

Image Wisely™ Campaign Gaining Momentum

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January 2011 Volume 21, Number 1



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Drayer is RSNA President

BURTON P. DRAYER, M.D., an expert on CT and MR imaging of neurological disorders, is RSNA president for 2011.

Dr. Drayer is executive vice-president for risk at The Mount Sinai Medical Center in New York City and the Dr. Charles M. and Marilyn Newman Professor and chair of the Department of Radiology at The Mount Sinai School of Medicine. He served as president of The Mount Sinai Hospital from November 2003 to September 2008.

"My goals for 2011 are to enhance collaborations among radiology and non-radiology societies, as well as to extend the utilization and recognition of the RSNA's extensive technology platform," Dr. Drayer said. "I hope to accelerate our critically important research agenda by fostering the growth and quality of our journals, annual meeting program and Research & Education Foundation grant support, and I am committed to expanding RSNA's role in advancing radiation safety."

Before coming to Mount Sinai, Dr. Drayer was chair of the Division of Neuroimaging Research-Education at the Barrow Neurological Institute in Phoenix from 1986 to 1995.

Dr. Drayer's research has involved developing advanced imaging strategies to analyze brain iron, cerebral blood flow, contrast media safety, neurodegenerative disorders, brain infarction and multiple sclerosis. Dr. Drayer was elected to the RSNA Board of Directors in December 2003, was liaison for the annual meeting and technology until 2008, and served as chair and president-elect of the Board in 2009 and 2010, respectively.

Read "In 2011, the House of Radiology Must Work Together," in My Turn on Page 4.



Donaldson Becomes Board Chairman

RADIATION ONCOLOGIST Sarah S. Donaldson, M.D., is chairman of the RSNA Board of Directors for 2011.

Dr. Donaldson has been associate chair of the Department of Radiation Oncology at the Stanford University School of Medicine in Stanford, Calif., since 1997, where she is also the Catherine and Howard Avery Professor of Radiation Oncology.

"My primary goal as RSNA Board chairman will be to initiate a comprehensive review of the RSNA strategic plan," Dr. Donaldson said. "I will focus on education via the Internet, the international needs of radiologists, quality improvements in our field and strengthening RSNA's interactions with subspecialty societies. My intent is to listen and to hear the voices of all radiologists and address their concerns, while focusing on the issues identified as central to the RSNA strategic plan."

Dr. Donaldson also serves as deputy clinic chief and associate residency program director of radiation oncology at Stanford Hospital and Clinics. She is chief of radiation oncology service and a member of the medical board at Lucile Salter Packard Children's Hospital at Stanford, as well as the medical staff of the VA Palo Alto Health Care System. Dr. Donaldson served as the residency program director of radiation oncology at Stanford from 2001 to 2009.

At RSNA 1995, Dr. Donaldson presented the Annual Oration in Radiation Oncology, "Organ Preservation in Rhabdomyosarcoma: Fact or Fiction." She was elected to the RSNA Board of Directors in 2005 and had served as the Board liaison for publications and communications since 2006.



Ehman Named to RSNA Board

MR IMAGING EXPERT Richard L. Ehman, M.D., is the newest member of the RSNA Board of Directors. He will serve as the liaison-designate for science under N. Reed Dunnick, M.D., until Dr. Dunnick becomes RSNA Board Chairman in 2012.

Dr. Ehman is a professor of radiology at the Mayo Clinic in Rochester, Minn., and is a clinician-investigator in Mayo's Center for Advanced Imaging Research. He also holds joint appointments in physiology and biomedical engineering. He has been with Mayo since 1985.

"For me, the RSNA represents radiology in full force," Dr. Ehman said. "By truly reflecting the breadth and depth of radiology, RSNA has an essential role in helping to define the future of medical imaging."

Dr. Ehman is the inventor of MR elastography, a method for "palpation by imaging" recently introduced as a clinical diagnostic tool. Dr. Ehman led many early studies that explored potential applications of MR imaging in body, cardiovascular and musculoskeletal imaging. He is also credited with developing other technologies widely used in clinical MR, such as spatial presaturation to reduce flow artifacts and "navigator echo" to resolve structures in motion.

As principal investigator of multiple National Institutes of Health (NIH) R01 grants over the last two decades, Dr. Ehman has served as a referee on NIH study sections and chaired the Medical Imaging (MEDI) study section from 2002 to 2004.

Funding for one of Dr. Ehman's first research grants, "Development of a Comprehensive Method for High Resolution Magnetic Resonance Imaging of Moving Structures," came from the RSNA Research & Education (R&E) Foundation. Dr. Ehman now serves on the R&E Board of Trustees. RSNA honored Dr. Ehman with its Outstanding Researcher award in 2006.

Dr. Ehman was elected to the Institute of Medicine of the National Academies of Science in October 2010.



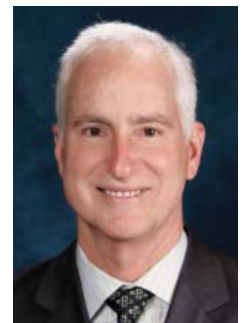
Bisset is President-Elect

GEORGE S. BISSET III, M.D., chief of pediatric radiology at Texas Children's Hospital and a professor of radiology and Edward B. Singleton Chair of Pediatric Radiology at Baylor College of Medicine in Houston, is the 2011 RSNA president-elect.

"I am looking forward to my tenure as president-elect, during which time I will also serve as secretary-treasurer," Dr. Bisset said. "The financial management of the RSNA is in excellent hands. I would like to add some new perspectives on improving our portfolio and providing some new insight into means for building our membership and membership programs."

Prior to his positions in Houston, Dr. Bisset was a professor of radiology and pediatrics, as well as a staff radiologist, at Duke University Medical Center in Durham, N.C., where he served as vice-chair of the Department of Radiology from 1995 to 2008. He was interim chair of the Department of Radiology at Duke from November 2008 to March 2010. Dr. Bisset also has served in academic positions in radiology and pediatrics at Tulane University School of Medicine in New Orleans and the University of Cincinnati College of Medicine.

Dr. Bisset served on the pediatric subcommittee of the RSNA Scientific Program Committee from 1990 to 1998 and chaired the Scientific Program Committee in 2001. He was elected to the RSNA Board of Directors in 2004 and has been the Board education liaison since 2005. In 2010, Dr. Bisset served as Board chairman.





McBride, Larson

ASTRO AWARDS GOLD MEDALS

The American Society for Radiation Oncology (ASTRO) has awarded David Larson, M.D., Ph.D., and William McBride, D.Sc., Ph.D., its 2010 gold medals at the society's recent annual meeting in San Diego.

A former ASTRO president, Dr. Larson is a professor in the radiation oncology and neurological surgery departments at the University of California San Francisco and co-director of the Gamma Knife Radiosurgery Program at Washington Hospital Healthcare System in Fremont, Calif. Dr. McBride is a professor and vice-chair of research for the Department of Radiation Oncology at the University of California Los Angeles.

Rubin, Baker Receive caBIG® Awards

Daniel Rubin, M.D., M.S., and **Nathan Baker, Ph.D.,** received the National Cancer Institute's 2010 Cancer Biomedical Informatics Grid (caBIG®) Connecting Collaborators Award at the recent caBIG annual meeting in Washington, D.C. The award recognizes an individual or organization working to connect multiple institutions in support of collaborative research. Dr. Rubin (right) is an assistant professor of radiology at Stanford University in Stanford, Calif., and a member of Bio-X and the Stanford Cancer Center. Dr. Baker is an associate professor of biochemistry and molecular biophysics at the Center for Computational Biology at Washington University in St. Louis. Dr. Rubin chairs RSNA's RadLex® Steering Committee.



University of South Alabama Names Brandon Chair Jeffrey C. Brandon, M.D., a professor of radiology at the University of South Alabama (USA) College of Medicine, has been appointed chair of USA's Department of Radiology.

Dr. Brandon has served as vice-chair of radiology and director of the residency program at USA since 1995. In addition, he was associate dean of continuing and graduate medical education, assistant dean of graduate medical education and a professor of physician assistant studies.



CORRECTION

An announcement in the December 2010 issue of *RSNA News* incorrectly stated the hospital affiliation of SNM award recipient Hossein Jadvar, M.D., Ph.D., M.P.H., M.B.A. Dr. Jadvar is an associate professor of radiology and biomedical engineering and the director of radiology research at the University of Southern California Keck School of Medicine in Los Angeles.



Numbers in the News

16.2

Number, in millions, of emergency department visits in 2007 that included a CT examination, according to a recent study. Attempts to limit inappropriate CT use will become more successful as more sophisticated and evidence-based decision models are used, researchers say. (Read "Radiology in Public Focus," Page 20)

20

Percent fewer lung cancer deaths among National Lung Screening Trial participants screened with CT versus standard X-ray. (Read "First Results of National Lung Screening Trial Discussed at RSNA 2010," Page 9)

1,707

Pledges signed, as of Jan. 4, via the Image Wisely™ campaign to increase awareness of adult radiation protection. (Read "Image Wisely" Campaign Gaining Momentum," Page 5)

3,000

Amount, in dollars, of a Canon U.S.A./RSNA Research Medical Student Grant awarded to Vignesh A. Arasu, B.S. Arasu's institution, the University of California, San Francisco, matched the grant to make it a total of \$6,000. (Read "Your Donations in Action," Page 15)

RADIOLOGYINFO.ORG HONORED

The RSNA/American College of Radiology public information website *RadiologyInfo.org* recently received one of five Aesculapius Awards of Excellence for health-related websites by the non-profit Health Improvement Institute.

The Aesculapius Award, named for the ancient Greek god of healing, is designed to promote and to encourage excellence in communication about healthy lifestyles, disease prevention and healthcare treatments.

RadiologyInfo.org

The radiology information resource for patients

My Turn

In 2011, the House of Radiology Must Work Together

AS I BEGIN my tenure as RSNA president, organized radiology and radiologists are facing a confluence of threats that could alter our privileged position in the medical enterprise. Uncertainty in the economic environment, healthcare reform, service line and institutional realignment of care, utilization management necessities, and controversy over radiation dose will make the coming decade an important time for our field. My job and that of my fellow RSNA Board members will be to sustain, clarify and expand the image and practice of our dynamic and innovative specialty.

The theme of the RSNA annual meeting in 2011 will be "Celebrate the Image." We will not only celebrate the miraculous images, but also, more importantly, the radiologists, technologists, imaging scientists and equipment vendors that have enabled extraordinary advances and translated them into safer and better patient care. We must take pride that our skills have changed the face of not only clinical diagnosis, but also early disease detection and advanced interventional therapeutics.

In 2011, the RSNA will further its commitment to its core mission of supporting enlightened education and innovative research. Our annual meeting must constantly evolve as the premier venue for North American and international radiologists to come together, create lifelong friendships, present the finest in education and research, and view the newest and most sophisticated equipment and information technology advances. The

educational and research robustness of our organization is directly related to the commitment and expertise of our volunteers for which all of radiology is grateful.

RSNA will also continue to support young radiology investigators through the Research & Education Foundation. My goal is to at least double our present 2 million dollars of annual grant funding over the next decade. The theme remains the same and is even more prescient in these turbulent times—no specialty can claim clinical excellence and ownership if it does not sustain a leadership role in innovative basic and translational research.

In an era of advanced communication, the RSNA must strongly support its publications. *Radiology* is the world's leading publication for communicating clinical and scientific advances in imaging, while *RadioGraphics* continues to uniquely educate radiologists and celebrate the elegance of the image. *RSNA News* has modified its format to even better provide up-to-date news and act as a guide to activities and people involved in our specialty. The radiology-wide "Image Wisely" campaign will be highlighted on the RSNA/American College of Radiology website *RadiologyInfo.org*.

This year RSNA will support and promote its information technology advances through interrelated projects enhancing workflow, connectivity, and quality improvement including decision support and data mining: myRSNA™, a valuable, configurable Web portal to support daily

professional productivity and educational activities; the RadLex® radiology ontology, the vocabulary and grammar supporting clinical systems and research; Structured Reporting, an improved dictation paradigm; the Integrating the Healthcare Enterprise (IHE®) initiative, a framework for multisystem interoperability including image sharing; and the Medical Imaging Resource Center (MIRC®), supporting development of research protocols and teaching files.

Finally, in disruptive times, it becomes even more important to remain close to our professional friends. The house of radiology must work together with exceptional collegiality to avoid minor internal disagreements. All radiology societies must provide a united front in advancing the needs of clinical radiology and the imaging sciences in North America and throughout the world. RSNA will play a leadership role in fostering this unity of purpose.

Burton P. Drayer, M.D., is RSNA President. Dr. Drayer is executive vice-president for risk at The Mount Sinai Medical Center in New York City and the Dr. Charles M. and Marilyn Newman Professor and chair of the Department of Radiology at The Mount Sinai School of Medicine.

To view Dr. Drayer's message to members on the RSNA Annual Meeting website, go to RSNA2011.RSNA.org/DrDrayerVideo.



IN MEMORIAM

Melvin M. Figley, M.D.

Melvin M. Figley, M.D., founding chair of the Department of Radiology at the University of Washington and known as one of the fathers of modern angiography, died on June 7, 2010. He was 89.

Dr. Figley, a thoracic and cardiovascular radiology expert who helped develop cardiac catheterization, served as editor of the *American Journal of Roentgenology* from 1976 to 1985. The Figley Fellowship in Radiology Journalism was established shortly after his tenure.

Holger T.A. Pettersson, M.D., Ph.D.

Holger T.A. Pettersson, M.D., Ph.D., known for his contributions to pediatric and skeletal radiology, died Nov. 3, 2010. He was 68.

Dr. Pettersson served as a professor of clinical radiology at the University of Lund, Sweden, since 1989 and was also the medical director for the Swedish region of Skåne. Dr. Pettersson was president of the European Congress of Radiology in 2001 and received RSNA Honorary Membership at RSNA 2000.



RSNA News

January 2011 • Volume 21, Number 1
Published monthly by the Radiological Society of North America, Inc.
820 Jorie Blvd., Oak Brook, IL 60523-2251. Printed in the USA.

POSTMASTER: Send address correction "changes" to: *RSNA News*, 820 Jorie Blvd., Oak Brook, IL 60523-2251

Non-member subscription rate is \$20 per year; \$10 of active members' dues is allocated to a subscription of *RSNA News*.

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Image Wisely™ Campaign Gaining Momentum

Launched at RSNA 2010, the Image Wisely™ campaign—which seeks to deepen understanding of adult radiation protection among radiologists, referring practitioners, medical physicists and radiologic technologists—is quickly gaining momentum. The widely publicized call to action during the recent RSNA Annual Meeting resulted in over 400 pledges on the first day, and more than 1,000 during its first two weeks.

ATTENDEES WERE ENCOURAGED to sign the pledge and pick up an “I Pledged to Image Wisely” ribbon at an Image Wisely booth throughout the week at RSNA 2010 or sign up on the newly launched website *ImageWisely.org*. The website posts the tally of pledges to date.

The campaign was launched at the “Current Issues in Radiation Safety” special interest session at RSNA 2010, where ACR-RSNA Joint Task Force on Adult Radiation Protection co-chairs James A. Brink, M.D., and E. Stephen Amis Jr., M.D., discussed the campaign’s objectives.

“Image Wisely seeks to raise awareness of opportunities to eliminate unnecessary imaging examinations and to lower radiation doses in those imaging examinations that are necessary to the minimum needed to acquire appropriate medical images,” Dr. Brink said.

- Those signing the pledge agree to:
- Put the patient’s safety, health, and welfare first by optimizing imaging examinations to use only the radiation necessary to produce diagnostic quality images
 - Convey the principles of the Image Wisely program to the imaging team in order to ensure that their facility optimizes its use of radiation when imaging patients
 - Communicate optimal patient imaging strategies to referring physicians and to be available for consultation
 - Routinely review imaging protocols to ensure that the least radiation necessary to acquire a diagnostic quality image is used for each examination

The campaign will initially focus on CT but will broaden to include nuclear medicine, fluoroscopy and radiography, Dr. Brink said.

Campaign Modeled on Image Gently™
RSNA is among the campaign’s charter members, along with the American College of Radiology

ON THE COVER
The Image Wisely™ campaign kicked off at RSNA 2010, where attendees visited educational booths.



Brink

Amis

(ACR), the American Association of Physicists in Medicine (AAPM) and the American Society of Radiologic Technologists (ASRT). The campaign is modeled in part on the successful Image Gently™ campaign initiated in January 2007 to encourage safe imaging of pediatric patients.

However, three levels of commitment are planned for Image Wisely. The first level involves taking a pledge to adhere to the principles of Image Wisely; the second level will involve becoming an accredited facility by the ACR or equivalent accrediting organizations with similar attention to radiation dose monitoring and control; and the third level of commitment will involve dose registry participation.

“Radiation awareness has increased exponentially in the last few years, but now Image Wisely is asking stakeholders to actually commit—by pledging their support and utilizing available radiation safety resources.”

James A. Brink, M.D.

“Radiation awareness has increased exponentially in the last few years, but now Image Wisely is asking stakeholders to actually commit—by pledging their support and utilizing available radiation safety resources,” said Dr. Brink, who noted that radiation exposure to society as a whole from CT scanning has increased 600 percent since 1980.

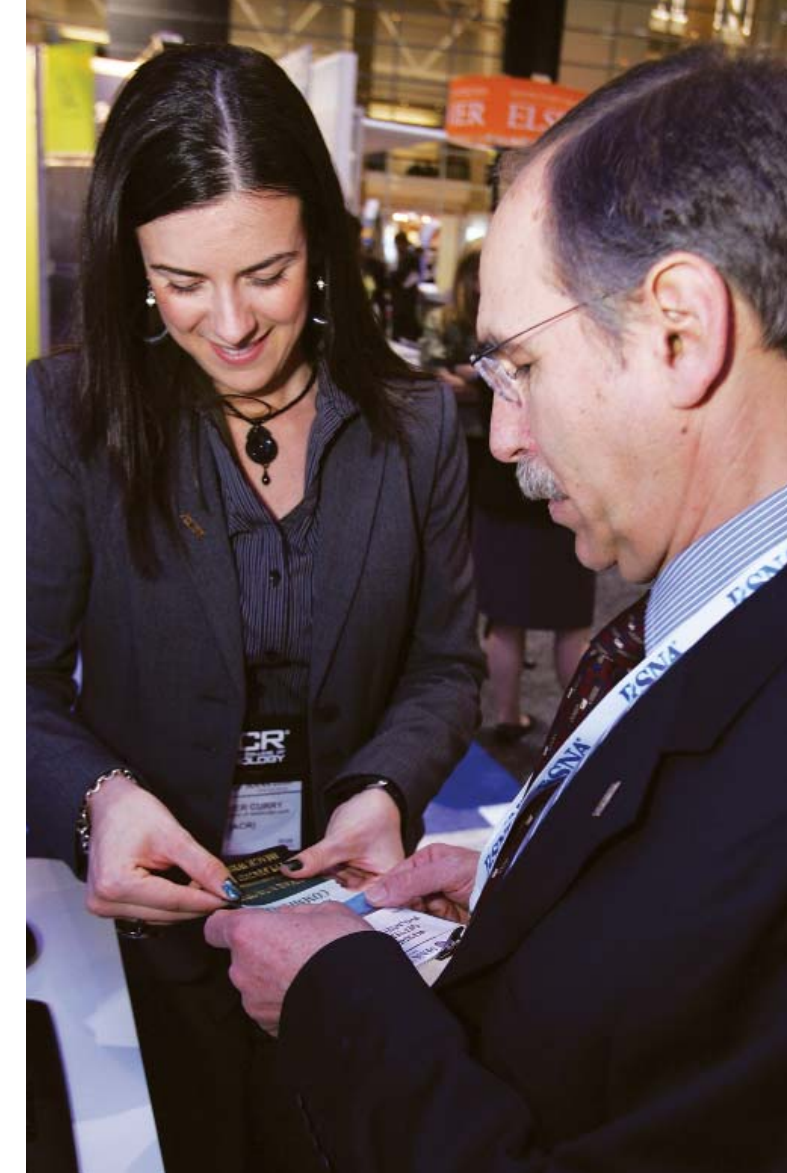
Along with developing educational resources for radiologists, medical physicists and technologists who provide medical imaging care within the U.S., program coordinators plan to relay the availability of these resources using a variety of electronic and print media and through networking with affiliated healthcare organizations, educational institutions and government agencies.

Website Offers User-friendly Resources

At *ImageWisely.org*, imaging professionals and referring physicians can download informational PDFs including Ionizing Radiation, Reducing Ionizing Radiation and Avoiding Ionizing Radiation. Another section addresses equipment issues, with links to vendor sites for CT dose guidelines.

For patients, the site provides a downloadable imaging history record (co-sponsored by Image Wisely and the U.S. FDA), a video on safe medical imaging, general information on radiation safety and quick links to educational resources. All patient-related information links to *RadiologyInfo.org*, the public information website developed and funded by RSNA and ACR. (See sidebar)

“Combined, these user-friendly resources will foster greater insight among imaging professionals, patients and the public at large, while underscoring the reality that radiation dose in adult imaging requires further study and is impacted by numerous factors,” Dr. Brink said. □



Attendees were encouraged to sign the Image Wisely™ Pledge and pick up an “I Pledged to Image Wisely” ribbon at an Image Wisely booth during RSNA 2010. Above: Warren B. Geffer, M.D., takes the Image Wisely pledge at the American College of Radiology booth.

WEBSITES OFFER PATIENT SAFETY INFORMATION

Physicians should be encouraged to refer patients with questions about imaging safety to *ImageWisely.org*, which features a short video on safe medical imaging that includes three important safety questions to ask before receiving an X-ray, CT scan, ultrasound or MR imaging procedure. Patients can download a free standard or wallet-size imaging card to track the date, type and location of their radiology exams. Answers to questions on imaging safety are also available by clicking on Radiology Benefits and Risks, which links directly to *RadiologyInfo.org*, the RSNA/ACR public information website featuring a series of brief, easy-to-understand presentations.



Radiology Researchers Diverse in Priorities and Challenges Worldwide

Diversity—in priorities, institutions and resources—is a challenge to radiology research around the world, according to a group of leading international radiologists.

EUROPE, ASIA, LATIN AMERICA AND THE U.S. were the focus of the International Trends meeting at RSNA 2010, which addressed issues including research funds, academic infrastructure, scientific paper publication and policy.

Latin America, it appears, lags behind the rest of the world in many of those areas, said Ricardo Garcia-Monaco, M.D., Ph.D., chair and professor of radiology at Hospital Italiano at the University of Buenos Aires, Argentina. While Mexico, Brazil and Argentina have the most monetary resources, there is a huge disparity between them and other Latin American countries, he said. Overall more resources must be focused on image-related research, Dr. Garcia-Monaco said. “Some hospitals in Latin America do good clinical research work, but there are very few examples compared to the U.S. and Western Europe,” he said.

Except for industry-sponsored investigation, few academic resources are devoted to imaging research, Dr. Garcia-Monaco said. He noted, however, growing interest among developed countries in integrating Latin America into international studies because of the increasing number of qualified researchers in the region.

Clinical, Biomedical Research the Focus in Europe

“Europe couldn’t be more diverse than it is, so it’s a challenge to summarize research on the continent,” said Gabriel Krestin, M.D., Ph.D., chair of the Department of Radiology at Erasmus MC, University Medical Center in Rotterdam, the Netherlands. While the U.S. publishes more papers than other regions, he said, there is considerable clinical work and biomedical imaging research occurring in Europe. The European Institute for Biomedical Imaging Research, for example, is involved in a cell imaging network and biomedical image analysis, he said.

Funding comes from diverse sources, but predominantly from industry and business enterprise, Dr. Krestin said. “Funding from the European Commission makes up a very small percentage.”

In terms of published research in Europe, radiology departments produce fewer imaging papers than other non-radiologic academic departments, Dr. Krestin said. Nevertheless, while the European Union publishes less research than the U.S., “We are doing quite well with less money, as the number of papers per inhabitant or related to gross domestic



product in some smaller European countries is higher than in the U.S.,” he added.

The higher priority and a greater share of funding are reserved for clinical work, Dr. Krestin said. In terms of the European Institute for Biomedical Imaging Research, the European Union does not provide coordinated funding, he said.

Research Funding a Challenge in Asia

Byung Ihn Choi, M.D., Ph.D., spoke of clinical research and academic center partnerships, and the funding to support them, under way in Asia. Dr. Choi presented the results of a molecular imaging survey. “We can see some hope in the future of Korean radiology,” said Dr. Choi, a past-president of the Korean Society of Radiology. “The question is, how can clinical research be funded?”

“The U.S. is open to any and all international partnerships. We welcome globalization.”

Mitchell D. Schnall, M.D., Ph.D.

A group of leading international radiologists discussed the challenges and opportunities facing researchers worldwide during the International Trends Meeting at RSNA 2010. Above: Burton P. Drayer, M.D. (far right), then RSNA President-elect, moderated the session.



The importance of international partnerships was stressed by Mitchell D. Schnall, M.D., Ph.D. (far right); Dominique Delbeke, M.D., Ph.D. (bottom), president of SNM, offered her viewpoint at the session.



Approximately 80 percent of funding for imaging currently comes from national programs, Dr. Choi said. “All clinical research should undergo review and be integrated into radiology training programs where possible,” he added.

U.S. Has Rich Trial Infrastructure

RSNA Board of Directors member N. Reed Dunnick, M.D., offered a perspective from the Department of Radiology at the University of Michigan in Ann Arbor. Externally funded, basic radiology investigations are conducted in the lab by researchers with doctorates. Translational research—which is externally funded—is increasing, and is conducted by researchers with medical doctor degrees and doctorates. Clinical research is conducted by researchers with medical doctor degrees and is “seldom funded,” Dr. Dunnick added.

“Funding does not cover the full cost of research,” Dr. Dunnick said. “Start-up funding and gap funding are not externally covered.”

Relatively few academic radiology departments have research programs that fulfill their true potential, Dr. Dunnick said. “We don’t do enough to train physician-scientists in radiology,” he added.

Compared to other countries, the U.S. has a “very rich infrastructure to support trial development,” said Mitchell D. Schnall, M.D., Ph.D., professor of radiology at the University of Pennsylvania. Dr. Schnall chairs the American College of Radiology Imaging Network (ACRIN), which he called a platform to enable rigorous, multicenter imaging trials. “Multicenter imaging trials will continue to grow in importance,” Dr. Schnall said.

The imaging research community needs to coalesce around important clinical problems while academic departments and community practices must embrace clinical trials as a critical component of their future, according to Dr. Schnall.

“The U.S. is open to any and all international partnerships,” Dr. Schnall said. “We welcome globalization.” □

RSNA Board of Directors member N. Reed Dunnick, M.D. (far left), offered a perspective on research at his own facility, The University of Michigan in Ann Arbor, while Jian-Ping Dai, M.D. (above), an RSNA 2008 Honorary Member, discussed the state of radiology research in China.

First Results of National Lung Screening Trial Discussed at RSNA 2010

A demographically appropriate population, uniformity among CT scanners and protocols and relatively low radiation doses to patients were all considered to be important aspects of the National Lung Screening Trial (NLST), according to investigators, who discussed potential ramifications of the trial results at a session during RSNA 2010.

“WE FOUND 20 percent fewer lung cancer deaths among trial participants screened with CT,” said Denise Aberle, M.D., principal investigator for NLST and a professor of radiology and bio-engineering at the David Geffen School of Medicine at the University of California, Los Angeles.

NLST compared CT with standard chest X-ray. “The primary endpoint was lung cancer-specific mortality, and we had 90 percent power to detect the 20 percent difference,” Dr. Aberle said.

An additional finding, which was not the main endpoint of the trial’s design, showed that all-cause mortality—deaths due to any cause, including lung cancer—was 7 percent lower in those screened with CT, the investigators noted.

The study, sponsored by the National Cancer Institute (NCI) and conducted by the American College of Radiology Imaging Network (ACRIN) and Lung Screening Study group, involved more than 53,000 current or former heavy smokers aged 55 to 74. Thirty-three institutions across the U.S. participated in the trial. Investigators said they took care to closely reflect the eligible U.S. population by comparing the demographics of their participants with those of the U.S. Census Department’s Tobacco Use Supplement (TUS) Survey of 2002-2004.

Persons enrolled in the study had no evidence of lung cancer at the beginning of the trial, but all had a smoking history of at least 30 pack years—calculated by multiplying the average number of packs of cigarettes smoked per day by the number of years a person has smoked. “We conducted targeted minority recruitment based on the TUS population,” Dr. Aberle said, noting that the final study population was ethnically representative of the high-risk U.S. population of smokers. “Nevertheless, the final NLST population may have been somewhat healthier than the TUS population in that they tended to be younger, better educated, and not current smokers,” she said.

NLST was launched in 2002 and has been under biannual review by the NLST Data and Safety Monitoring Board (DSMB), a group of independent experts appointed to ensure the safety of



Researchers conducting the National Lung Screening Trial (NLST) took care to closely reflect the demographics of the U.S. Census Department’s Tobacco Use Supplement Survey of 2002-2004, said NLST Principal Investigator Denise Aberle, M.D. (second from left), who participated in a panel discussion of the trial results during an RSNA 2010 session.

participants and determine if the primary scientific objective of the trial has been met. In October 2010, the DSMB determined that sufficient data had been collected to provide a statistically significant answer to the study’s primary objective. NCI concurred with the conclusion, enabling the release of initial results.

A team of physicists ensured as much uniformity as possible across scanners and protocols, and sought to achieve relatively low radiation doses to patients. “We’ve demonstrated that acceptable chest CT screening can be accomplished at a small fraction of the dose of standard chest CT,” said Frederick J. Larke, M.S., a medical physicist and associate

“The primary endpoint was lung cancer-specific mortality, and we had 90 percent power to detect the 20 percent difference.”

Denise Aberle, M.D.

professor of radiology at the University of Colorado.

The study’s findings should not be interpreted to mean that the general population should now get regular CT scans, the investigators noted. They emphasized that the results apply to a high-risk population and noted the potential risks of repeated CT screens to otherwise healthy people, particularly women due to breast irradiation. They also discussed the implications of false-positive results, noting that CT in general yields relatively higher false positive rates than standard chest X-ray.

Added Dr. Aberle: “It behooves us to remember that although we saw a 20 percent mortality reduction, clearly the greatest way to prevent lung cancer mortality is elimination of tobacco use.”

More data are forthcoming about quality of life—including patient anxiety about screening—as well as screening’s effects on smoking behavior, healthcare utilization and cost effectiveness, said Constantine Gatsonis, Ph.D., a professor of biostatistics and Director for Statistical Sciences at Brown University. The cost-effectiveness study takes into account non-medical expenses associated with screening, such as lost wages and travel and lodging. In addition, the researchers have begun to examine radiation risks from consecutive screening, creating risk models for serial scans. The investigators noted a relatively higher risk to female participants due to the absorption of breast tissue. The implications of further imaging for false-positive scans will be discussed in a forthcoming manuscript, Dr. Aberle said.

The study also yielded a biospecimen repository for the study of lung cancer biomarkers, said Dr. Gatsonis, who is the lead statistician within the American College of Radiology Imaging Network (ACRIN). “This is a very rich bank of blood, urine and sputum samples, and it’s complemented by pathology specimens,” he said.



When possible, the tissues procured for microarrays included the predominant and secondary histologies of the primary lung cancer, surrounding normal lung tissue and resected metastases. The NLST-ACRIN Biorepository will provide a unique resource of specimens for molecular characterization, Dr. Gatsonis said. The goal is to validate biomarkers that can predict preclinical or early lung cancer, progression from a precancerous lesion to invasive cancer, or the extent or severity of lung cancer. “This bank is not currently intended to discover new biomarkers, but rather to test the validity of biomarkers that have already shown to be promising in preliminary testing,” said Dr. Gatsonis.

Several peer-reviewed publications are forthcoming on the NLST results later this year. □

LEARN MORE

To access, “The National Lung Screening Trial: Overview and Study Design,” published online in November 2010 in *Radiology*, go to RSNA.org/radiology.

Speaking at the RSNA 2010 session, Constantine Gatsonis, Ph.D., a professor of biostatistics and Director for Statistical Sciences at Brown University, said the NLST yielded a biospecimen repository for the study of lung cancer biomarkers.

Mahoney Discusses Radiation Exposure on “The Dr. Oz Show”

In December, RSNA Public Information Committee Chair Mary C. Mahoney, M.D., was a guest on an episode of “The Dr. Oz Show” focusing on radiation exposure from medical imaging, airport scanners and dental X-rays. Among many points she made to help the audience put radiation exposure in perspective, Dr. Mahoney explained that patients should ask their doctor about the medical necessity of imaging being ordered for them. “The real important question for a patient to ask is ‘How will this scan change my care? How will this help me get better?’” she said.

She stressed that patients not avoid tests that will benefit their treatment for fear of radiation exposure. “The worst thing that can happen is for a patient to not get a necessary test,” Dr. Mahoney said. “It’s a mistake to forgo a mammogram for fear of radiation when the benefits of detecting cancer early far outweigh the risks of radiation.”



In the Spotlight: RSNA 2010

ALONG WITH A full roster of popular programs, new and redesigned elements and cutting-edge technologies—including touch screen wayfinders and a live Twitter feed—kept RSNA 2010 buzzing and moving at an exceptionally exciting pace. The theme of the 96th annual meeting, “Personalized Medicine: In Pursuit of Excellence,” was reflected in the wide spectrum of scientific and educational offerings, the robust technical exhibition and the stellar lineup of world-renowned presenters and lecturers.



1 Meeting attendees registered and picked up badges at the Professional Registration area.

2 2010 RSNA President Hedvig Hricak, M.D., Ph.D., Dr. h.c., opened RSNA 2010 with her address, “Oncologic Imaging: A Guiding Hand of Personalized Care.”

3 Best-selling author and world-renowned physician Atul Gawande, M.D., M.P.H., captivated the standing-room-only crowd with his presentation, “Real Reform: Facing the Complexity of Health Care,” in the Arie Crown Theater.

4 RSNA 2010 attendees had the opportunity to check out RSNA’s print and online publications at the RSNA Journals & News booth.

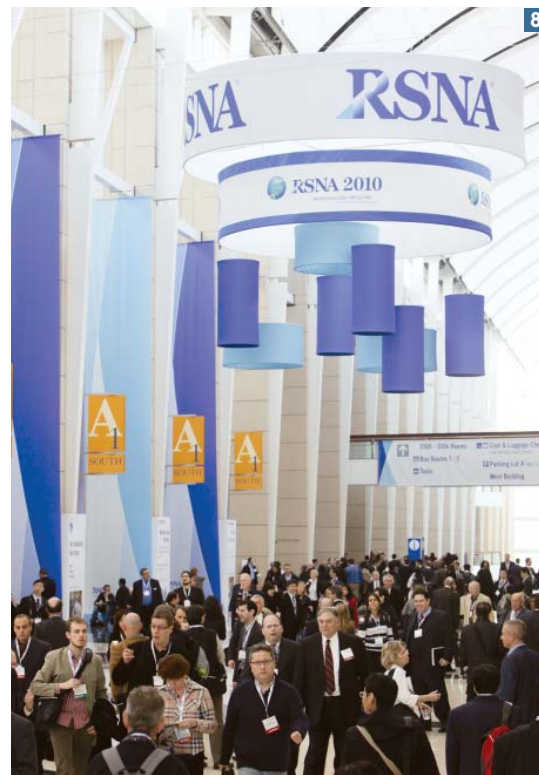
5 The RSNA 2010 Technical Exhibition featured 678 exhibitors.

6 The 1,915 education exhibits and 679 posters in the Lakeside Learning Center were available for viewing within each subspecialty in lounge areas known as “communities.”

7 New this year, annual meeting attendees shopped for not only the latest in educational offerings but also RSNA-branded merchandise and apparel in the RSNA Store.

8 The Grand Concourse served as the hub of activity for RSNA 2010.

Daily Bulletin coverage of RSNA 2010 is available at RSNA.org/bulletin.



RSNA Unveils Structured Reporting Library

RSNA experts have published an extensive library of best-practice radiology reporting templates ready for use by equipment and software developers to enable information to flow easily and precisely into electronic health records (EHRs).

EARLY IN 2010, the National Institute of Biomedical Imaging and Bioengineering (NIBIB) in Bethesda, Md., awarded the RSNA a grant to support the incorporation of RadLex®—the standardized lexicon developed by RSNA—into radiology reporting templates. The newest initiative is to engage the vendor community in the process, according to Charles E. Kahn Jr., M.D., M.S., a professor of radiology at the Medical College of Wisconsin in Milwaukee and vice-chair of the Structured Reporting Subcommittee of RSNA's Radiology Informatics Committee.

"Thirteen groups of clinical experts, convened by the RSNA, have developed more than 100 templates to create an online template library—a database that allows users to search and retrieve report templates by imaging modality, organ system or RadLex® term," Dr. Kahn said. "We are now working with vendors to define standards and workflow for these templates, to get them into the hands of radiologists."

Structured reporting templates are designed to encourage radiologists to enter detailed, clinically relevant information, ultimately leading to better patient care and making it easier to build databases, retrieve reported information and share information among enterprises, Dr. Kahn said. The templates also enable radiology reports to capture quantitative data which can help monitor the effectiveness of treatment.

To this end, Dr. Kahn and colleagues are leading an effort within DICOM (Digital Imaging and Communications in Medicine) to build upon standards that allow radiologists to incorporate measurements and annotations into a report directly from the imaging equipment.

"Radiologists should be able to incorporate measurements from an ultrasound exam, for example, directly from the DICOM data accompanying the images," Dr. Kahn said. "This approach can simplify the reporting process and reduce potential errors. Together with developers of commercial systems, we're working to ensure RSNA's reporting templates can integrate data from imaging devices and transmit RadLex-encoded reports to electronic medical record systems."

Template Exchange on the Horizon

Housed at Reporting.RSNA.org, the template library is equipped with features including a tracking function

to record which templates have been most frequently downloaded, Dr. Kahn said. The committee hopes to foster an interactive community in which interested users can submit best-practice templates of their own.

Working in concert with DICOM, the Integrating the Healthcare Enterprise (IHE) effort is developing methods for the exchange of report templates. IHE radiology committees have approved a new template exchange profile for completion in the coming year, said Curtis P. Langlotz, M.D., Ph.D., chair of the RSNA Structured Reporting Subcommittee and editor of the profile. "Through IHE, RSNA will work with vendors to create several new features for radiologists who use speech recognition systems," said Dr.

Langlotz, a professor and vice-chair for informatics at the University of Pennsylvania's Department of Radiology.

"The new profile will enable radiologists to download templates from the RSNA library and other sources with a single click. Radiologists also could exchange templates electronically with radiologists at other sites and more easily migrate templates to a newer reporting system when changing vendors," Dr. Langlotz said.

Using RadLex Creates Universal Language

In 2010, the NIBIB extended its longtime support of RadLex with a two-year supplemental contract to integrate RadLex with structured radiology reports. The Medical College of Wisconsin, the University of Pennsylvania, the University of Utah and Stanford University are taking part in the initiative, with Dr. Kahn serving as the principal investigator.



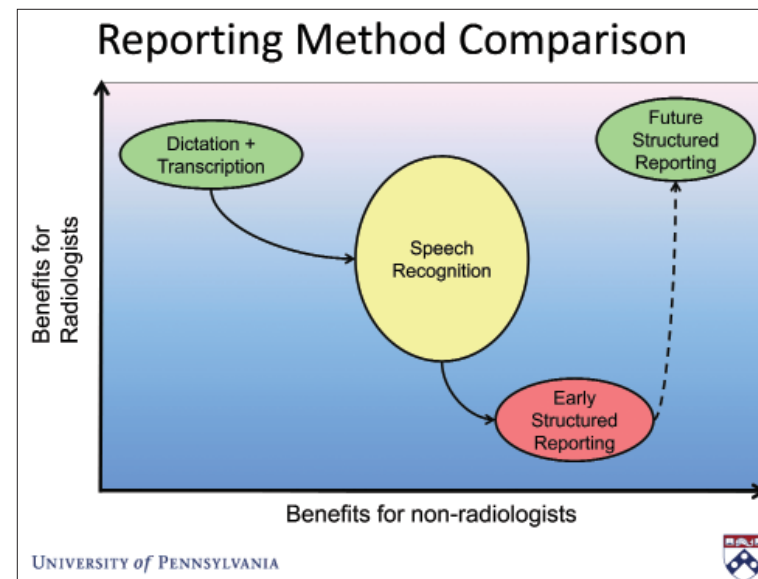
Kahn



Langlotz

“The new profile will enable radiologists to download templates from libraries with a single click.”

Curtis P. Langlotz, M.D., Ph.D.



The RSNA structured reporting initiative fosters the development of new templates and systems that help radiologists create high-quality reports more efficiently.

"First, this project allows us to link the elements of structured reports with RadLex," Dr. Kahn said. "Second, it will enable us to enhance RadLex—to find those terms that radiologists use but are not currently in RadLex—so we can add these terms into the lexicon."

"Even if one radiologist uses different terms in his reports, such as 'heart' and 'cardiac silhouette,' or uses terms in a different order, linking those terms to RadLex will allow the report information to be understood across systems," continued Dr. Kahn.

Ella Kazerooni, M.D., a professor of radiology and associate chair for clinical operations at the University of Michigan, joined Drs. Kahn and Langlotz to introduce RSNA's online library of reporting templates at RSNA 2010 in an informatics refresher course. Their session, "Best-practices Radiology Reporting: RSNA's Library of Radiology Report Templates," which describes Dr. Kazerooni's experience implementing structured reporting at the University of Michigan is available for bookmarking and viewing within myRSNA™ at RSNA.org.

Engaging Vendor Community is Critical

Many of the templates in the structured reporting library are already accessible as speech macros and could potentially be integrated into existing reporting systems, Dr. Kahn said.

RSNA is working toward that goal with vendors and physicians on two fronts. "First, we have engaged the IHE community to define the workflow related to the exchange and sharing of templates," Dr. Kahn said. "Second, through RSNA's involvement in DICOM, we are defining an electronic standard format for structured reports that builds on and interacts with the DICOM Structured Reporting effort and the Health Level Seven International, or HL7, standard for clinical information systems."

"Making the templates accessible through vendors is critical, because they will provide the product to the radiologist in a busy practice looking to do good quality reporting and stay productive." □

EDITOR'S NOTE

This article launches a new, regular *RSNA News* section called Technology Forum, which focuses on the latest developments in information technology and their potential to change how we practice radiology. Have an idea for Technology Forum? Contact us at tellus@rsna.org.

DATA MINING SUCCESS HINGES ON STRUCTURED REPORTING

Structured reports are critical to successful "data mining"—comprehensive analyses that help radiologists use data more effectively in managing everything from disease prevalence to billing errors, said presenters of an RSNA 2010 course.

Speaking during "Data Mining, Searching, and Analytics of Radiology Reports," Keith Dreyer, D.O., Ph.D., an instructor of radiology and vice-chair of radiology computing and information sciences at Massachusetts General Hospital, used an automotive analogy to describe the processes of mining structured and unstructured reports.

"It's kind of like trying to decide whether to build a racecar or a truck," said Dr. Dreyer, who serves on the RSNA Radiology Informatics Committee. Mining both types of reports has its utility, he said, "though I really do think you

need a standard nomenclature like RadLex and a standard structure."

Structured reporting also reduces problems with natural language processing encountered in data mining, said course presenter Ricky Taira, Ph.D., an assistant professor of the Department of Radiological Sciences at the University of California, Los Angeles. "We can focus more on conclusions with the metatags we put into the system," he said.

The ultimate goal is to have data mining software "learn" to detect associations in various data, seeing how many patients with one diagnosis go on to have other diagnoses, said presenter Woojin Kim, M.D., an assistant professor of radiology, chief of radiography and associate director of imaging informatics at the Hospital of the University of Pennsylvania.

Said Dr. Kim, "The computer can be working while you sleep, and in the morning say, 'By the way, I found three associations. You might want to look into this.'"



Dreyer

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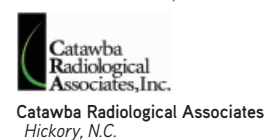
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Journal Highlights

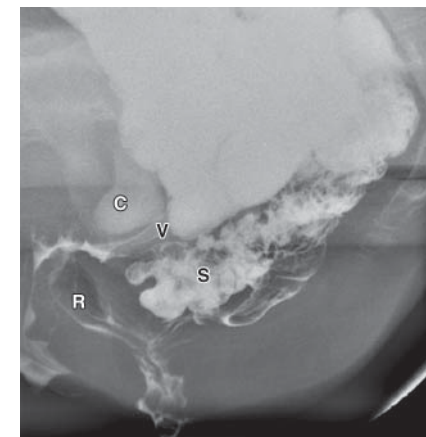
The following are highlights from the current issues of RSNA's two peer-reviewed journals.

Functional Imaging of the Pelvic Floor

Despite advances in other imaging methods, dynamic cystocolpoproctography (DCP) has remained a practical, cost-effective procedure for evaluating anorectal and pelvic floor dysfunction. Clinicians find it a useful diagnostic tool that can alter management decisions from surgical to medical and vice versa in many cases.

In a "How I Do It" article in the January issue of *Radiology* (RSNA.org/Radiology), Dean D.T. Maglinte, M.D., of the Indiana University School of Medicine at Indiana University Hospital in Indianapolis, and colleagues discuss the use of DCP to diagnose defecatory disorders and pelvic organ prolapse. Specifically, the authors emphasize the technical details used to demonstrate the full extent of prolapse, define radiographic criteria used for diagnosis and staging and discuss the limitations and clinical relevance of DCP.

"Because it enables a more functional evaluation of evacuation, we believe that it remains the method of choice for the assessment of defecatory disorders," the authors conclude. "DCP complements the deficiencies of physical examination in the evaluation of pelvic organ prolapse."



Recurrent prolapse in a patient who had previously undergone hysterectomy and, more recently, urinary bladder suspension for urinary incontinence. The patient presented with worsening constipation. Lateral strain radiograph obtained after digitation of the posterior vaginal wall shows a stage 2 sigmoidocele (S), a stage 2 anterior rectocele [KC1] (R), a stage 1 vaginal vault (V) prolapse, and a cystocele (C).

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SEE HOW IT'S DONE

A video demonstrating the techniques and procedures described in "Functional Imaging of the Pelvic Floor," from the January issue of *Radiology*, can be accessed at RSNA.org/radiology.

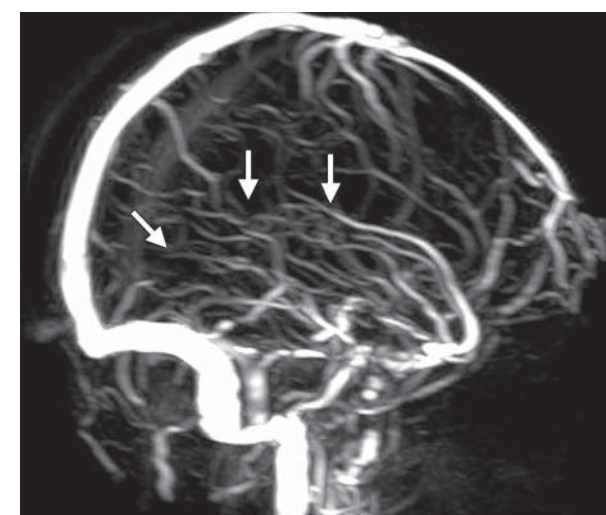
Differential Diagnosis for Bilateral Abnormalities of the Basal Ganglia and Thalamus

Bilateral abnormalities of the basal ganglia and thalamus may be detected in different acute and chronic clinical situations, and although MR imaging is the modality of choice for evaluation, the correct diagnosis can be made only by taking all relevant clinical and laboratory information into account.

In an article in the January-February issue of *RadioGraphics*, (RSNA.org/RadioGraphics), Amogh N. Hegde, M.D., of the National Neuroscience Institute in Singapore, and colleagues review the MR imaging anatomy of the basal ganglia and thalamus, discuss and illustrate a wide variety of pathologic conditions of these brain structures and discuss the radiologic assessment of those conditions.

Systemic and metabolic abnormalities often involve the basal ganglia or thalamus on both sides and careful assessment of brain abnormalities occurring simultaneously outside these structures is important, the authors write.

"CT and MR imaging, including T1-weighted imaging, diffusion-weighted imaging, MR angiography, MR venography and MR spectroscopy are



Deep cerebral venous thrombosis in a 37-year-old woman with headache and drowsiness. Phase-contrast MR venogram shows absence of normal flow in the internal cerebral veins, vein of Galen, and straight sinus (arrows), with preservation of the superior sagittal and transverse sinuses.

often helpful in narrowing the differential diagnosis," the authors conclude. "Oftentimes, however, the diagnosis is not straightforward, and the correlation of typical imaging features with clinical and laboratory data can help make the correct diagnosis."

Radiology in Public Focus

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

Ischemic Stroke: Etiologic Work-up with Multidetector CT of Heart and Extra- and Intracranial Arteries

MULTIDETECTOR CT is a promising tool for etiologic assessment of ischemic stroke, though the identification of minor cardiac sources with this technique requires the establishment of robust criteria, researchers found.

In a prospective study of 46 patients who had recently experienced an ischemic stroke, Loic Boussel, M.D., Ph.D., of Louis Pradel Hospital in Lyon, France, and colleagues compared a single-session multidetector CT examination of the heart, neck and brain vessels with standard protocol involving transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE), duplex ultrasonography of the neck vessels and MR angiography of the neck and brain vessels.

Of the 46 cases, the final etiologic classifications using the standard combination approach were cardiac sources in 44 percent, major arterial atheroma in 20 percent, multiple sources in 9 percent and cryptogenic sources in 28 percent. Multidetector CT facilitated correct etiologic classification for 83 percent of the 46 patients.

"Multidetector CT may be the first-line imaging modality for identifying acute ischemic stroke causes," the authors concluded. "Negative multidetector CT results should be confirmed with TEE and MR imaging."



On multidetector CT image (two-chamber long-axis reconstruction) in 77-year-old man, thrombus (arrow) of left ventricular apex appears as nonenhanced lesion in left ventricular cavity.

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HEAR WHAT WE THINK

A video podcast featuring Loic Boussel, M.D., Ph.D., discussing his study, "Ischemic Stroke: Etiologic Work-up with Multidetector CT of Heart and Extra- and Intracranial Arteries," from the January issue of *Radiology*, is accessible at RSNA.org/Radiology.

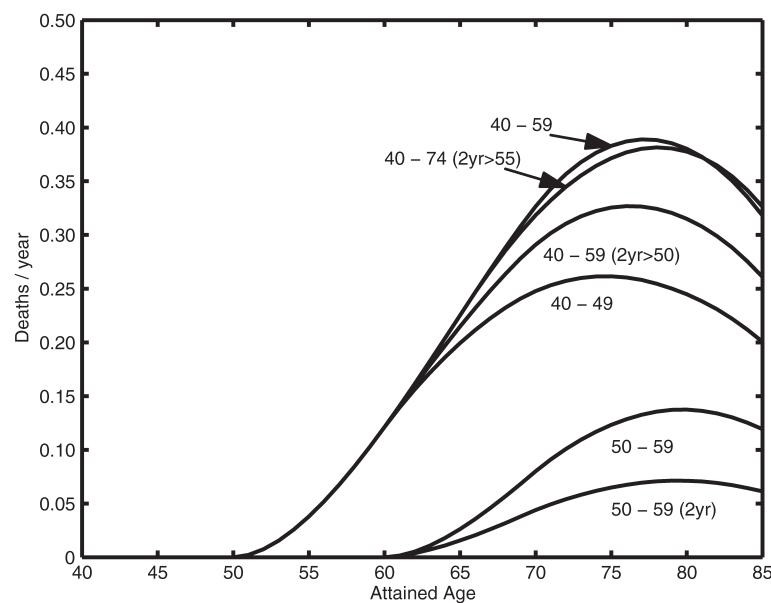
Risk of Radiation-induced Breast Cancer from Mammographic Screening

FOR THE mammographic screening regimens considered that begin at age 40, the risk of radiation-induced breast cancer is small compared with the expected mortality reduction achievable through screening, researchers have found.

In the study, Martin J. Yaffe, Ph.D., and James G. Mainprize, Ph.D., of Sunnybrook Health Sciences Centre, University of Toronto in Ontario, developed a model for estimating the risk of radiation-induced breast cancer following exposure of the breast to ionizing radiation from various screening mammography scenarios and estimated the potential number of breast cancers, fatal breast cancers and years of life lost, attributable to mammography screening.

For a cohort of 100,000 women each receiving a dose of 3.7 mGy to both breasts, screened annually from age 40 to 55 and biennially thereafter to age 74, it is predicted that there will be 86 cancers induced and 11 deaths due to radiation-induced breast cancer, researchers found.

"The predicted risk of radiation-induced breast cancer from mammographic screening is low in terms of the number of cancers induced, the number of potential deaths, and the number of woman-years of life lost," Drs. Yaffe and Mainprize concluded.



Graph of deaths per year that are potentially attributable to radiation-induced cancer at various attained ages (in years) following various screening regimens (3.7 mGy breast dose per examination). 50–59 = annual screening from ages 50 to 59 years, 50–59 (2yr) = biennial screening from ages 50 to 59 years, 40–49 = annual screening from ages 40 to 49 years, 40–59 = annual screening from ages 40 to 59 years, 40–59 (2yr>50) = annual screening from ages 40 to 50 years and biennial screening to age 59 years, 40–74 (2yr>55) = annual screening from ages 40 to 55 years and biennial screening to age 74 years.

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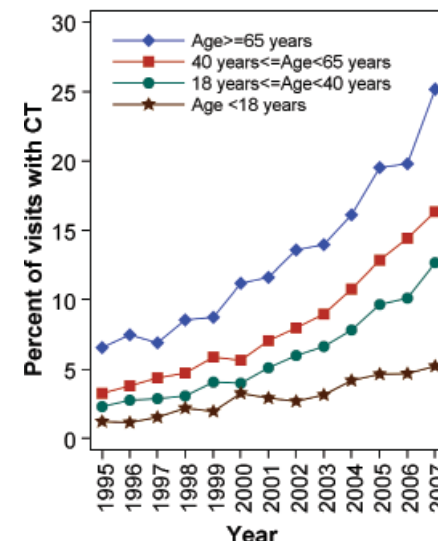
National Trends in CT Use in the Emergency Department: 1995–2007

USE OF CT has increased at a higher rate in the emergency department than in other settings and the overall use of CT had not begun to taper by 2007, researchers found.

Using data from the 1995–2007 National Hospital Ambulatory Medical Care Survey, David B. Larson, M.D., M.B.A., of Cincinnati Children's Hospital, and colleagues evaluated the numbers and percentages of emergency department visits associated with CT, sampling a mean of 30,044 visits each year. Results showed that the number of emergency department visits that included a CT examination increased from 2.7 million to 16.2 million—a 5.9-fold increase and a 16 percent compound annual growth (CAGR). The percentage of visits associated with CT increased from 2.8 to 13.9 percent, constituting a 4.9-fold increase and 14.2 percent CAGR, researchers found.

The increase in CT use is related to both a higher frequency of scanning for the same indications reported in the past and an increasing number of reasons to use the technology, researchers concluded.

"We believe that attempts to limit inappropriate CT use will become more successful as more sophisticated and evidence-based decision models regarding the likelihood of patient benefit from CT are incorporated at the time the decisions are made," the authors wrote.



Graph illustrates percentages of emergency department visits involving CT based on patient age. $P < .01$ for comparison among all years. (*Radiology* 2011;258:1:164–173) ©RSNA, 2011. All rights reserved. Printed with permission.

HEAR WHAT WE THINK

A video podcast featuring David B. Larson, M.D., M.B.A., discussing his study, "National Trends in CT Use in the Emergency Department: 1995–2007," from the January issue of *Radiology*, is accessible at RSNA.org/Radiology.

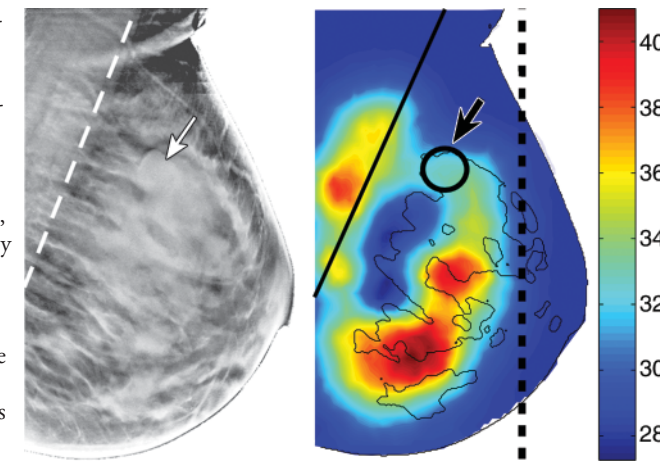
Combined Optical and X-ray Tomosynthesis Breast Imaging

COMBINING DIGITAL breast tomosynthesis (DBT) and diffuse optical tomography (DOT) may provide additional differentiation of malignant from benign lesions and can potentially help reduce unnecessary biopsies resulting from standalone conventional mammography, researchers found.

Qianqian Fang, Ph.D., of Massachusetts General Hospital in Boston, and colleagues performed DBT and DOT on 189 breasts of 125 women with an average age of 56 years. Of the 189 studies, 138 were negative and 51 showed evidence of lesions. Breast biopsy determined that 26 of the 51 lesions were malignant and 25 were benign.

In the 26 malignant tumors, total hemoglobin concentration (HbT) was significantly greater than in the normal glandular tissue of the same breast. Solid benign lesions and cysts had significantly lower HbT contrast compared to the malignant lesions, researchers found.

"The optical and DBT images were structurally consistent," researchers concluded. "The malignant tumors and benign lesions demonstrated different HbT and scattering contrasts, which can potentially be exploited to reduce the false-positive rate of conventional mammography and unnecessary biopsies."



Reconstructed (a) digital breast tomosynthesis and (b) total hemoglobin concentration images of a 16-mm fibroadenoma (arrow) surrounded by a circle on (b) in 39-year-old woman.

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Media Coverage of RSNA

In November 2010, media outlets carried 274 RSNA-related news stories. These stories reached an estimated 342 million people.

November print and broadcast coverage included *Orlando Sentinel*, *South Florida Sun Times*, *News and Observer* (Raleigh, N.C.), *Herald-Sun* (Durham, N.C.), *Daily Review* (Wilkes-Barre, Pa.), *News-Herald* (Cleveland), *Abilene Reporter News*, *The Courier* (Salisbury, Md.), *WAGA-TV* (Atlanta), *WSFX-TV* (Wilmington, N.C.), *KBAK-TV* (Bakersfield, Calif.), *KFOX-TV* (El Paso, Texas), *XRM-TV* (Colorado Springs), *Ira Breite Show* (Doctor Radio – National), *Jason Lewis Show* (KSTE-AM – Sacramento, Calif.), *Joey Reynolds Show* (WOR-AM – New York), *WIBC-FM* (Indianapolis).

Online coverage included *MSN.com*, *Yahoo! News*, *Healthday*, *Reuters*, *iVillage*, *Medical News Today*, *Health.com*, *DocGuide.com*, *GoodHealth.com*, *USNews.com*, *PhysOrg.com* and *AZCentral.com*.

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.

CD-ROM Collections Available in RSNA Education Center 2010-2011 Product Catalog

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

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

Each course is offered on CD-ROM and can be viewed on most PCs or laptop computers. Audio recordings of speakers

and their slides are accompanied by optional written transcripts for 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.

Those who did not get a catalog in their RSNA 2010 bag this year, or 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.

Medical Meetings

February – May 2011

FEBRUARY 12-17

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

FEBRUARY 20-24

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

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 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

Education and Funding Opportunities

RSNA, ASTRO Co-sponsor New Cancer Imaging and Radiation Therapy Symposium

The Cancer Imaging and Radiation Therapy Symposium, co-sponsored by ASTRO and RSNA, will focus on the synergy between radiation oncologists and clinical radiologists in determining the extent of a patient's cancer, developing the best radiation plan and following up for response and recurrence.

Taking a multidisciplinary look at cancer staging and treatment, the symposium will seek the many points of contact between imaging and radiation oncology from diagnosis through the entire course of the patient's disease. The future of biological imaging and adaptive therapy will also be addressed from the perspective of both specialties.

Anthony Zietman, M.D., and Suresh Mukherji, M.D., are co-chairs of the committee planning the symposium. Dr. Zietman is ASTRO president and a radiation oncologist at Massachusetts General Hospital in Boston. Dr. Mukherji is a professor of radiology at the University of Michigan in Ann Arbor.

For more information, go to www.cancerimagingandrttherapy.org.

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.

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

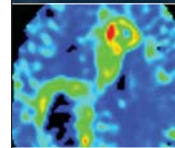
November 4: Final advance discounted registration, housing and course enrollment deadline to have full conference badge mailed

Nov. 27 – Dec. 2: 97th Scientific Assembly & Annual Meeting

Cancer Imaging and Radiation Therapy Symposium

A Multidisciplinary Approach

Atlanta Marriott Marquis | Atlanta | April 29-30, 2011



Discover the value new imaging modalities bring to cancer care.

Join us for this two-day multi-disciplinary look at cancer staging and treatment seeking the many points of contact between imaging and radiation oncology from the day of diagnosis through the entire course of the patient's disease.

Register at www.cancerimagingandrttherapy.org

Annual Meeting is Significant CME Opportunity

With its hundreds of offerings ranging from plenary sessions and refresher courses to scientific presentations and education exhibits, the RSNA annual meeting gives attendees a chance to earn numerous CME credits in a short period. The top CME earner at RSNA 2010 accumulated 70.50 *AMA PRA Category 1™* credits during the week.



November 27 – December 2 | McCormick Place, Chicago

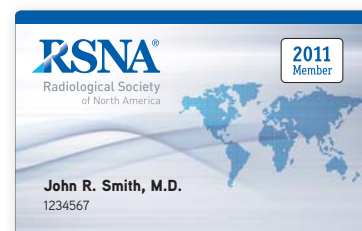
For Your Benefit

Renew Your RSNA Membership Now

RSNA membership includes many benefits, such as your subscription to *RSNA News* and:

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

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



RSNA Committee Work Has Widespread Impact

AS AN ACADEMICIAN, I teach at Beth Israel Deaconess Medical Center as well as at local, regional and national meetings. However, the impact of the work I contribute to RSNA committees and publications has an impact far beyond local teaching.

Since joining the RSNA Public Information Advisors Network in 2004, my work on committees and publications has continued to evolve and expand, allowing me to contribute to RSNA, the education of radiologists and to the advancement of science.

My largest time commitment to RSNA has been in publications. Currently, as senior deputy editor of *Radiology*, I spend about 30 percent of my time working on the journal.

The Value of Membership

When *Radiology's* editorial office moved to Boston, it was wonderful opportunity to increase my activities in editing and in publications—something that changed the focus of my career.

Serving as a grant reviewer for the R&E Foundation's Study Section is a way of giving back to RSNA and helping researchers and educators at different stages of their careers.

Various other committee posts have led to meeting people outside my specialty who share similar interests in research and education.

I really love this work and I encourage other RSNA members to get involved with the committees that are so critical to RSNA's mission.

Deborah Levine, M.D., is a professor of radiology at Beth Israel Deaconess Medical Center and Harvard Medical School. Along with serving on RSNA's Public Information Advisors Network and as senior deputy editor of *Radiology*, Dr. Levine's various RSNA committee posts include serving on the Research & Education (R&E) Foundation Study Section. Dr. Levine ended her three-year tenure as editor of the *Daily Bulletin*, the official newspaper of the RSNA annual meeting, in 2010.



Residents and Fellows Corner

This month, *RSNA News* launches a new section called Residents and Fellows Corner. Watch this section for news affecting radiology residents and fellows—salary outlooks, new restrictions on hours, changes to curricula and more. Send your ideas for this section to tellus@RSNA.org.

Chief Residency Gets Thumbs Up

A third of outgoing chief residents report being "very satisfied" with the experience, according to a recent survey.

The 2010 Annual Chief Resident Survey was conducted by Caitlin Lopez, M.D., on behalf of the American Alliance of Academic Chief Residents in Radiology (A³CR²). More than 225 individuals representing 140 unique programs completed the entire survey.

The survey also indicated that 47 percent of chief residents were "somewhat satisfied" with the

experience, with only 1 percent reporting they were "very dissatisfied." More than 90 percent of respondents said they would accept the position again.

Compared with survey results from 2005 and 2000, chief residents now report being more involved in resident selection and resident and medical student teaching, and less involved in curriculum development and board review.

To see more survey results, go to www.aur.org/A3CR2 and click the Information tab.

Liver Ultrasound Explained

RadioGraphics editor William W. Olmsted, M.D., recommends for residents "Doppler Ultrasound of the Liver Made Simple" in the January-February issue. Dean Alexander McNaughton, M.D., and Monzer M. Abu-Yousef, M.D., of the University of Iowa Hospitals and Clinics, discuss the basic concepts and terminology for vascular Doppler ultrasound, including the characteristic appearances of normal and abnormal liver Doppler waveforms and the manifestations of both normally functioning and malfunctioning transjugular intrahepatic portosystemic shunts (TIPS). Read this article, based on a Magna Cum Laude education exhibit from RSNA 2009, at RSNA.org/RadioGraphics.

RSNA.org

Joining IVP Aids International Education Effort

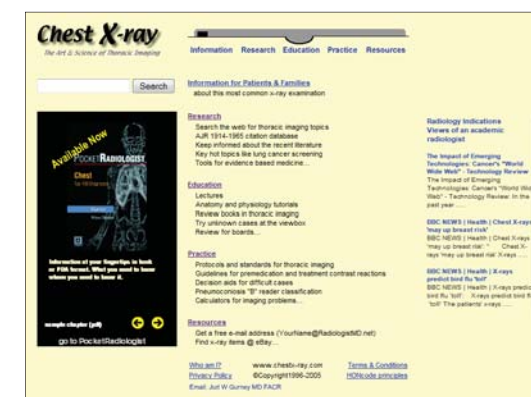
RSNA members interested in becoming part of the international teams that travel to developing countries each year to teach radiology are encouraged to apply through RSNA.org.

Established in 1986, the RSNA International Visiting Professor Program (IVP) annually sends teams of North American professors to lecture at national radiology society meetings and visit with radiology residency training programs at selected host institutions in developing nations. The goal is to foster teaching and a cultural exchange between radiology departments in the U.S. and those in other countries. Participants have travelled to a diverse roster of countries including China, Chile, Kenya and the West Indies.

The RSNA Committee on International Relations and Education (CIRE) administers the program. For more information about the IVP program and to download an application, go to RSNA.org/International/CIRE/ivpp.cfm. An article about the IVP team that traveled to Brazil in 2010 will appear in next month's issue of *RSNA News*.



Sherry Teeefy, M.D. (second from left), demonstrated musculoskeletal ultrasound during a 2007 IVP trip to Uganda.



Site Offers All Things Chest Related

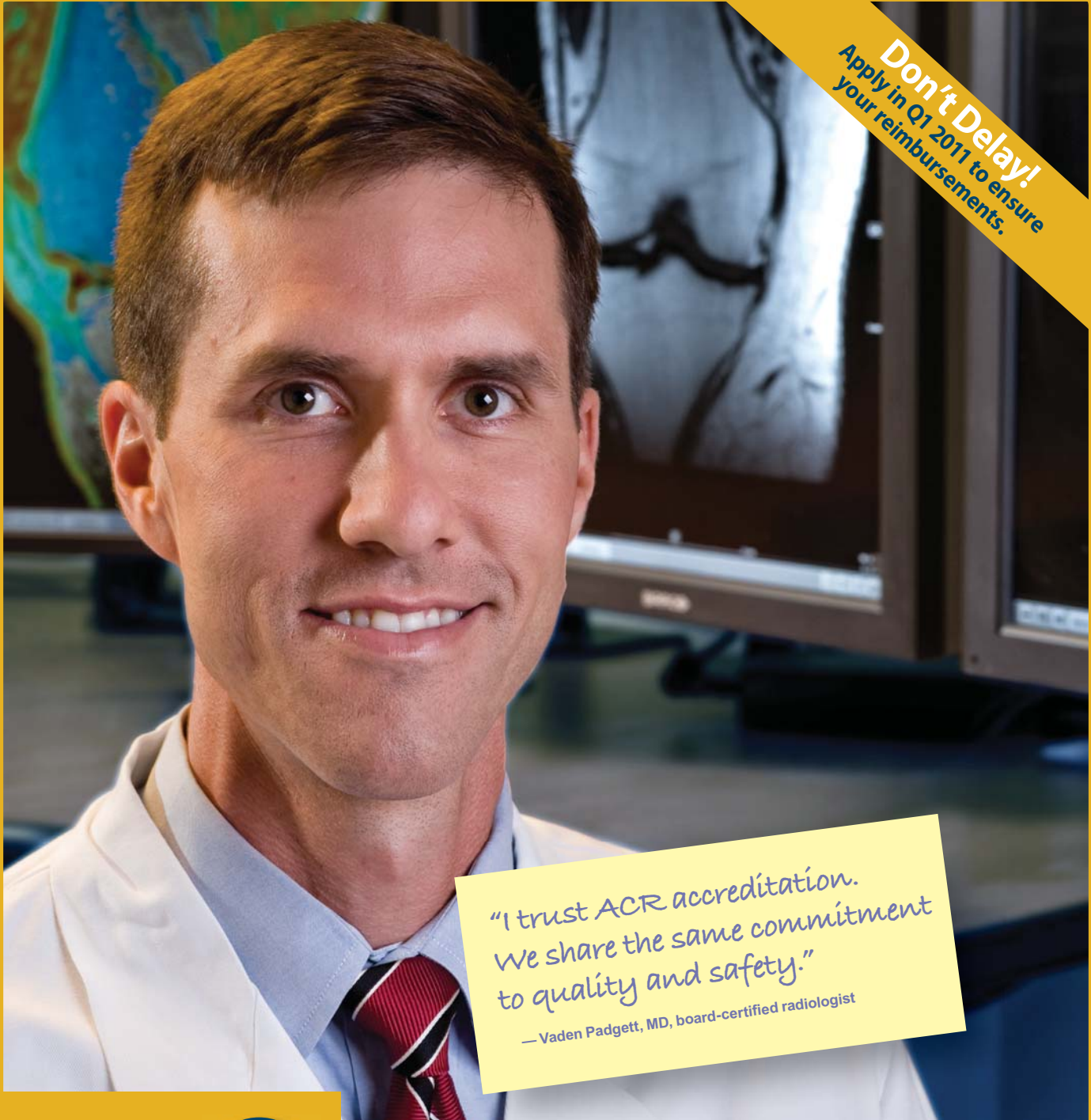
Subtitled "Your Thoracic Imaging Resource," the award-winning *Chest X-Ray.com* comprehensively covers numerous areas within chest radiology. Maintained by Jud W. Gurney, M.D., of the Department of Radiology at Nebraska Medical Center in Omaha, the site features sections on research, education and practice. The practice resources section includes evidence-based medical tools, protocols and standards, while the interactive research resources section offers a Medline search.

COMING IN FEBRUARY

Understanding federal "meaningful use" requirements for health information technology (HIT) is critical to qualifying for financial incentives. In next month's *RSNA News*, experts from the RSNA 2010 informatics session, "Healthcare Reform Through Meaningful Use of Healthcare IT: Implications for Radiologists," will outline specifics of the federal law that took effect in 2011 and is being staged in over the next five years.



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