four such issues—screening mammography, medical imaging errors, radiation dose, and appropriate utilization of medical imaging. The position statements were drafted by RSNA’s Board of Directors and Public Information Committee with assistance from Public Information Advis- sor Network members and other radiology societies.

To access RSNA’s position statements, log onto myRSNA®, click AddStuff on the top right-hand corner of the screen, scroll to RSNA Position Statements and click Add. The statements will appear on the main screen of your myRSNA home page each time you log in.

Free Site Offers Tools to Aid Radiology, Teaching, Learning

Targeting primarily residents and medical students, Learning Radiology.com offers access to high-quality resources and tools that support innovations in teaching and learning at all levels of science and technology. Launched in 2002, the site was conceived, designed, developed and published by William Herrig, M.D., vice-chair and radiology residency program director at Albert Einstein Medical Center in Philadelphia. Dr. Herri-g continues to manage, maintain and produce all content. LearningRadiology.com offers content including images, cases of the day and lectures. Video podcasts can be downloaded free through iTunes. No sign-in or registration is required for the free, commercial-free site.

COMING IN SEPTEMBER

In coming months, radiologists—especially those involved in clinical trials—can expect to use and evaluate image acquisition protocol drafts for quantitative results from scans. Next month, RSNA News will report on the groundwork involved in creating the protocols—including RSNA’s involvement—and how they will ultimately improve reproducibility of numerical data from scans across patients, scanners and timepoints.

Headlines

Remembering radiologic topics that made the news. This month’s feature: views of the specialty from around the world.

Kenya Summer 1992 Protocol for Adventure—RSNA Visiting Professor Relates Experiences in Kenya

Malaysia Summer 1993 Visiting Professor Describes the State of Radiology at the University of Malaysia

Lithuania Summer 1994 Visiting Professor Describes Radiology in Lithuania as Both Busy and Rewarding

Jamaica Summer 1996 Visiting Professor Tells of Experience in West Indies

India November 1998 RSNA Member Journeys to Rural India for 10-week Professorship

Bolivia July 2001 “Visiting Professors” Find Experience Rewarding

Thailand April 2002 RSNA Visiting Professor Calls Experience in Thailand “Valuable”

Guatemala June 2003 RSNA Visiting Professor Program Thrills Teachers as Well as Students

Argentina December 2004 RSNA Visiting Professors Share Experiences with Argentine Radiologists

Brazil January 2006 RSNA Visiting Professors Foster Teaching and Cultural Exchange in Brazil

Chile January 2007 Giving and Receiving Part of Experience for Visiting Professors in Chile

Greenland March 2007 Teleradiology Faces Ultimate Challenge on World’s Largest Island

Korea January 2008 Uganda Visit Inspires Ongoing Contribution

Australia May 2008 Australian Quality Program Quickly Yields Applicable Results

Kenya August 2008 E-Mentoring Program Offers Real-Time Global Radiology Education

China February 2009 Visiting Professors Find Modern Radiology Departments in China

Estonia February 2010 Visiting Professors Teach Radiology in Well-wired Estonia

Global Views on Hybrid Imaging, Dose Reduction Reported

International radiology panels, which have met at RSNA annual meetings since 2007 to discuss hybrid imaging, e-health initiatives and radiation dose reduction, have also been the subject of RSNA News coverage. “We learn from each other and, working together, we can advance biomedical imaging toward global imaging standards and harmonization,” RSNA President Hedvig Hricak, M.D., Ph.D., Dr. h.c., told the group gathered at RSNA 2009.

Crossword Answer

Here are the answers to the 20th anniversary crossword from our July 2010 issue. Missed the puzzle and still want to give it a try? Go to rsnanews.org to try an interactive version, complete with timer and optional clues. A new puzzle will be published in print and online with the September 2010 issue of RSNA News.

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