

RSNA News™

October-November 2012 Volume 22, Numbers 10 & 11

DOUBLE ISSUE



Annual Meeting Preview

and Restaurant Guide

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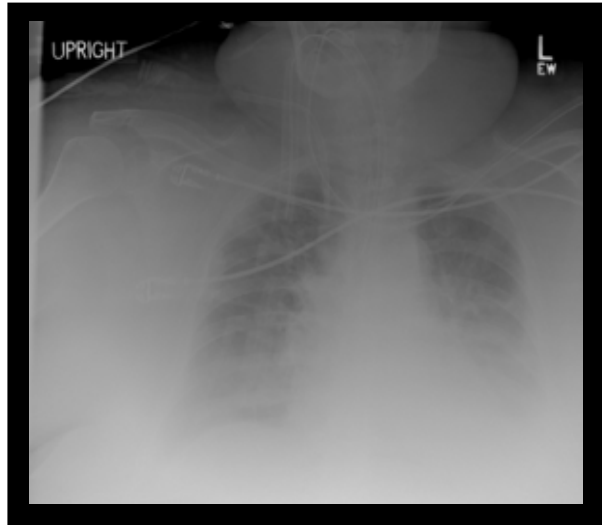
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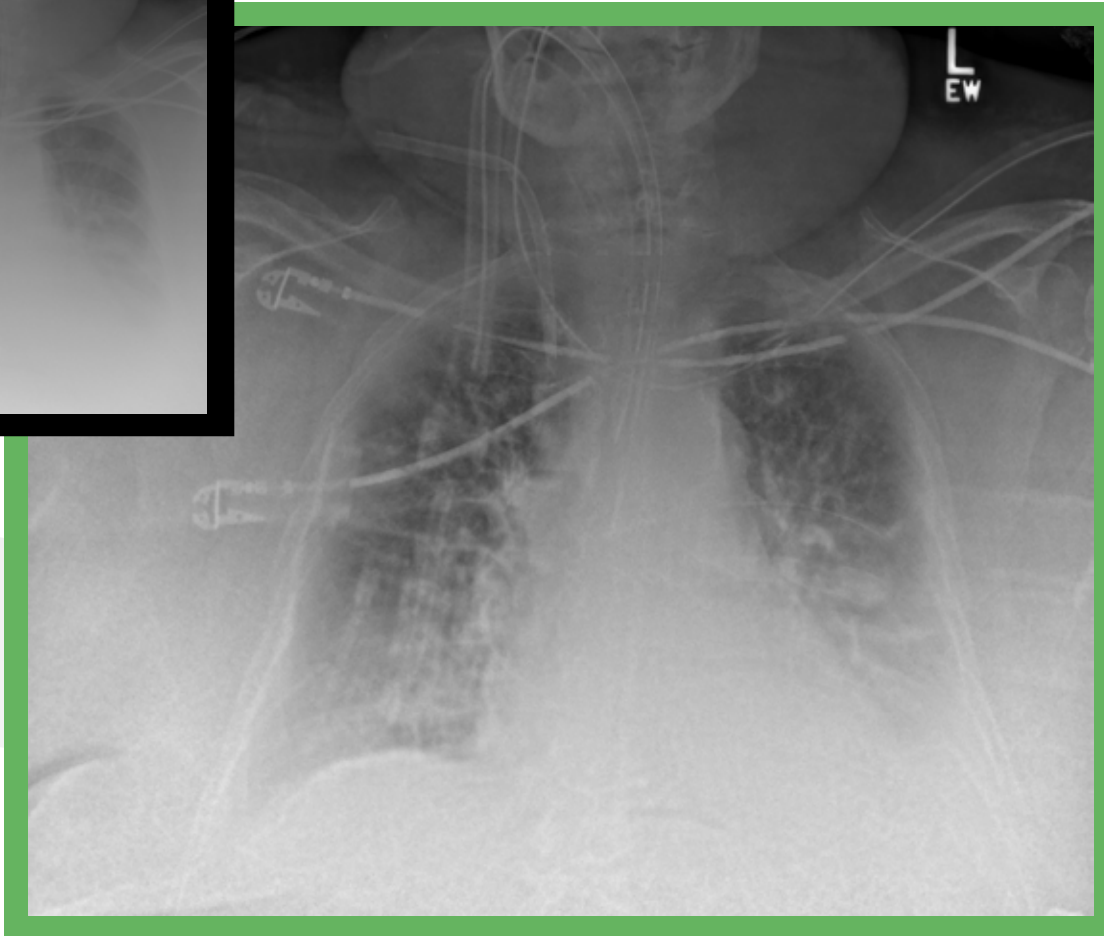
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The RSNA promotes excellence in patient care and healthcare delivery through education, research and technologic innovation.

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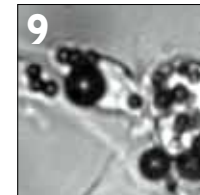
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2013 RSNA Membership Renewal Under Way

RSNA membership renewal for 2013 is under way. Renew online at RSNA.org/renew or by mail with the invoice sent to you early in October. When renewing, take a moment to update your profile with current contact information.

All RSNA members have access to RSNA journals online. Because online access to *Radiology* and *RadioGraphics* is tied to membership status, if your payment has not been received by December 31, 2012, your online subscriptions will be automatically inactivated.

Practices can take advantage of RSNA's group billing option. For more information on the option and/or to renew membership by phone, contact the RSNA Membership Department toll-free at 1-877-RSNA-MEM or at 1-630-571-7873, or send an e-mail to membership@rsna.org.

2013 R&E GRANT APPLICATION PROCESS OPENS THIS MONTH

Individuals interested in obtaining RSNA Research & Education (R&E) Foundation grants for 2013 can begin submitting their applications starting in October. For more information, go to RSNA.org/Foundation or contact Scott A. Walter, M.S., Assistant Director, Grant Administration at 1-630-571-7816 or swalter@rsna.org. Grants available include:

EDUCATION GRANTS

Deadline—Jan 10

- Education Scholar Grant
- RSNA/AUR/APDR/SCARD Radiology Education Research Development Grant

RESEARCH GRANTS

Deadline—Jan 15

- Research Scholar Grant
- Research Seed Grant
- Research Resident/Fellow Grant

RESEARCH MEDICAL STUDENT GRANT

Deadline—Feb 1

Learn about the 2012 R&E Foundation grant recipients and their projects starting on Page 13.



Numbers in the News

8.5

Approximate number, in millions, of visitors in 2011 to RadiologyInfo.org, the RSNA-American College of Radiology (ACR) public information website. [Read more about the growth of the popular healthcare website, launched in 2000 as a radiology information resource for patients and patient-communication tool for physicians, on Page 11.](#)

29

Population, in millions, of Nepal. [See Page 5 for the impressions of an RSNA International Visiting Professor team that traveled to the Southeast Asian nation earlier this year.](#)

50

Approximate percentage of malpractice claims against radiologists resulting in litigation, according to a study of more than 10,000 medical malpractice claims from 2002 to 2005. Just 2 percent of litigated claims went to trial. [Turn to Page 7 to find out why, even in the face of these numbers, malpractice suits remain a significant fear in the specialty.](#)

13,162

Number of abstracts received by RSNA, to consider for presentation at RSNA 2012. [Read about the science, education and technology to be showcased at this year's annual meeting, starting on Page 26.](#)

ACR Bestows Honors

William G. Bradley Jr., M.D., Ph.D., Milton J. Guiberteau, M.D., and Richard L. Morin, Ph.D., were recently awarded gold medals by the American College of Radiology (ACR). George Klempfner, M.D., and Giovanni G. Cerri, M.D., Ph.D., were named honorary fellows.

Dr. Bradley is professor and chairman of the Department of Radiology at the University of California, San Diego. He is a member of the RSNA Public Information Advisors Network (PIAN) and was awarded the RSNA Gold Medal in 2003.

Dr. Guiberteau is chief of nuclear medicine and academic chief in the Department of Medical Imaging at St. Joseph Medical Center and a clinical professor of radiology and nuclear medicine at the University of Texas medical school, both in Houston. Dr. Guiberteau is a member of the PIAN and has chaired the nuclear medicine subcommittee of the RSNA Scientific Program Committee.

Dr. Morin is a professor of radiologic physics at the Mayo Clinic Jacksonville (Florida). He is currently a member of the PIAN and the Radiology Informatics Committee. He was previously an RSNA third vice-president and was a manuscript reviewer for *Radiology* and *RadioGraphics*.

Dr. Klempfner holds a private practice in radiology and nuclear medicine at St. Frances Xavier Cabrini Hospital in Melbourne, Australia. He was named an RSNA Honorary Member in 2004.

Dr. Cerri is the secretary for health of São Paulo State and director of the Institute of Radiology at the Hospital das Clínicas, School of Medicine, University of São Paulo, Brazil. Dr. Cerri will be awarded RSNA Honorary Membership at RSNA 2012. (See Page 51).



Bradley



Guiberteau



Morin



Klempfner



Cerri

Hricak Receives Schinz Medal

2010 RSNA President Hedvig Hricak, M.D., Ph.D., Dr. h.c., was awarded the Schinz Medal at the recent annual meeting of the Swiss Society of Radiology (SSR) in Zurich. Dr. Hricak is chair of the Department of Radiology at Memorial Sloan-Kettering Cancer Center, a member of the Molecular Pharmacology and Chemistry Program, Sloan-Kettering Institute, a professor of radiology at the Weill Medical College of Cornell University, and a professor at Gerstner Sloan-Kettering Graduate School of Biomedical Sciences, New York City. The medal is the highest honor awarded by the SSR.



Hedvig Hricak, M.D., Ph.D., Dr. h.c. (left) with SSR President Rahel Kubik, M.D. (right).

COMING NEXT MONTH

Wondering how 2011 compensation in radiology compares to the year before? Or how salaries compare to those of other specialties? In next month's annual salary survey, *RSNA News* analyzes 2011 data from the American Medical Group Association (AMGA) 24th Annual Medical Group Compensation and Financial Survey and asks the experts what radiologists can expect in the coming year.

ESGAR Honors Martin and Mendelson

Derrick F. Martin, M.D., and Richard Mendelson, M.D., were awarded honorary fellowships by the European Society of Gastrointestinal and Abdominal Radiologists (ESGAR) at the 23rd Annual Meeting and Postgraduate Course held in Edinburgh, Scotland, in June. Dr. Martin, an ESGAR founder, is a gastrointestinal and interventional radiologist at University Hospital of South Manchester NHS Foundation Trust at Wythenshawe Hospital. Dr. Mendelson is a clinical professor at the University of Western Australia and an adjunct professor at the school of Medicine at Notre Dame University in Western Australia.



Martin



Mendelson

More PQI Templates to Aid MOC Diplomates

RSNA's Quality Improvement Committee (QIC) held its second Practice-based Quality Improvement (PQI) Template Workshop earlier this year in Chicago. Facilitated by Joseph R. Steele Jr., M.D., of MD Anderson Cancer Center, more than a dozen volunteer experts from the interventional radiology, thoracic, abdominal, pediatric and neuroradiology subspecialties worked to create turnkey quality improvement projects for individuals seeking to fulfill the Part IV requirements of the American Board of Radiology (ABR) Maintenance of Certification (MOC) program.

Many individuals participating in MOC have reported feeling intimidated by the requirement to conduct PQI projects. The RSNA library of ABR-qualified PQI Project templates (RSNA.org/Practice_Quality_Improvement_Projects.aspx), created after the first PQI Template Workshop in 2009, assists these individuals by

giving them specific instructions about projects they can undertake. As a result of the June workshop, RSNA is preparing to submit at least 15 new project templates to the ABR for qualification.

Once qualified, the projects will be added to the existing library of 12 templates. The templates are designed so that

after diplomates have completed one or two, they should feel prepared to develop and implement their own. Each PQI Project template provides the key elements including potential interventions, reference materials and project metrics. New this year is the inclusion of several projects suitable for group participation.

Multiple Radiology Mobile Apps Available

I am writing to alert *RSNA News* of an error that misinformed your readers about FDA-cleared diagnostic technology.

In the August 2012 cover article, "Mobile Apps Gain New Ground in Radiology," the statement: "The U.S. Food and Drug Administration (FDA) has approved just one app for diagnostic radiology - Mobile MIM Software," is incorrect.

Calgary Scientific's ResolutionMD™ has been FDA-cleared for diagnostic use on the iPhone and iPad since September 2011. In fact, your readers would want to be notified that ResolutionMD Mobile was the first mobile radiology application to receive regulatory approval in a major

jurisdiction in April 2010 when Health Canada approved its use.

There are a number of distinct and important ways that ResolutionMD differs from other radiology applications, making it the choice for many of the world's largest OEMs. ResolutionMD maintains absolute patient data security with all data resident on the server—leaving no trace of patient data on a device after the browser goes idle. The application also allows for fastest diagnosis with the industry's shortest load time to first image. We welcome curiosity about the FDA-cleared ResolutionMD mobile

radiology application and all of Calgary Scientific's innovations at RSNA 2012. Many thanks and kind regards.

BYRON OSING
CEO AND CHAIR
CALGARY SCIENTIFIC INC.

EDITOR'S NOTE: *We thank Mr. Osing for his letter and apologize for the error. Mobile radiology technology is a vital, rapidly evolving area we will continue to cover, as our readers are eager to learn about new products that can improve and facilitate their work.*



First International Day of Radiology

More than 66 medical societies in 38 countries around the globe will join together on November 8 to celebrate the first International Day of Radiology (IDoR), co-sponsored by RSNA, the European Society of Radiology (ESR) and the American College of Radiology (ACR).

The day, which marks the 117th anniversary of the discovery of the X-ray, is meant to build greater awareness of radiology's value and contributions to patient care and medical outcomes and highlight radiologists' essential role in healthcare. The main topic will be oncologic imaging with a special focus on the role of radiology in patient safety and optimizing radiation dose.

A video, press kit and brochures on the history of radiology and on oncologic imaging are available to support the International Day of Radiology. *RadiologyInfo.org*, the patient information website co-sponsored by RSNA and ACR, also plays an important role in the initiative, as a comprehensive and easy-to-understand radiology information resource for the public and a turnkey patient communication tool for physicians.

For more information, contact Marijo Millette at mmillette@rsna.org or 1-630-590-7727.



Above: RSNA President George S. Bisset III, M.D., and SPR President Ricardo Baaklini, M.D., celebrate the agreement between the two societies.

RSNA will collaborate with the Radiological and Diagnostic Imaging Society of São Paulo (SPR) for the São Paulo Radiological Meeting in 2014, 2016 and 2018 in São Paulo, Brazil. RSNA will help develop material and courses not traditionally covered at the meeting and support the travel of some North American speakers.

MOC News

ABMS Delays Reporting Date

The American Board of Medical Specialties (ABMS) has postponed until spring 2013 the public reporting of American Board of Radiology (ABR) diplomates' maintenance of certification (MOC) status.

ABMS was to begin public reporting on August 31, 2012; however, ABR requested a deferral to allow time to verify that each diplomate's status is reported as accurately as possible. ABR is implementing "Continuous Certification," which links the ongoing validity of certificates to meeting MOC requirements. ABR certifi-

cates will no longer have "valid-through" dates; instead, each new certificate in diagnostic radiology, radiation oncology or medical physics will note the initial certification date and be accompanied by the statement, "ongoing certification is contingent upon meeting the requirements of Maintenance of Certification."

Three categories are to be reported on the ABMS website, www.certificationmatters.org:

- Meeting the requirements of Maintenance of Certification

- Not meeting the requirements of Maintenance of Certification
- Not required to participate in Maintenance of Certification (lifetime-certified diplomates)

The ABMS website will refer users to the ABR website, www.theabr.org, which is being enhanced to include its own online verification database. See the September issue of *RSNA News* for a feature article about the new ABMS and ABR public reporting.

My Turn

How AMA Benefits Radiology

You may not believe this, but at the recent American Medical Association (AMA) annual meeting, radiology secured two huge victories. First, the AMA disagreed with the United States Preventive Services Task Force (USPSTF) recommendations and came out in support of a woman's right to have mammograms starting at age 40, urging continued insurance coverage.

Second, the AMA supported radiology's opposition to the proposed Multiple Procedure Payment Reduction (MPPR) plan, which right now only potentially impacts radiology and no other specialty. Why would the AMA do that? As it turns out, the AMA isn't the stodgy monolith you think it is; it's a representational democracy, plain and simple.

Although this coalition accomplished the recent mammography and MPPR wins, just think of what we could accomplish if every radiologist joined and we had five times the current representation! And while there is a radiologist on the AMA Board of Trustees, it has been more than

minology® (CPT) Editorial Panel, which establishes the universal language for all codes and is fundamental to the reimbursement process. It is because of our AMA involvement that the ACR has a voice

at the RUC and CPT and is advocating on your behalf.

Regardless of where you stand on "Obamacare," there are parts that raise concern: For example, the Independent Payment Advisory Board (IPAB), with its power to unilaterally reduce Medicare payments, represents a significant threat to reimbursement, and radiology is no less vulnerable than other specialties. We need the AMA to stand with us as we face these and other challenges.

Of course, you won't agree with everything the AMA does, but it is wrong to decide against joining the AMA in protest. You need to be a part of the process. Your radiology delegates are your voice and the voice of your patients. You and they need to be heard!

Please join today at www.ama-assn.org/go/membership. Make sure that radiology gets credit for your membership by casting your specialty ballot (ama-assn.org/go/ballot). There is a lot at stake—not only for you, your practice and radiology, but most importantly for your patients.



David A. Rosman, M.D., M.B.A., is medical director for Mass General Imaging Worcester and associate director, business development for Mass General Imaging.

"The AMA's weight behind our advocacy on issues like women's access to mammography gives us more credibility and will help us get other important issues across the finish line."

We've long heard that the AMA is really only for primary care doctors, mainly cardiologists and others who are often unsympathetic toward radiologists' issues. The simple truth is that if more radiologists were AMA members, radiology would have more votes in the AMA House of Delegates. In fact, if all radiologists were AMA members, we would be the largest voting bloc in the whole organization!

As it is, we try to make headway with a meager six votes for the American College of Radiology (from a possible 30 or more), along with a team of delegates from other radiologic societies that have seats in the AMA, including the Society of Interventional Radiology, Association of University Radiologists, RSNA, American Roentgen Ray Society, American Society of Neuroradiology, American College of Radiation Oncology, American Society for Radiation Oncology and Society of Nuclear Medicine and Molecular Imaging.

15 years since a radiologist has been president of the AMA.

If you are a full-time practicing radiologist, the AMA has made you hundreds of thousands of dollars over the past six years through its repeated action on the Sustainable Growth Rate (SGR). Radiology could not have accomplished that alone—we needed a federation of physicians to get there. The AMA's weight behind our advocacy on issues like women's access to mammography gives us more credibility and will help us get other important issues across the finish line.

And there's more! The AMA convenes and supports the Relative Value Scale Update Committee (RUC), a Congressionally mandated committee that advises CMS on the relative value of all services in medicine, including imaging. The AMA also oversees the *Current Procedural Ter-*

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Visiting Radiology Professors Teach, Bring Back Lessons from Nepal

Nepal is a geographically breathtaking country in South Asia and home to majestic Mount Everest and about 240 other peaks that rise more than 20,000 feet above sea level—magnets for mountain climbers worldwide.

AS A TRIO of doctors visiting the country with the RSNA-hosted International Visiting Professor (IVP) Program recently discovered, those mountains—and the victory experienced by those who scale them—serve as a metaphor for the healthcare challenges faced by this country of 29 million, and the resourceful practitioners who are overcoming them.

Young Kim, M.D., was among the doctors who traveled to Nepal, located in the Himalaya Mountains and bordered by China to the north and India to the south, east and west, for nearly two weeks in February 2012. RSNA annually sends teams of North American-based professors to lecture at national radiology society meetings and meet with radiology residency training programs at selected host institutions in developing nations.

“The medical community in Nepal was hungry to learn more about technology and procedures they can use now,” said Dr. Kim, an associate professor of radiology at the University of Massachusetts Medical School, Worcester, participating in his first IVP trip. “Faculty members remarked often that hearing about advanced technologies such as MR enterography motivated and inspired them to continually learn and advance in their profession.”

A top priority for the IVP team was attending the South Asian Association for Regional Cooperation (SAARC) Fifth Congress of Radiology in Dharan, a major city in eastern Nepal. IVP team members lectured at the congress which was originally established by the Radiological Society of SAARC Countries, whose member countries are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

“It makes you appreciate the advantages that we have here,” said Anne Roberts, M.D., chief of vascular and interventional radiology at the Thornton Hospital/University of California San Diego Medical Center and a member of the RSNA Public Information Advisors Network, on her second trip with the IVP program (she previously traveled to Nigeria). “I know it sounds cliché, but until you have seen what other countries make do with—and without—it is hard to really understand how lucky we are.”

SAARC Congress a High Point of IVP Trip

The doctors' visit began with the SAARC congress, its fifth and largest gathering so far, held on the 700-acre campus of B.P. Koirala Institute of Health Sciences. The complex features a hospital, medical school, nursing school, technology training and housing for medical students, residents, faculty and staff.

The doctors lectured and gave case presentations to an audience that included almost all of Nepal's radiology residents, many residents from India and numerous radiologists from SAARC countries. A demonstration by the third IVP participant, Kambiz Motamedi, M.D., an associate professor of musculoskeletal imag-

ing at the University of California, Los Angeles, included what he considered an unusually successful demonstration of hands-on ultrasonography on actual patients.

“The audio-visual equipment was excellent and the projection of ultrasound images—which, from my past experience is not so easy—was superb,” Dr. Motamedi said.

As team members toured the medical institution's grounds, including the surgical, pediatric and OB/GYN areas, they observed the institute's Department of Radiology, which has basic resources but clearly needs more advanced equipment.

“They have a 0.5 Tesla MR imaging scanner that is about 20 years old,” Dr. Motamedi said. “There are several up-to-date ultrasound machines and a multi-detector CT scanner, but there is limited availability of fluoroscopy and regular diagnostic radiology mammography machines.”

In Kathmandu the IVP physicians lectured at the National Academy of Medical Science, Bir Hospital and the Tribhuvan University Institute of Medicine and toured their radiology departments. Most are equipped with one older, low-field (0.5 T) MR imaging scanner and a multi-detector CT scanner. None of the institutions they visited owned PACS equipment and high-resolution 3T MR imaging wasn't available anywhere in the country, the doctors said.

The IVP team's next stop, the Universal College of Medical Sciences in Bhairahawa was better equipped than other facilities, Dr. Motamedi said. Located in a brand new wing in the private college, the radiology department has a 0.5 T MR imaging scanner, a new multi-detector CT scanner, three ultrasound rooms and several general radiology rooms.

Widening Pool of Radiology Resources Aid Nepal's Advancement

Funding for the mostly public hospitals and medical institutions visited by the RSNA team comes from various sources. The B.P. Koirala Institute, for example, receives funds from the government and the Indo-Nepalese Medical Association. India also plays

“The medical community in Nepal is hungry to learn about technology and procedures they can use now.”

Young Kim, M.D.



Along with their official duties, the International Visiting Professors took time explore the remarkable sites in Nepal. From left: Young Kim, M.D., Anne Roberts, M.D., her husband John Arnold, M.D., Kambiz Motamedi, M.D., and host Professor Raj Kumar Rauniyar pay a visit to the UNESCO World Heritage site of Bhaktapur in the Kathmandu Valley.

a large role in funding Nepal's medical system, which draws a large percentage of its radiology residents from India. Nepal has five radiology residency programs with a total of 25-30 residents in training and these spots are very much in demand.

“Although the equipment, with few exceptions, is quite old, the staff and residents still are able to provide invaluable service to their patients,” Dr. Motamedi said.

Despite current challenges, Nepal holds the promise of future radiology advancement by tapping into an ever-expanding pool of resources, including those offered by RSNA, he added.

“Although the state of medicine and, in particular, radiology in public institutions is very basic, the speed and availability of the Internet and support from India are promising and may aid advancing radiology in Nepal,” Dr. Motamedi added. “RSNA can also play a crucial role in advancing radiology in Nepal by continuing to provide access to medical journals and online tutorials. With the exception of India, the other SAARC countries are really in need of help in terms of radiology training.”

Trip Fulfills Lifelong Dream of Giving Back

While the team spent a lot of time working, they were also able to enjoy some of the amazing Nepalese sights, including a temple in Kathmandu, a bird reserve at the Nepalese/Indian border and a view of the Himalayas and Mount Everest by air.

A visit to Lumbini, a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage site that was the birthplace of the Buddha and where many temples have been built over the centuries, was a trip highlight for Dr. Kim. “On first glance, the area seemed empty and undeveloped with nothing but trees and vast fields, but it offered a remarkable sense of comfort and calmness that is rarely felt,” Dr. Kim said.



International Visiting Professor Kambiz Motamedi, M.D., (front) reviews MR imaging anatomy for the staff and residents at B.P. Koirala Institute of Health Sciences in Nepal.

In contrast with its magnificence, seeing the areas where Nepal is lacking—infrastructure, medical technology—had a profound impact on the IVP team, who felt privileged to give of their time and training. In fact, the Nepalese trip fulfilled a dream Dr. Kim has had for many years.

“Having grown up in South Korea, I was able to experience the transformation of a country from a poor and undeveloped nation to a modern, high-tech society,” Dr. Kim said. “I was always very appreciative of the medical education I received. Many of my teachers trained in countries such as Japan, Germany and the U.S., and returned to Korea to help develop the medical profession. I have always felt the need to give back in the same fashion, and going to Nepal was simply a dream come true.”

In addition to Nepal, 2012 IVP teams traveled to Vietnam, Mexico and El Salvador. Destinations for 2013 are Tunisia, Russia and Kenya. Other recent trips have included Myanmar, Lithuania, Estonia, Nigeria and Malaysia. □

WEB EXTRAS

For more information on the Radiological Society of SAARC Countries and the SAARC Congress of Radiology, go to www.scr-2012nepal.org/index.html.

RSNA's International Visiting Professor Program is accepting host applications for its 2014 program through December 31, 2012. To fill out an application and for more information on the program, go to RSNA.org/International/CIRE/ivpp.spx.

The IVP program is made possible by the support of Agfa HealthCare and Fujifilm Medical Systems.

Malpractice Claims against Radiologists Often Dismissed, but Fears Persist

About half of all litigated malpractice claims against diagnostic radiologists are dismissed in court and only 5 percent go to verdict—a result in line with other medical specialties, according to recent research.

WHILE radiologists have a low risk of losing a case, the often lengthy and expensive path to resolution could explain why malpractice remains a major—but often distorted—fear in the minds of radiologists, experts say.

National data on the frequency of litigation, how lawsuits are typically resolved and how long cases take to be resolved have been lacking, said Anupam B. Jena, M.D., Ph.D., an assistant professor of health care policy at Harvard Medical School and physician at Massachusetts General Hospital, both in Boston. As an author of “Outcomes of Medical Practice Litigation Against U.S. Physicians,” in the May issue of the *Archives of Internal Medicine*, Dr. Jena and colleagues examine malpractice data by physician specialty.

“Incomplete data have left malpractice rates and case resolutions among physician specialties poorly understood,” Dr. Jena said. “The primary source of data has been the National Physician Data Bank, which records settlements and lost lawsuits but does not publish according to physician specialties. In our study, we obtained a data set from a nationwide professional liability insurer that allowed us to compare specialties.”

Dr. Jena and colleagues examined more than 10,000 medical malpractice claims from 2002 to 2005 that involved some cost to the defendant. Specialties were divided into nine categories including diagnostic radiology.

Results showed that 55.2 percent of all claims resulted in litigation, ranging from 46.7 percent for claims against anesthesiologists to 62.6 percent for claims against obstetricians and gynecologists. Slightly more than 50 percent of claims against radiologists resulted in litigation, while only 2 percent of those cases went to trial. Radiologists won half of the cases that went to trial, Dr. Jena said. However, Dr. Jena noted that the sample size was too small to generalize their results.

“Overall, though, when cases are decided by a jury, they are more likely to be decided in favor of the physician,” he said.

Long Path to Settlement Drives Malpractice Fears

No matter the outcome, malpractice cases take a significant time to resolve.



Jena



Berlin

“Among all physicians, claims took an average of 20 months to close,” Dr. Jena said. “Claims that went to a jury took 40 months on average. This is troublesome for both patients and physicians.”

The long, often expensive path to resolution could explain why radiologists harbor a fear of malpractice that is often distorted, according to Leonard Berlin, M.D., a radiologist at Skokie Hospital and a professor of radiology at Rush University and the University of Illinois, Chicago. Dr. Berlin is among the RSNA 2012 Honored Lecturers (See Page 34).

“In terms of malpractice risk, radiologists are in the bottom third, just below anesthesiologists and just above ophthalmologists. About 7 percent will face a lawsuit annually and about 2 percent will pay a claim.”

Anupam B. Jena, M.D., Ph.D.

“A survey was done that showed 40 percent of radiologists felt they were likely to face a lawsuit in the next five years,” he recalled. “The actual result turned out to be 10 percent. The perception was four times the reality. In fact, the total number of lawsuits against physicians has dropped in the last few years. Physicians’ perceptions haven’t changed, but the risk has.”

In fact, an earlier study by Dr. Jena’s group published in the August 2011 issue of the *New England Journal of Medicine* found that radiologists face a low risk of malpractice suits compared with other physician specialties. Missed breast cancer on mammography was the leading cause of medical malpractice against radiologists.

“In terms of malpractice risk, radiologists are in the bottom third, just below anesthesiologists and just above ophthalmologists,” Dr. Jena said. “About 7 percent will face a suit annually, and about 2 percent will pay a claim.”

However, the cumulative risk of facing a malpractice claim is high, even in a low-risk specialty like radiology. By age 65, three-fourths of physicians in low-risk specialties and 99 percent of physicians in high-risk specialties like neurosurgery will have faced a malpractice claim, Dr. Jena calculated.

“Even though 75 percent of claims don’t result in payment to patient, there is a cost, and it’s not only the insurance company that pays,” Dr. Jena said. “When a physician defends himself against a lawsuit, there is lost practice time, stress and a concern about how he will be viewed by his peers.”

A separate study by Dr. Jena’s research team published in the August 2011 issue of the *New England Journal of Medicine* found that the average cost to defend a claim was approximately \$23,000 for all specialties. Radiologists had a lower average payment: about \$15,000 without indemnity, and \$38,000 with indemnity.

Malpractices Fuels “Defensive Medicine”

The time, money and stress associated with malpractice are feeding the growth of “defensive medicine,” or the ordering of additional tests to limit the threat of malpractice liability, according to Dr. Jena. His research team is planning to analyze this association more closely.

“Fear of malpractice is the largest cause of defensive medicine,” Dr. Berlin added. “You don’t want to overlook anything. That’s why a physician might perform a CT scan on a patient with a headache even though there’s only one-half of one percent chance of a bleeding aneurysm.”

So far, tort reform has failed to make much of an impact on medical malpractice, Dr. Jena said. A means for quickly separating meritorious cases from others and promoting early disclosure of medical errors are among the ideas being discussed to improve the process.

Irrespective of any regulatory or legislative changes, Dr. Berlin advises radiologists not to get overly distracted by malpractice fears.

“Enjoy the profession and do the best you can,” he said. “The perception of getting sued exceeds the reality. If you’re going to stay awake at night worrying about getting sued, you’re in the wrong field.” □

WEB EXTRAS

□ To access an abstract of the May 2012 study, “Outcomes of Medical Malpractice Litigation Against US Physicians,” by Anupam B. Jena, M.D., and colleagues in the *Archives of Internal Medicine*, go to archinte.jamanetwork.com/article.aspx?articleid=1151587

□ To access Dr. Jena’s August 2011 study, “Malpractice Risk According to Physician Specialty,” in the *New England Journal of Medicine*, go to nejm.org/doi/full/10.1056/NEJMsa1012370

MALPRACTICE IS FOCUS OF RESIDENT-FELLOW SESSION

“Legal Aspects of Radiology,” one session of the RSNA Resident and Fellow Symposium 2012, will include lectures on malpractice.

Moderated by RSNA Resident and Fellow Committee Chair Aparna Annam, D.O., the session will feature “Medical Malpractice Pitfalls Your First Year Out: How to Avoid Them,” presented by Leonard Berlin, M.D. He will help attendees understand the frequency and common causes, of medical malpractice lawsuits involving radiology, as well as malpractice pitfalls that can occur in the everyday radiology practice. Attendees will also learn about the importance of communication of abnormal radiologic findings to the referring physician and, under certain circumstances, to the patients themselves.

“You’ve Been Sued, Now What?” will be presented by David Yousem, M.D., who used a Philips Medical Systems/RSNA Research & Education Foundation Education Scholar Grant to create a free online course to help prepare radiology

trainees for economic, financial and leadership challenges. His presentation will help attendees understand the framework of a malpractice case in terms of duty, breach, causation and damages, as well as the timeline for the legal process required to bring a case to court. Attendees will also take away dos and don’ts once they’ve been named in a lawsuit.

The RSNA Resident and Fellow Symposium 2012 will be held Wednesday, November 28, from 1:30 to 5:45 p.m. Other topics to be covered include the future of the radiology job market, tele-radiology and contract negotiations. See the *RSNA Meeting Program*, courses MSRP41 and MSRP42, for more information.



Annam

Yousem

Stem Cells Used as “Trojan Horse” for Ultrasound-Targeted Cell Therapy

Although stem-cell based therapy is moving closer to a clinical reality, questions remain about the safety of these viral-based gene strategies. One researcher has demonstrated that ultrasound-mediated gene delivery therapy offers a safer, noninvasive and more targeted method of delivering therapeutic DNA to specific cells—a method he has dubbed the “Trojan Horse” approach.

RSNA **R&E** **FOUNDATION** CURRENT cell-based therapeutic methods require the preactivation of a gene in stem or progenitor cells ex-vivo and then their insertion into diseased tissue directly or intravenously, creating an element of risk, said Sidhartha Tavri, M.B.B.S., resident physician, Department of Radiology, University of California San Diego (UCSD) School of Medicine.

“These approaches rely on the natural behavior of viruses to introduce genes into cells to infect them and activate the gene,” Dr. Tavri said. “But delivering transfected cells or viruses into an organism raises the risk of these cells and viruses reaching unintended targets. In addition, viruses carry the potential of causing some serious side effects.”

At UCSD, Dr. Tavri began working with Robert F. Mattrey, M.D., director of research and a professor of radiology at the school of medicine, to test the efficacy of ultrasound-guided therapy. “Microbubble cell labeling and tracking with ultrasound was a burgeoning project in my lab,” Dr. Mattrey said.

Dr. Tavri began working on in vivo transfection of neuroprogenitor cells with ultrasound, an idea realized through a 2010-2011 Hitachi Medical Systems/RSNA Research Resident Grant for the project, “Stem Cells as a Trojan Horse for Ultrasound-Targeted Cell Therapy.” Serving as primary investigator, Dr. Tavri worked with colleagues Wenjin Cui, Ph.D., and Boris Minev, M.D., on the project overseen by Dr. Mattrey.

“We came up with new ideas to try and achieve in vivo transfection of these cells using ultrasound,” Dr. Tavri said. He hypothesized an approach that involved loading stem cell or progenitor cells ex vivo with DNA-carrying microbubbles, which became known as the “Trojan Horse” strategy.

“Since genes on internalized microbubbles remain inactive until exposed to ultrasound, our approach allows for systemic administration of microbubble-loaded cells and then gene activation under ultrasound guidance in only the desired locations,” Dr. Tavri said. “Because diseased tissues naturally attract stem and progenitor cells, by pre-loading them with genes which remain silent until exposed to ultrasound, these cells metaphorically serve as ‘Trojan Horses.’”

Ultrasound Detects Single Cell with High Sensitivity

Before they could start in vivo experiments, team members needed to perform several in vitro studies. First, the researchers needed to show that they could attach DNA constructs on the microbubble shell and that these microbubbles could be internalized by the progenitor cells. Next, they worked to demonstrate in vitro that gene transfection of neuroprogenitor cells occurred in vitro only when the cells were exposed to ultrasound, proving that if the cells accumulated into undesirable areas they wouldn't be activated.

They then determined that these microbubbles would survive long enough to ensure they would still be alive when the pre-loaded cells reached targeted areas to allow for transfection. Simultaneously, the team performed sensitivity experiments to ensure that the microbubble-loaded cells would be detected by ultrasound. They showed that ultrasound was able to detect a single cell, which is “the highest sensitivity of any cell-labeling and tracking in vivo imaging technique.”

Dr. Tavri and his colleagues demonstrated that these cells could be transfected in vivo in the skeletal muscle of mice. “Our preliminary results indicated that ultrasound not only mediates in vivo transfection of neuroprogenitor cells in skeletal muscle, but is also necessary,” said Dr. Tavri. “We also showed that microbubble loading of cells is



Tavri

“Diseased tissues attract stem and progenitor cells; by pre-loading them with genes ... that remain silent until exposed to ultrasound, these cells metaphorically serve as ‘Trojan Horses.’”

Sidhartha Tavri, M.B.B.S.

essential for gene expression and is better at transfecting the desired cells than an equivalent number of gene-loaded free microbubbles.”

Research Lays Foundation for Future Study

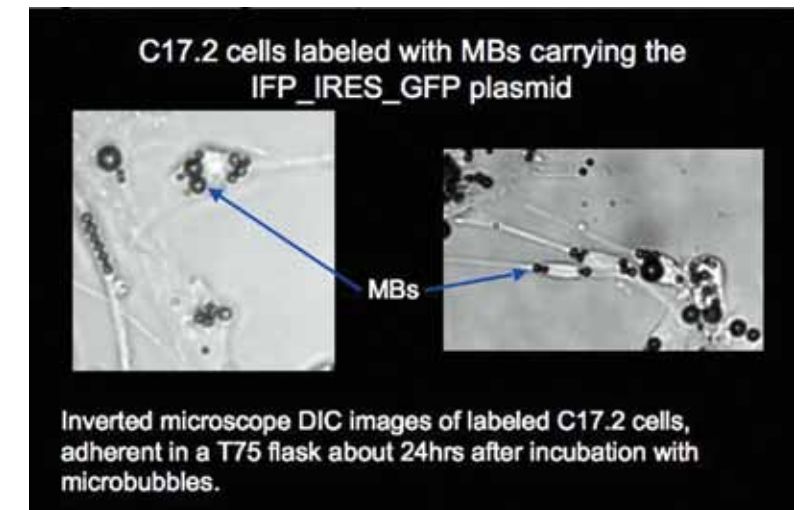
“The results of the study lay the foundation to achieve ultrasound-mediated extravascular delivery of gene therapy by using targeted cell-based therapy,” Dr. Tavri said, adding that diagnostic radiology will play a key role in monitoring cell-based therapy. “Ultrasound offers real-time imaging of cells in vivo and has the potential to be more sensitive and less expensive than modalities like MR imaging or PET.”

“Although we are still early in this process to know whether it will be possible to accumulate enough cells in a region of interest, transfect the cells with ultrasound and induce the desired effect, data generated by Dr. Tavri so far continue to be promising,” Dr. Mattrey added.

If results continue to be positive, the team plans to use the preliminary data for future applications, Dr. Mattrey said. “Should we succeed with our approach to deliver stem cells or progenitor cells loaded with gene-carrying microbubbles systemically, we would provide a new cell-based diagnostic and therapeutic platform,” he said.

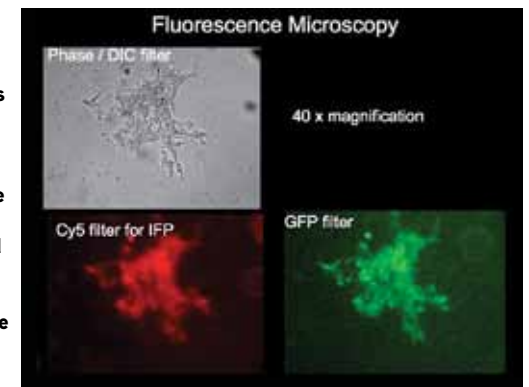
The RSNA Research Resident Grant not only allowed Dr. Tavri to collect data for this project but serves as a stepping-stone for his career in academic radiology, he said.

“I feel fortunate to have received the RSNA grant,” Dr. Tavri said. “I understand it is competitive and getting more so every year. It was the first grant proposal I've submitted and putting it together was a great learning experience. It has also had a tremendous impact by giving me the opportunity to function as a ‘mini-clinical scientist.’” □



In his research, Sidhartha Tavri, M.B.B.S., loaded neuroprogenitor cells with DNA carrying microbubbles and then transfected the cells in vivo using ultrasound. Top: Positively charged microbubbles were loaded with the IFP-IRES-GFP plasmid and incubated with C17.2 cells. Phase-contrast microscopy was then performed on a sample of microbubble-labeled C17.2 cells to confirm microbubble labeling. Some

flasks were then sonoporated using the commercially available Sonigene device. Non-sonoporated cells served as the control. One to two days after, sonoporation biliverdin was added to the flask two hours before imaging to increase the signal from the fluorescent proteins and either fluorescence microscopy or optical imaging was performed to detect GFP and IFP gene expression, respectively. Bottom: Fluorescence microscopy with GFP or Cy5 filter sets detected green or red fluorescence in adherent C17.2 cells indicating not only the expression of GFP and IFP, but also that cells survived ultrasound-mediated gene delivery.



GRANTS IN ACTION

NAME:

Sidhartha Tavri, M.B.B.S.

GRANT RECEIVED:

2010-2011 Hitachi Medical Systems/RSNA Research Resident Grant

STUDY:

“Stem Cells as a ‘Trojan Horse’ for Ultrasound-targeted Cell Therapy”

CAREER IMPACT:

The grant not only allowed Dr. Tavri to collect data to prove whether gene expression can be induced under ultrasound control, but serves as a stepping-stone for his career. “This project allowed me to not only nurture my skills in molecular imaging but also as an academic radiologist,” Dr. Tavri said. “My long-term objective is to add pioneering innovations to the advances in molecular imaging and hopefully translate it to human beings to make a positive impact in the lives of our patients.”

CLINICAL IMPACT:

“The results of the study lay the foundation to achieve ultrasound-mediated extravascular delivery of gene therapy by using targeted cell-based therapy,” Dr. Tavri said, adding that diagnostic radiology will play a key role in monitoring cell-based therapy. “Ultrasound offers real-time imaging of cells in vivo and has the potential to be more sensitive and less expensive than its counterparts like MR imaging or PET.”

For more information on all R&E Foundation grant programs, go to RSNA.org/Foundation or contact Scott Walter, M.S., Assistant Director, Grant Administration at 1-630-571-7816 or swalter@rsna.org.

RadiologyInfo.org Views Imaging Through the Eyes of the Patient

Any patient preparing for an imaging exam, whether for him- or herself or a family member, is likely to have lots of questions: Is it safe for my child to have X-rays? What are contrast materials and how do they work? Which imaging studies use anesthesia?

FOR ANSWERS to these and many other questions, a growing number of patients are turning to *RadiologyInfo.org*, the joint RSNA-ACR (American College of Radiology) public information website launched in 2000 as a radiology information resource for patients and a patient-communication tool for referring physicians to guide their patients. A highly accurate and trusted healthcare website, *RadiologyInfo.org* drew approximately 8.5 million users in 2011—an increase of nearly 1 million visitors from 2010. The site attracts approximately 712,000 visitors each month.

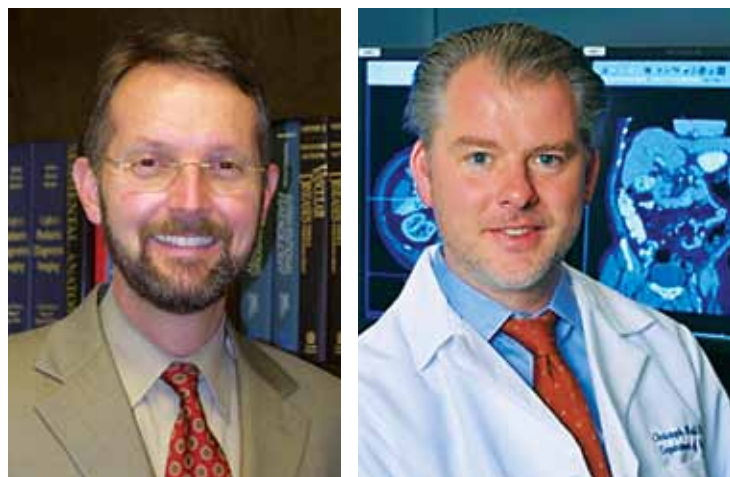
Members of the RSNA-ACR Public Information Website Committee that oversees *RadiologyInfo.org* attribute its success to one basic tenet: content must be viewed through the eyes of the patient, which means keeping information simple, straightforward and to the point.

“When you take a step back and consider what makes a public information website successful, there are three main ingredients,” said James Donaldson, M.D., chair of the Department of Medical Imaging at Lurie Children’s Hospital of Chicago, professor of radiology at Feinberg School of Medicine at Northwestern University and RSNA co-chair of *RadiologyInfo.org*. “The content has to be relevant, you have to know how to reach the user and you have to convey the information in a way they will understand.”

This first-of-its-kind information portal specifically for radiology has delivered on all three counts and built a substantial library of resources, including mobile and social media platforms. Its Spanish version and mobile sites drew 2.2 million visitors in 2011—a 33 percent increase from 2010.

RadiologyInfo.org now offers 127 procedure descriptions, and committee members created 55 videos among a wide array of other multimedia content. Committee members attest to the hard work and collaboration required to develop those resources from the ground up.

“We started at square one in terms of content in 2000,” said Christoph Wald, M.D., Ph.D., executive vice-chair of the Department of Radiology at Lahey Clinic in Burlington, Massachusetts, associate professor of radiology at Tufts University Medical School in Boston and ACR co-chair of *RadiologyInfo.org*. “Not only did the committee have an enormous task just to catch up, we had to stay in lock step with new developments. In the last 2-3 years



Donaldson

Wald

we have reached a point where the content is so comprehensive that we just have a few remaining gaps to fill.”

Committee members with expertise in many different radiology subspecialties select the content that is developed and then vetted by radiology experts from ACR, RSNA and other professional radiology organizations. “We also ask committee members to review and update the content every year,” Dr. Wald said. “Their input and patient feedback help us to continuously refine the material.”

Disease Pages Answer “Big-Picture” Questions

One new feature came through the realization that patients seeking radiology information also have “big picture” questions that extend beyond imaging. To address those questions and help put imaging in the proper context, the site has begun listing disease and condition descriptions, the diagnostic tests used to evaluate them and the radiologic procedures for treating them.

“We realize that one site doesn't fit everybody and that some people like to read and some would rather watch videos.”

James Donaldson, M.D.

“Patients may not think about imaging by the type of exam or modality but by symptom or disease,” Dr. Donaldson said. “Soon a patient can go to the disease page, type in appendicitis, and get a brief, simple description of how imaging is used in evaluating that disease.”

Terms within the disease descriptions, such as gallbladder, for example, link to a glossary of medical terms explained in easy-to-understand language offering patients further clarification—one example of the comprehensive network of cross-linking within the site.

Patient Safety Section Expanded

To address patient concerns about radiation, the committee continues to enhance the site’s Patient Safety section that includes information and videos on radiation exposure in X-ray and CT examinations and other topics. That section also serves as the patient-facing portion of the Image Wisely campaign sponsored by radiology associations including RSNA and ACR, to promote imaging safety for adults. Through shared human resources, *RadiologyInfo.org* and Image Wisely have been very effective in placing patient-directed information where it belongs while avoiding duplication, or worse, contradiction across separately created resources, said Dr. Wald, a member of the Image Wisely Steering Committee.

To assist parents with questions about their child’s examination, *RadiologyInfo.org* recently bolstered its pediatric-specific content—indicated by teddy bear icons throughout—and added links to the Image Gently campaign whose website promotes radiation safety practices in children.

One (Web) Site Doesn't Fit All

Creating an image-rich site is an ongoing goal of committee members who continually add videos, pictures, anatomical drawings, podcasts and more. “We realize that one site doesn't fit everybody and that some people like to read and some would rather watch videos,” Dr. Donaldson said. “We’re trying to fill as many niches as we can.”

The committee is tapping new resources including images and illustrations from the RSNA journals *RadioGraphics* and *Radiology* and the website *CTisus.com*, operated by one of the committee’s vice co-chairs, Elliot K. Fishman, M.D., who will replace Dr. Donaldson as co-chair in 2013. “Dr. Fishman has many illustrations on his website and he’s been gracious enough to let us use this as a resource,” Dr. Donaldson said.

While the site benefits from a highly effective search engine optimization strategy that consistently returns *RadiologyInfo.org* at the top of millions of Google hits on radiology keyword searches, getting patients to the site itself means staying on top of continually evolving communication methods, committee members said.

“We have to match patients’ communication habits,” Dr. Donaldson said. “The website has branched out with Twitter and Facebook and users can subscribe to SMS and e-mail updates or RSS feeds and



Realizing that patients often have questions that extend beyond imaging, the RSNA-ACR Public Information Website Committee that oversees *RadiologyInfo.org* has begun listing disease and condition descriptions, the diagnostic tests used to evaluate them and the radiologic procedures for treating them (above). To assist parents with questions about their child’s examination, pediatric-specific content is now indicated with teddy bear icons throughout the site.

visit the mobile-optimized version of *RadiologyInfo.org* from their cell phones. We are constantly trying to optimize content.” (See sidebar)

Judging by visitor feedback, patients are happy with what they find on the website and the committee will continue to add more resources in 2013, Dr. Wald said. “The feedback is very positive,” he said. “Most people love the site and are able to find what they need.”

The website continues to earn other accolades. Along with numerous past awards, *RadiologyInfo.org* received the 2011 Health Improvement Institute’s Aesculapius Award of Excellence and a certificate from the Web Health Awards, an awards program organized by the Health Information Resource Center.

Calling it a “great success story,” both doctors attribute much of the website’s success to the high level of collaboration between the two societies.

“This has been a highly successful, cooperative venture between RSNA and ACR,” Dr. Donaldson said. “We pool our resources and we are both dedicated to making *RadiologyInfo.org* the best website it can be for patients.” □

WEB EXTRAS

Videos on topics including MR Cholangiopancreatography, Children and Radiation Safety, Carotid Ultrasound, CT of the Kidneys and many others are now available on *RadiologyInfo.org* as part of the “Your Radiologist Explains” series. The video presentations feature PowerPoint slides with images and narration and are intended to help explain various radiology tests and treatments to patients. To access the videos, go to RadiologyInfo.org/vids.

Physicians can download *RadiologyInfo.org* promotional posters, business cards and printable PDF versions of the various radiology procedures as handouts for patients.

EXPLORE RADIOLOGYINFO.ORG AT RSNA 2012

RadiologyInfo.org is featured as an important patient-communication tool in patient-centered radiology courses presented to radiologists at RSNA 2012. Stop by RSNA Services to get a demonstration of *RadiologyInfo.org* from RSNA staff members. While you’re there, enter the drawing—you could win a Kindle Fire!

RSNA® 2012
Patients First

RSNA R&E Foundation Announces 2012 Grant Recipients

The RSNA Research & Education Foundation funded 79 grant projects totaling \$2.9 million, the highest in the Foundation's history. The Foundation's Board of Trustees thanks the Vanguard companies, individuals and private practices whose generous contributions have made the following grants possible. Learn more about grant opportunities at RSNA 2012—visit the R&E Foundation Booth in RSNA Services, Level 3, Lakeside Center.



RESEARCH SCHOLAR GRANT

Jonathan R. Dillman, M.D.
University of Michigan Health System
Comparative Effectiveness of MR Enterography, Enteric Ultrasound, and Ultrasound Elastography Imaging in the Evaluation of Pediatric Small Bowel Crohn Disease



Jason Druzgal, M.D., Ph.D.
University of Virginia
Machine Learning Classification of Resting State Functional MRI Data in Autism Spectrum Disorders

Joseph Erinjeri, M.D., Ph.D.
Memorial Sloan-Kettering Cancer Center
Modulating Inflammation to Improve Treatment Response Following Thermal Ablation of Tumors



Xiang He, Ph.D.
University of Pittsburgh
MR-Based Non-Invasive Functional Renal Imaging in Acute Kidney Injury



Michael Hope, M.D.
University of California, San Francisco
Comprehensive Hemodynamic Assessment of Valve-Related Aortic Disease with Cardiac Magnetic Resonance



Jerry Jaboin, M.D., Ph.D.
Washington University Medical Center
Conditionally Replicative Virotherapy for Recurrent and Aggressive Meningioma Tumors

Hee Kyung Kim, M.D.
Cincinnati Children's Hospital
MR Quantification of Muscular Fat in Duchenne Muscular Dystrophy: Integrating T2 Relaxation Time Mapping and MR Spectroscopy



John Lewis, Ph.D.
Dana-Farber/Brigham and Women's Cancer Center
Development of 3D Fluoroscopic Imaging During Radiotherapy for Reconstruction of Delivered Dose Distributions



James A. Tanyi, Ph.D.
Knight Cancer Institute, Oregon Health & Science University
Incorporating the Effects of Transcytolemmal Water Exchange in Pharmacokinetic Analysis of DCE-MRI Data in the Prediction of Head and Neck Cancer Response to Chemoradiation

David Woodrum, M.D., Ph.D.
Mayo Clinic
Influence of Differential Cellular Heat Shock (Stress) Protein Expression on Cellular Death from Focal Laser Ablation

Katherine Zukotynski, M.D.
Brigham and Women's Hospital
Predictive Value of 18F-FDG PET/CT and 18F-NaF PET/CT in Castrate-Resistant Prostate Cancer

RESEARCH SEED GRANT

Muneeb Ahmed, M.D.
Beth Israel Deaconess Medical Center
Silver Anniversary Campaign Pacesetters Research Seed Grant
Elucidating the Extent and Causes of RF Ablation-Induced Cell Growth

Brian Alexander, M.D., M.P.H.
Dana-Farber/Brigham and Women's Cancer Center
Functional Connectivity Mapping for Patients Receiving Radiation Therapy to the Brain

Sameer Ansari, M.D., Ph.D.
Northwestern University, Feinberg School of Medicine
Dual-venic 4D Flow MRI of Unruptured Intracranial Aneurysms: Potential for Risk Stratification and Post-Treatment Evaluation



Rony Avritscher, M.D.
The University of Texas MD Anderson Cancer Center
Adjunctive Use of Mesenchymal Stem Cells to Enhance Tumor Destruction After Radiofrequency Ablation for Hepatocellular Carcinoma



Eric Chang, M.D.
VA San Diego Healthcare System; University of California, San Diego Medical Center
Non-invasive Quantitative MR Evaluation of Rotator Cuff Tendon Utilizing Ultrashort TE (UTE) Techniques

Mary Chiavaras, M.D., Ph.D.
McMaster University
Impact of Platelet Rich Plasma Over Alternative Therapies in Patients with Lateral Epicondylitis (IMPROVE): A Multicenter, Randomized Trial Comparing Autologous Platelet Rich Plasma (PRP) Versus Autologous Whole Blood Versus Tenotomy on Pain and Quality of Life in Patients with Lateral Epicondylitis

Jeremy Collins, M.D.
Northwestern University, Feinberg School of Medicine
Non-Contrast MR Angiography, Venography, and 4D Flow as a Comprehensive Protocol for Pre-Liver Transplant Vascular Assessment



Eileen Connolly, M.D., Ph.D.
Columbia University
Investigation of Targeted Akt Inhibition as a Radiation Sensitizer of Breast Cancer Stem Cells

Mary Mahoney, M.D.
University of Cincinnati
Choline Metabolite Ratios as Markers of Human Breast Cancer



Raymond Mak, M.D.
Dana-Farber/Brigham and Women's Cancer Center
Autophagy as a Biomarker and Therapeutic Target in KRAS-Mutant Non-Small Cell Lung Cancer

Gale Sisney, M.D.
University of Wisconsin
Interpretative Performance and Outcome Analysis of the University of Wisconsin-American College of Radiology-National Mammography Database for Women Undergoing First Time, Annual and Biennial Screening Mammography



Alda Tam, M.D., M.B.A.
The University of Texas MD Anderson Cancer Center
Optimizing Techniques and Imaging Evaluation of Combination Locoregional Therapy in Rabbit VX2 Hepatic Tumors Using Radiolabeled Nanoparticles

Hongwu Zeng, M.D.
Shenzhen Children's Hospital (China)/ University of Wisconsin-Madison
Language Reorganization and Functional and Structural Connectivity Patterns in Children with Benign Epilepsy with Centrotemporal Spikes (BECTS)



RESEARCH FELLOW GRANT

Linda Chu, M.D.
Johns Hopkins Medicine
Cardiac MRI Evaluation of Early Disease Markers of Hypertrophic Cardiomyopathy



Michael Farwell, M.D., M.A.
Columbia University Medical Center
Ralph Schlaefer Charitable Foundation Research Fellow Grant
Development of a New SPECT Radiotracer for Seizure Focus Localization in Patients with Epilepsy

Kathy Han, M.D.
Princess Margaret Hospital, University of Toronto
A Prospective Pilot Study of the Utility of DWI, DCE-MRI and FDG PET Imaging for Target Delineation in Brachytherapy for Cervical Cancer

RESEARCH RESIDENT GRANT

Scott Bratman, M.D., Ph.D.
Stanford University Medical Center
A Genomic Strategy for Residual Disease Monitoring following Stereotactic Ablative Radiotherapy for Non-small Cell Lung Cancer

Aaron Brown, M.D.
The University of Texas MD Anderson Cancer Center
Nanoparticle-Mediated Radiation Dose Enhancement - Advancing Clinical Translation in Head and Neck Cancer Treatment

Qi Cao, M.D., Ph.D.
University of Maryland Medical Center
F18-Proline PET/CT Imaging in the Functional Diagnosis of Early-Stage Alcoholic Liver Fibrosis



Sherwin Chan, M.D., Ph.D.
University of Washington
Evaluation of a Novel Quantitative Method to Detect Arterial Stenosis Using Spectral Doppler Ultrasound



Terence Gade, M.D., Ph.D.
Hospital of the University of Pennsylvania
In Vivo Imaging of Cellular Adaptations to Metabolic Stress: Hyperpolarized MR Spectroscopic Imaging of Changes in Tumor Metabolism and Viability Following Transarterial Embolization in an Autogenous Rat Model of Hepatocellular Carcinoma



Susan Hiniker, M.D.
Stanford University Medical Center
Improving Prediction and Diagnosis of Recurrence in Early-Stage Lung Cancer Patients after Stereotactic Ablative Radiotherapy



Michael Jurkiewicz, Ph.D., M.D.
University of Toronto, Toronto Western Hospital
A Novel Method of BOLD fMRI Resting State Functional Connectivity Analysis Across the Human Brain



Theodore Marentis, M.D., M.S.E.E.
University of Michigan Health System
A MicroElectroMechanical Systems (MEMS) X-ray Blood Pressure (X-BP) Sensor for Coronary Stent Restenosis Surveillance



Continued on Next Page

Continued from Previous Page

Paul Murphy, M.D., Ph.D.
University of California, San Diego
Reduction of Cardiac and Respiratory Motion Artifacts in Liver DW-MRI

HITACHI
Inspire the Next

Andrew Nicholson, M.D.
Emory University
In Vivo Imaging of the Neuroprotective Effects of Thrombolitically-Inactive tPA



LIFE FROM INSIDE

Christopher Potter, M.D.
University of Washington
RSNA Presidents Circle Research Resident Grant
Axonal Degeneration in Alzheimer Disease: Functional and Structural Investigation with Dynamic Manganese-Enhanced MRI (dyMEMRI) and Diffusion Tract Imaging (DTI)



SHAPING RADIOLOGY'S FUTURE

Navneet Singh, M.D.
University of Toronto
The Ability of Routine Clinical High Resolution 3-Tesla MR Imaging of Carotid Intraplaque Hemorrhage to Identify Vulnerable Cardiovascular and Cerebrovascular Patients

PHILIPS

Bashir Akhavan Tafti, M.D.
University of California, Los Angeles
Potential Application of Irreversible Electroporation (IRE) in the Treatment of Breast Cancer

PHILIPS

Leo L. Tsai, M.D., Ph.D., M.Sc.
Beth Israel Deaconess Medical Center/ Harvard Medical School
Characterization of Perfusion, Metabolism, and Therapeutic Resistance in a Renal Cell Carcinoma Mouse Model with Hyperpolarized 13-C-Tert-Butanol and 13-C-Pyruvate MRI



LIFE FROM INSIDE

Chiaojung Jillian Tsai, M.D., Ph.D.
The University of Texas MD Anderson Cancer Center
MicroRNA as a Prognostic Marker in Cervical Cancer Patients After Chemoradiation: Analysis of Tissues from RTOG 90-01 and an Institutional Prospective Trial

PHILIPS

RESEARCH MEDICAL STUDENT GRANT

Richard Ahn, Ph.D.
Northwestern University, Feinberg School of Medicine
Immuno-PET Imaging of the Urokinase Plasminogen Activator Receptor in Glioblastoma Multiforme and Triple Negative Breast Cancer

Cody Branch, B.S.
University of Mississippi Medical Center
Advanced CT Image Analysis of Diffuse Liver Disease

J. Daniel Carson, B.S.
University of Mississippi Medical Center
Complications and Costs Associated with Management of Bosniak IIF, III & IV Cystic Renal Lesions

Canon

Jason Chiang, B.S.
University of Wisconsin-Madison
Development of Thrombotic Risk Function for Guiding Microwave Tumor Ablation Applicators

Adam Dmytriw, M.Sc.
QE II Health Sciences Centre, Dalhousie University School of Medicine
PROPELLER-DWI in the Staging of Head and Neck Squamous Cell Carcinoma: A Pilot Study

Jonathan Eisenberg, B.A.
Massachusetts General Hospital
Effects of Radiation Associated With Post-Treatment Surveillance Imaging in Cancer Patients: A Life Expectancy Analysis

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Boston University School of Medicine
Left Versus Right-Sided Intravenous Contrast Injection on CTA in the Evaluation of Cerebral Vasculature: Who really Needs Right-Sided Injection?

Christopher Hostage, B.S.
Duke University School of Medicine
Effect of APOE Epsilon 4 Allele Dose on Brain Volumes Across the Cognitive Spectrum

Leonel Kahn, B.S.
Oregon Health & Science University
Construction of a Nomogram for Predicting Mortality and Visual Outcomes of Patients Treated with I-125 Plaque Brachytherapy for Choroidal Melanoma

Kartik Kesavabhotla, B.S.
Weill Cornell Medical College
The Role of Diffusion Susceptibility Contrast Imaging in Assessing Recurrent Glioblastoma Multiforme Early Response to Supersensitive Intra-Arterial Bevacizumab Therapy

Aileen Kim, B.S.
Duke University Medical Center
Adaptive Treatment Planning with F-18 FDG-PET and CT Scanning Before and During Chemoradiotherapy to Optimize Sparing of the Parotid Glands in Patients with Head and Neck Cancer

Jennifer Kwan, B.S.
University of Toronto, Princess Margaret Hospital/Ontario Cancer Institute
Development and Characterization of Novel Uroporphyrinogen Decarboxylase Inhibitors as Tumor-Specific Radiosensitizing Agents in Head and Neck Cancers

Caleb Leake, B.S.
Mayo Clinic
Risk of Contrast Induced Nephropathy (CIN): Contrast-Enhanced CT or CTA followed by Cardiac Catheterization

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Emilie Muelly, Ph.D.
Penn State University College of Medicine
Brain Morphometry as it Relates to Neurochemistry in Patients with Maple Syrup Urine Disease and healthy controls

Patrick J. Pan, B.S.
Duke University School of Medicine
High-Resolution Ultrasound of Colorectal Carcinoma Metastases with a Microbubble Contrast Agent: Measurement of the Heterogeneity of Perfusion Changes as a Better Indicator of Tumor Response to Anti-Angiogenic therapy

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University of California, Los Angeles
High Angular Resolution Diffusion Imaging for Predicting Outcomes in the Surgical Treatment of Mesial Temporal Lobe Epilepsy

Charles Andrew Robinson, B.S.
The Ohio State University
Evaluation of MEK Inhibitor-Mediated Radiosensitization in KRAS Mutant Carcinoma Cell Lines

Rahul Sarkar, B.A.Sc., M.Sc.
University of Manitoba, Sunnybrook Health Sciences Centre
In-Vivo Characterization of High-Risk Plaque Using Quantitative T1 Magnetic Resonance Imaging

Brittany Simone, B.S.
Touro College of Osteopathic Medicine
Caloric Restriction as an Adjunct to Conventional Therapy in Triple Negative Breast Cancer

Yeohan Song, B.S.
University of Michigan Health System
Investigating Clinical, Pathologic, and Molecular Determinants of Outcome Following Post-Prostatectomy Salvage Radiotherapy for Prostate Cancer: An Institutional Cohort Study

Lova Sun, B.S.
University of Pennsylvania
Use of Gold Nanoparticles in Enhancing Imaging and Radiation Therapy of Brain Tumors

Hsiang-Jer Tseng, M.A.
University of Minnesota
Comparative Study of Doxorubicin-Loaded Drug Eluting Beads: An in vitro evaluation



Joshua Walker, Ph.D.
Oregon Health & Science University
The Role of DAMPs as Immune Activators in Combination SBRT and IL-2 Therapy of Metastatic Melanoma

Ruth White, Ph.D.
Oregon Health & Science University
MicroRNA Mediated Radiosensitization of Head and Neck Squamous Cell Carcinoma Cancer Stem Cells

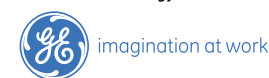
Aaron Wild, B.A.
Johns Hopkins Medicine
Radiosensitization of Hepatocellular Carcinoma Using Rationally Combined Molecular-targeted Agents

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Brian W. Bresnahan, Ph.D.
University of Washington
Developing Radiology-Focused Web-Based Educational Modules in Health Services Research, Comparative Effectiveness Research, and Health Economic Evaluation

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Stephen Brown, M.D.
Children's Hospital Boston and Harvard Medical School
Program to Enhance Relational and Communication Skills for Radiologists (PERCS-Radiology)



James Duncan, M.D., Ph.D.
Washington University in St Louis
Development and Implementation of a Radiology Improvement Leader Training Course

Sharad Goyal, M.D.
UMDNJ/Robert Wood Johnson Medical School, UMDNJ/New Jersey Medical School & The Cancer Institute of New Jersey
COntouring in Radiation Oncology Education (CORE)—A Self-Assessment Module (SAM) for Radiation Oncologists

DEADLINES FOR 2013 GRANT APPLICATIONS

The application process for 2013 R&E Foundation grants opens this month.

Deadlines are:

- ▶ January 10, Education Grants
- ▶ January 15, Research Grants
- ▶ February 1, Research Medical Student Grant

Posters outlining R&E Foundation research and education grant programs, as well as programs for which international RSNA members are eligible, will be mailed this month to department chairs and are available for download at RSNA.org/Grants_and_Awards.aspx. Posters will also be available at RSNA 2012 in the R&E Foundation Pavilion in RSNA Services. Learn more about applying for R&E grants at RSNA.org/Foundation.

Saurabh Jha, M.D.
University of Pennsylvania
Technology Assessment for Radiology Residents – a Curriculum to Understand the Economics of Imaging and How to Value a Diagnostic Test



Salvador Pedraza, M.D.
University of Girona (Spain)
Developing a Computer Game for Problem-Based Learning (PBL) of Radiology for Undergraduate Medical Education (MEDGAME)

Priscilla Slanetz, M.D., M.P.H., and Ronald L. Eisenberg M.D., J.D.
Beth Israel Deaconess Medical Center
Development of a Peer Observation Teaching Program to Enhance Radiology Resident Teaching Skills

Sergio Uribe, Ph.D., M.S.
Pontificia Universidad Catolica de Chile
Derek Harwood-Nash Education Scholar Grant Latin American MR e-learning Platform

Carolyn Wang, M.D.
University of Washington
Evidence Based Development of a High-Fidelity Simulation Team Training Program for Contrast Reaction Management

Xiaoming Yang, M.D., Ph.D.
University of Washington School of Medicine
Toward Clinical Translation of Interventional Molecular Imaging: An Educational Program for New Generations of Interventional Radiologists

RSNA/AUR/APDR/SCARD RADIOLOGY EDUCATION RESEARCH DEVELOPMENT GRANT

Kalpna Kanak, Ph.D.
University of Washington
Use of Pediatric CT Protocols among Children with Head Trauma in U.S. Hospitals

Daniel Strauchler, M.D.
Jacobi Medical Center
Randomized Controlled Study of Simulated Interpretation to Enhance Medical Student Radiology Clerkship

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Through his project, "Polymeric Iohexol Nanoconjugates for Targeted Transcatheter Drug Delivery: Quantitative CT Analysis of Spatial Distribution in a Rabbit VX2 Liver Tumor Model," funded by an RSNA Research & Education (R&E) Foundation/Philips Healthcare Research Seed 2011-12 Grant, **Ron Gaba, M.D.**, an assistant professor of radiology at the University of Illinois Hospital, Chicago, laid the foundation for his interventional radiology career. "I am happy to report that the experience gained during the course of that study has allowed me to apply for and successfully obtain a 2012-2013 Basic Science Research Grant, 'Effects of Drug Delivery on Tumor Necrosis After Liver Chemoembolization', from the American Cancer Society Illinois Division," Dr. Gaba said. "This career development grant will help me prepare and transition to National Institutes of Health-level funding proposals."



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Journal Highlights

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

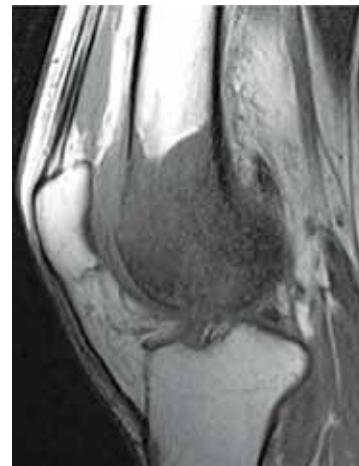
Musculoskeletal Tumors: How to Use Anatomic, Functional and Metabolic MR Techniques

Although the function of MR imaging in the evaluation of musculoskeletal tumors has traditionally been to help identify the extent of disease prior to treatment, its role continues to evolve as new techniques emerge.

In an article in the October issue of *Radiology* (RSNA.org/Radiology), Laura M. Fayad, M.D., of Johns Hopkins Medical Institutions in Baltimore, and colleagues discuss a multiparametric approach to evaluating musculoskeletal tumors, focusing on the utility and potential added value of pulse sequences in helping establish a diagnosis, assess pretreatment extent and evaluate tumors in the post-treatment setting for recurrence and treatment response.

The authors discuss anatomic, functional and metabolic imaging protocols, including chemical shift MR imaging (in-phase and opposed-phase imaging), diffusion-weighted imaging, perfusion imaging and MR spectroscopy, T1-weighted and fluid-sensitive sequences.

"Although conventional T1-weighted and fluid-sensitive sequences are entirely sufficient to enable determination of the location and extent of a musculoskeletal lesion, quantitative methods now provide metrics that may advance the role of MR imaging to include detection, characterization, and reliable assessment of treatment response," the authors write.



Osteosarcoma of the right femur in a 15-year-old girl. Sagittal T1-weighted MR image (370/10) shows complete replacement of normal fatty marrow signal intensity involving epiphysis and distal metadiaphysis of the right femur. Images obtained with nonenhanced T1-weighted sequence best depict contrast between marrow-replacing tumor and normal fatty marrow for accurately defining extent of the lesion.

(*Radiology* 2012;265:2 (In Press) ©RSNA, 2012. All rights reserved. Printed with permission.)

Radiology

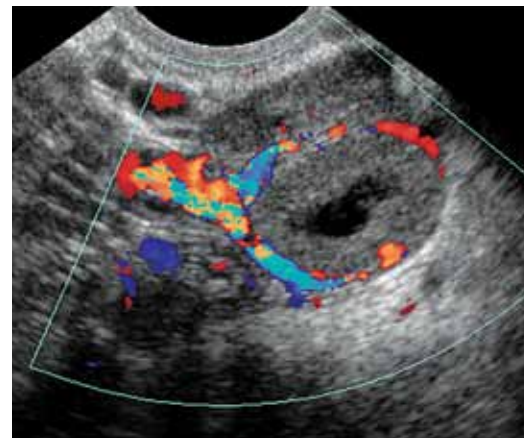
Imaging of the Female Pelvis through the Life Cycle

The appearance of the normal reproductive tract on radiologic images changes dramatically over the female patient's life span, reflecting the influence of hormones on these organs.

In an article in the October special issue of *RadioGraphics* (RSNA.org/RadioGraphics), Jill E. Langer, M.D., of the University of Pennsylvania, and colleagues describe expected findings and physiologic changes in the normal female reproductive tract from birth through postmenopausal years, with an emphasis on the appearances of the uterus and ovaries at pelvic ultrasound, CT and MR imaging.

Whether the female pelvis is imaged because of a suspicion of underlying gynecologic disease or as a screening examination in the asymptomatic patient, radiologists should be familiar with the range of normal appearances in these organs to avoid misinterpreting expected physiologic changes as pathologic conditions and to spare the patient unnecessary additional imaging and surgical or other invasive procedures, according to the authors.

"A thorough knowledge of how hormonal changes affect the appearance of the uterus and ovaries at pelvic imaging performed in childhood, during the reproductive years, after delivery, and in menopause is important for differentiating expected physiologic changes from pathologic conditions," they write.



Corpus luteum in a 25-year-old woman. Color Doppler flow image shows marked vascularity only within the wall of the corpus luteum and not in the fluid-containing center.

(*Radiographics* 2012; 32(6):1575-1597) ©RSNA, 2012. All rights reserved. Printed with permission.

RadioGraphics

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

Radiology in Public Focus

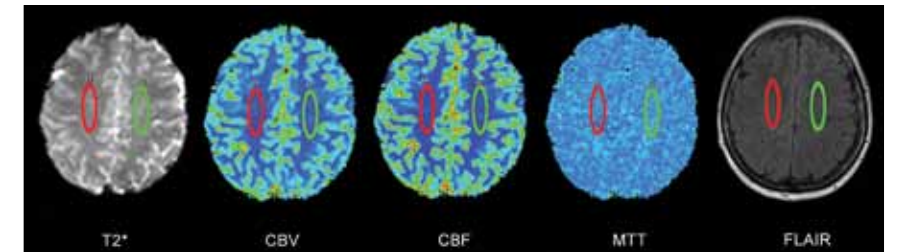
Press releases were sent to the medical news media for the following articles appearing in recent issues of *Radiology*.

Brain Hemodynamic Changes Associated with Chronic Cerebrospinal Venous Insufficiency Are Not Specific to Multiple Sclerosis and Do Not Increase Its Severity

THERE is no significant relationship between multiple sclerosis (MS) and chronic cerebrospinal venous insufficiency (CCSVI) with regard to cerebral hemodynamic parameters, according to new research.

In the study, Francesco G. Garaci, M.D., of the University of Rome Tor Vergata, Italy, and colleagues assessed cerebral blood volume (CBV), cerebral blood flow (CBF) and mean transit time with dynamic susceptibility contrast material-enhanced MR imaging in normal-appearing white matter (NAWM) in 39 patients with MS. Of those, 25 had CCSVI and 14 did not. Of the 26 healthy control subjects also evaluated, 14 had CCSVI and 12 did not.

Patients with CCSVI showed cerebral hemodynamic anomalies such as decreased CBF and CBV compared with individuals without CCSVI, without any delay in mean transit time. No significant interac-



ROIs placed in the NAWM of a 38-year-old healthy control subject at the level of the semioval centers. ROIs were placed carefully to avoid arterial and venous structures, in the same position and with the same measurements in all patients with MS and all control subjects. FLAIR = fluid-attenuated inversion-recovery sequence at MR imaging, L1 = right ROI, L2 = left ROI.

(*Radiology* 2012;265:1:233-239) ©RSNA, 2012. All rights reserved. Printed with permission.

tion between MS and CCSVI was found for any hemodynamic parameters and no correlations were found between CBV and CBF values in NAWM or for severity of disability in patients with MS, according to results.

"Our results show that CCSVI has no effect on neurologic function and disability progression in MS, since no correlations

were found between the hemodynamic abnormalities related to CCSVI and two direct measures of disability (Expanded Disability Status Scale and MS Severity Score)," the authors write. "Therefore, these results favor the hypothesis that CCSVI has no role in MS pathogenesis."

Altered Functional MR Imaging Language Activation in Elderly Individuals with Cerebral Leukoaraiosis

MODERATE leukoaraiosis is associated with atypical functional activation during semantic decision tasks in the elderly, according to new research. Consequently, leukoaraiosis is an important confounding variable in functional MR imaging studies of the elderly.

In the study, Kirk M. Welker, M.D., of the Mayo Clinic in Rochester, Minn., and colleagues performed functional MR imaging on 18 right-handed, cognitively healthy elderly participants with an aggregate leukoaraiosis lesion volume of more

than 25 cm³ and 18 age-matched control participants with less than 5 cm³ of leukoaraiosis. Researchers compared activation in patients performing semantic decisions with those making visual perceptual decisions.

Results showed that elderly patients with moderate leukoaraiosis exhibit atypical activation patterns during a functional MR imaging semantic decision task in comparison with age-matched healthy control participants.

"Participants with leukoaraiosis experi-

ence less language, primary visual, and basal ganglia activation during semantic decisions and increased visual-spatial activation during visual perceptual decisions," according to researchers. "On the basis of these results, we believe that researchers performing functional MR imaging language studies in elderly patients should address participants' leukoaraiosis levels in their experimental procedure."

Media Coverage of RSNA

In July, media outlets carried 210 RSNA-related news stories. These stories reached an estimated 405 million people.

Print and broadcast coverage included *The Courier-Journal* (Louisville, Ky.), *Florida Today*, *Monterey County Herald*, *Health Management Technology* and *WOR-AM* (New York, N.Y.).

Online coverage included Yahoo! News, MSN, *Philly.com*, *Toronto Sun*, *Medical News Today*, *Examiner*, *HealthDay* and *Medscape*.

October and November Public Information Activities Focus on Breast and Lung Cancer Awareness

To highlight National Breast Cancer Awareness Month in October and National Lung Cancer Awareness Month in November, RSNA is distributing public service announcements (PSAs) focusing on the importance of regular screening mammograms and the symptoms, risk factors and possible treatment options related to lung cancer.

In addition to the PSAs, RSNA is distributing the "60-Second Checkup" audio program focusing on better prognoses for women ages 40 to 49 who have breast cancer detected through mammography and treatment options for small cell versus non-small cell lung cancer patients.

Education and Funding Opportunities

Register Now for the RSNA-ASTRO Co-Sponsored Cancer Imaging and Radiation Therapy Symposium

February 8-9, 2013

Hilton Orlando Lake Buena Vista in the Walt Disney World® Resort

Registration for the second Cancer Imaging and Radiation Therapy Symposium, co-sponsored by ASTRO and RSNA, is now open.

This multidisciplinary symposium will continue to focus on the collaboration 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.

In addition, the symposium will cover the many points of contact between imaging and radiation oncology from diagnosis through the entire course of the patient's disease with a focus on the treatment of lung, head and neck, gastrointestinal and breast cancer.

Kevin Camphausen, M.D., and Suresh Mukherji, M.D., are co-chairs of the committee planning the symposium. Dr. Camphausen is a radiation oncologist at the National Cancer Institute in Bethesda, Md. Dr. Mukherji is a professor of radiology at the University of Michigan in Ann Arbor.

For more information, go to www.cancerimagingandrt Symposium.org.



Writing a Competitive Grant Proposal

February 22-23, 2013

RSNA Headquarters, Oak Brook, Ill.

Registration Deadline December 16, 2012

Registration is being accepted for the Writing a Competitive Grant Proposal workshop designed for researchers in radiology, radiation oncology, nuclear medicine and related sciences who are interested in actively pursuing federal funding.



A limited number of slots are available for this 1½-day intermediate-level program that combines didactic and small group interactive sessions designed to help radiologic researchers understand and apply the key components of writing a competitive grant proposal. Topics to be covered include 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 and provide tools for getting started. Faculty includes G. Scott Gazelle, M.D., Ph.D., M.P.H., of Massachusetts General Hospital in Boston, Ruth Carlos, M.D., of the University of Michigan Health System in Ann Arbor, Elizabeth Burnside, M.D., M.P.H., of the University of Wisconsin in Madison, and Francis Blankenberg, M.D., of Lucile Packard Children's Hospital at Stanford University in Palo Alto, Calif.

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

Medical Meetings

October-December 2012

OCTOBER 18-20

Interamerican College of Radiology (CIR), Annual Congress, Hotel Royal Decameron, El Salvador
• www.webcir.org

OCTOBER 18-20

Korean Society of Radiology (KSR), The 68th Korean Congress of Radiology, COEX, Seoul, Korea
• www.kcr4u.org

OCTOBER 19-23

Journées Françaises de Radiologie (JFR), 60th Annual Meeting, Palais des Congrès, Porte Maillot, Paris
• www.jfrxpo.com

OCTOBER 26-28

Australasian Society of Ultrasound in Medicine (ASUM), 2012 Scientific Meeting, Hilton, Sydney
• www.asum.com.au

OCTOBER 25-27

European Society of Cardiac Radiology (ESCR), Annual Scientific Meeting, Hotel Rey Juan Carlos I, Barcelona, Spain
• www.escr.org

OCTOBER 26-28

Society of Radiologists in Ultrasound (SRU), Annual Meeting, Renaissance Baltimore Harborplace Hotel
• www.sru.org

OCTOBER 27-28

Hong Kong College of Radiologists, 20th Annual Scientific Meeting, Hong Kong Academy of Medicine Jockey Club Building
• www.hkcr.org

OCTOBER 28-31

American Society of Radiation Oncology (ASTRO), 54th Annual Meeting, Boston Convention and Exhibition Center
• www.astro.org

OCTOBER 31-NOVEMBER 3

Chinese Society of Interventional Radiology (CSIR) and Global Embolization Symposium and Techniques (GEST), 10th Scientific Meeting, Nanjing International Exhibition Centre, China
• www.2012csir.com/en

NOVEMBER 7-9

IEEE, Healthcare Innovation Conference: Translational Engineering in Health & Medicine, Methodist Hospital Research Institute, Texas Medical Center, Houston
• healthinnov.embs.org/2012conf

DECEMBER 2-4

Innovations in Cardiovascular Interventions, ICI 2012, David Intercontinental Convention Center, Tel Aviv, Israel
• www.icimeeting.com

FIND MORE EVENTS AT RSNA.org/calendar.aspx

Workshop Offers Training in Challenging Conversations

A limited number of slots are available for the Program to Enhance Relational and Communication Skills for Radiologists (PERCS-Radiology) designed for radiologists in training and practice.

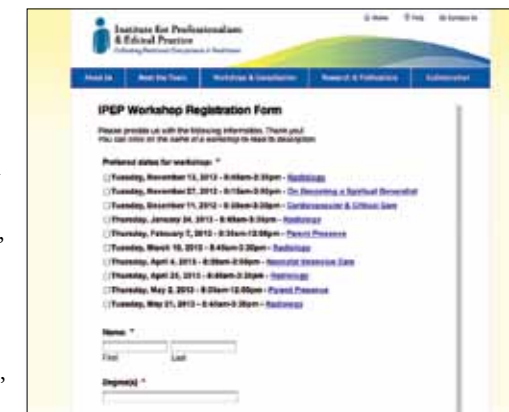
Funded by a GE Healthcare/RSNA Education Scholar Grant, PERCS-Radiology offers radiologists the opportunity to learn about helpful communication skills and relational abilities when having difficult conversations with patients about new, unexpected or difficult diagnoses, radiological errors and radiation safety.

To be held at Boston Children's Hospital, the daylong workshop combines didactic and educational media presentations with realistic improvised enactments between workshop participants and professional actors. Participants include attending radiologists, radiology residents and fellows,

radiologic technologists and nurses, non-radiologist physicians and patient representatives.

The workshop is offered: Tuesday, November 13, 2012; and Thursday, January 24; Tuesday, March 19; Thursday, April 25; and Tuesday, May 21 in 2013. The workshop is free and attendees will be reimbursed for travel, meals and two nights lodging in Boston.

For more information visit ipepweb.org/courses.html#Radiology or contact the course director, Stephen K. Brown, M.D., at stephen.brown@childrens.harvard.edu.



Register Now!

Cancer Imaging and Radiation Therapy Symposium

A Multidisciplinary Approach



This two-day program features multidisciplinary speakers emphasizing the collaboration between radiologists and radiation oncologists in treating head and neck, breast, gastrointestinal and lung cancers.

This live activity has been approved for *AMA PRA Category 1 Credits™*.

www.cancerimagingandrt Symposium.org

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ASTRO
TARGETING CANCER CARE

RSNA
Radiological Society
of North America

The Value of Membership

Featured Benefit: *RSNA News*

Whether you prefer the print, online or tablet edition, free access to *RSNA News* is an exceptional benefit of RSNA membership.

For more than 20 years, *RSNA News* has provided high-quality, timely coverage of radiology research and education and critical issues facing the specialty, along with comprehensive information about RSNA programs, products and other member benefits.

The *RSNA News* tablet edition provides enhancements to the radiology news, announcements and RSNA-related content published in the print version. This includes Web links, videos, audio features and educational presentations.

This month you can enjoy the expanded October-November 2012 meeting preview issue of *RSNA News* in all three formats. The Meeting Preview gives you everything you need to prepare for the world's premier medical meeting—previews of presentations in every subspecialty, a guide to the technology that will help you navigate the meeting, even a list of McCormick Place dining choices and options in the city.

For more information on these and other *RSNA News* features, go to RSNA.org/NewsLandingPage.aspx.



Residents & Fellows Corner

RSNA Salutes Chief Residents, Program Coordinators

As part of its commitment to support radiologists in every stage of their careers, RSNA takes this time of the year to acknowledge those selected as chief residents.

"These young doctors are the best of the best in their training program and RSNA is proud to honor them," said RSNA Board Chair N. Reed Dunnick, M.D. "Residents depend on the chief resident's leadership and guidance as they progress through their training, and RSNA is here to help."

RSNA recently sent each new chief resident a gift box including a "Chief Resident" mug and RSNA coaster.

RSNA also acknowledges radiology program coordinators for their efforts to ensure that RSNA reaches all radiology residents. This year each coordinator received an RSNA messenger bag.

"The coordinators are a true support group, providing pertinent RSNA information to the residents throughout the year," Dr. Dunnick said.

RSNA membership is free for residents and fellows and dues are discounted the first two years of practice. Learn more at RSNA.org/Benefits_Overview_.aspx.



Annual Meeting Preview

Medical imaging science, education, and technology—RSNA 2012 offers it all. Use this overview of the myriad educational and scientific offerings, technical exhibits and courses—as well as the technologies available to guide you and the amenities that will help you enjoy your Chicago stay—to plan your ideal experience.

Learning Opportunities

From lectures and special sessions focused on the specialty's hottest topics to presentations of cutting-edge research and the latest in radiology informatics, learning opportunities in every subspecialty abound at RSNA 2012. With full participation in the meeting, each physician can earn up to 93.75 *AMA PRA Category 1 Credits™*.

Science, Education Programs Raise the Bar at RSNA 2012

New research, evolving techniques and technology, expert updates on healthcare policy and the latest in patient-tailored care are included on the rich roster of offerings sure to capture attention.

Along with an overall uptick in abstract submissions, RSNA's science and education committee chairs reported stronger international participation, an increase in technology-driven sessions and a steady focus on keeping "Patients First." RSNA 2012 attendees can choose from a wide range of education exhibits and scientific sessions, refresher courses, self-assessment modules (SAMs), applied science, integrated science and practice sessions and workshops encompassing every subspecialty.

"RSNA 2012 attendees will see even more high-quality education exhibits," said Isaac R. Francis, M.D., Education Exhibits Program Committee chair. "Attendees visiting the Lakeside Learning Center can learn at their own pace, network with

friends and colleagues and earn CME credit by reviewing specific exhibits and correctly answering Cases of the Day."

Dr. Francis urged attendees to stop by the Bistro RSNA Table Discussions (see Page 38) and join hot-topic and contemporary conversations led by experts from several radiology disciplines, the American Board of Radiology and Resident Review Committee.

Scientific abstracts submitted for RSNA 2012 reflect a growing interest in functional oncologic imaging, neurodegenerative disease and quantitative imaging in the



Francis



Mauro



Jackson

chest and musculoskeletal systems, said Scientific Program Committee chair Matthew A. Mauro, M.D. "Diffusion imaging is finally making its way into the abdomen, where it has clinical applications, particularly in oncologic imaging," he added. "All of the hot topic and other special sessions are thought-provoking and will forecast standard of care imaging in the future."

Continued on next page

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“Refresher courses will continue to build upon the success of previous years, with emphasis on reviews and updates of information related to the technical and interpretative aspects of imaging and intervention,” said Valerie P. Jackson, M.D., RSNA Refresher Course Committee chair. “Innovative interactive programming will be available, continuing on the success of last year’s popular ‘Diagnosis Live’ sessions.”

The RSNA 2012 program will offer a wide spectrum of courses for all levels of radiologists, radiation oncologists, medical physicists and other healthcare professionals, Dr. Jackson said. RSNA 2012 offers multiple SAMs for maintenance of certification (MOC) and an innovative refresher course track on leadership and management in radiology, Dr. Jackson said.

RSNA received 13,162 abstracts to consider for presentation at RSNA 2012—688 more than last year. Of those, 2,125 were chosen for education exhibits and 3,121 were chosen for formal or informal scientific presentations.

BREAST IMAGING

RSNA received a noticeably greater number of submissions for newer imaging modalities such as automated breast ultrasound and 3D tomosynthesis, said Hiroyuki Abe, M.D., Education Exhibits Breast Subcommittee chair. “In addition, a number of high-quality exhibits cover a wide spectrum of current interests in breast imaging, including imaging of post-surgery/reconstructed breast, background parenchymal enhancement on

MR and evaluation of neoadjuvant chemotherapy,” Dr. Abe said. Pediatric breast imaging and molecular classification of breast cancer will share the spotlight, he added.

Hot topics include tomosynthesis as well as methods for decreasing time and possibly costs for breast MR, said Robyn L. Birdwell, M.D., Scientific Program Breast Subcommittee chair. Dr. Birdwell also noted interest in imaging assessment of risk based on breast density.

CARDIAC RADIOLOGY

This year’s cardiac education exhibits are “a great mix, very accessible, offering something of interest for everyone,” said Linda B. Haramati, M.D., Education Exhibits Cardiac Subcommittee chair. “There are reviews suitable for residents or radiologists who are initiating a cardiac imaging program in their practice and cardiac exhibits relevant to radiologists who interpret chest radiographs and CTs for non-cardiac indications,” she said. “Finally, we have high-level technical and clinical exhibits focused on enhancing the practice of dedicated cardiac imagers.”

Scientific Program Cardiac Subcommittee Chair Arthur E. Stillman, M.D., Ph.D., noted many abstracts focusing on dose reduction, particularly with iterative reconstruction. Transcatheter valve implantation is a “must see” topic this year and attendees should pay special attention to coronary CT angiography for patients presenting with chest pain in the emergency department, Dr. Stillman said.

CHEST RADIOLOGY

Jane P. Ko, M.D., Scientific Program Chest Subcommittee chair, observed a trend toward abstracts pertaining to lung nodules, radiation dose reduction and thoracic malignancy. Chest abstracts at RSNA 2012 will be presented in separate vertical series courses on pulmonary arterial imaging and lung nodules. “The series course will interweave informative refresher course presentations with scientific abstracts on similar topics,” she said.

Scientific oral and poster presentations will address noninvasive CT characterization of subsolid nodules and adenocarcinoma, which are challenging to manage and are of increasing clinical interest in light of molecular imaging and changes in classification, Dr. Ko said. “Additionally, abstracts span a range of methods for MR evaluation of ventilation and perfusion of the lung and malignancy.”

In terms of education exhibits, “the trend toward correlating with other specialties continues—surgical techniques, staging, correlating CT with clinical scores,” said Sanjeev Bhalla, M.D., Education Exhibits Chest Subcommittee chair. “Another trend is the discussion and illustration of the new staging and nomenclature for lung cancer, especially adenocarcinoma.”

EMERGENCY RADIOLOGY

“A record number of education exhibits were submitted in emergency radiology, continuing its steady growth and increasing popularity,” said Stephen P. Hatem, M.D., Education Exhibits Emergency Radiology Subcommittee chair. “Exhibits cover the gamut of the specialty, including submissions on technique and protocols ranging from organ-centered to disease-specific,” Dr. Hatem said. “The breadth is impressive. Reviews of traumatic injuries and nontraumatic emergencies will provide attendees with a variety of educational opportunities.”

Scientific presentations will highlight advances in CT technology such as multi-energy imaging and iterative reconstruction for improved and safer imaging of pulmonary embolism, trauma and acute abdominal pain, said Jorge A. Soto, M.D., Scientific Program Emergency Subcommittee chair, who also reported a growing international influence. “The

number of submissions for this section from all over the world increased substantially,” he said.

GASTROINTESTINAL RADIOLOGY

Most of this year’s submissions focus on new MR contrast agents and MR imaging techniques for diagnosing and staging hepatocellular carcinoma and other liver tumors, said Lisa M. Ho, M.D., Education Exhibits Gastrointestinal Subcommittee chair. “Advances in MR imaging for rectal cancer staging and MR enterography or CT enterography for evaluation of inflammatory bowel disease are also popular topics.”

CT dose reduction was the greatest area of interest for gastrointestinal scientific submissions, said David H. Kim, M.D., Scientific Program Gastrointestinal Subcommittee chair. “In addition to newer iterative reconstruction techniques, researchers are investigating a number of ‘lower tech’ interventions,” he said. “The abstracts paint a widespread, encompassing effort to minimize dose while maintaining the obvious diagnostic benefits to CT.”

Another popular topic is hepatic steatosis and fibrosis, underscoring the growing frequency of non-alcoholic steatohepatitis, Dr. Kim added. “Excellent abstracts were submitted regarding the use of MR and ultrasound, and considerable research into rectal MR evaluation of cancer continues,” Dr. Kim said. “Imaging is playing an increasingly important role in oncologic management decisions. Also, trial results in CT colonography performance continue to emerge and reinforce the ability of this modality to detect important colorectal polyps.”

GENITOURINARY/URORADIOLOGY

Genitourinary science submissions increased by 20 percent this year, said Julia R. Fielding, M.D., Scientific Program Genitourinary Subcommittee chair, with interest focused particularly on prostate and diffusion imaging and MR imaging methods that assess renal blood flow and function.

RSNA 2012 will feature a full prostate series highlighting presentations of three prostate scoring systems developed in Europe. “Prostate remains one of the top three fatal cancers in men yet we cannot

tell which tumors will progress,” Dr. Fielding said. “This is part of the reason the national health task force no longer recommends prostate-specific antigen tests.”

Diffusion imaging is another popular topic, Dr. Fielding noted. “Diagnosis and staging are critically important to therapy and diffusion imaging is everywhere—for gynecologic tumors, specifically endometrial and cervical cancers, and, once again, prostate cancer,” she said.

MR imaging of the prostate is starting to dominate education exhibits as well, said Aytekin Oto, M.D., Education Exhibits Genitourinary Subcommittee chair. “For the first time, the total number of prostate exhibits exceeded the number of kidney exhibits,” he said. Along with paying special attention to prostate and kidney neoplasm imaging, Dr. Oto recommends that attendees explore the prostate MR exhibits and those on image-guided interventions, as well as exhibits on renal cell carcinoma imaging.

HEALTH SERVICES EDUCATION, RESEARCH, POLICY AND PRACTICE

Education Exhibits Policy and Practice Subcommittee Chair Dean K. Shibata, M.D., noted a particular rise in the ‘quality improvement’ category, reflecting the burgeoning importance of this area for all radiologists, both in academic and private practice settings. “Highlights include exhibits on surgical foreign body identification, the role of PACS in medical error, and exhibits on quality improvement methodology to help radiologists establish programs in their own practice,” he said.

Other innovative topics focus on creating a milestone-based curriculum for residents and improving the quality of radiology reports. “As usual, there will be several particularly timely exhibits reflecting the world beyond radiology, including an exhibit on the impact of the Affordable Care Act on radiologists and how to discuss radiation risks with your patients,” Dr. Shibata said. “There will definitely be something for everyone in this year’s Policy and Practice exhibits.”



Aine M. Kelly, M.D., Scientific Program Health Services Policy and Research Subcommittee chair, noted a continuing rise in international submissions and an increased focus on alternative teaching methods such as videoconferencing and open-access materials.

“Topical issues such as the medicolegal aspects of radiology, including standardized reporting, the issuing of a second opinion on outside studies, proper documentation and communication of results remain as popular as ever,” Dr. Kelly said. “With the changes in healthcare reform, many have looked at the resultant trends in advanced imaging modalities with some interesting and unexpected findings. The future of radiology as a specialty and patient-centered imaging—including screening—are popular issues. Teleradiology continues to attract many differing opinions, leading to lively debate,” Dr. Kelly said.

INFORMATICS

Interest remains strong in the use of mobile devices for clinical and educational use as well as image sharing across institutional boundaries, said David S. Hirschorn, M.D., Scientific Program Informatics Subcommittee chair.

Continued on page 31



Virtual Meeting Returning to RSNA 2012

Returning to RSNA 2012 is the Virtual Meeting – a fascinating 2D environment, available via the Internet, offering education opportunities and virtual technical exhibits.

The Virtual Meeting delivers even more content this year: you will have access to live streaming courses, Cases of the Day, complete with expert discussion and new opportunities to earn CME credit up to 78.50 AMA PRA Category 1 Credits™.

In addition, “on demand” courses and sessions, scientific presentations, education exhibits, and virtual technical exhibits will be available throughout the week. Learn about new products being displayed in the Exhibitor Product Theater.

You can access the Virtual Meeting from any Internet connection, on your own time during RSNA 2012. It’s available for your

Mac or your PC. Content will be available directly in the 2D world.

It’s free for RSNA members and registered attendees.

It’s a smart educational investment even if you’re not a member or not attending the physical meeting. Non-member, non-attendee registration is only \$300, and gives you the opportunity to experience meeting highlights and earn continuing education credits, no matter where you are.

RSNA has an exciting lineup of courses, presentations and live sessions planned for this year’s Virtual Meeting.

Explore another dimension of RSNA 2012!

New this year: If you’re an RSNA member or have already registered for RSNA 2012, you’re automatically registered for the Virtual Meeting. Visit RSNA.org/Virtual_Meeting.aspx to log in with your member/badge number when the Virtual Meeting goes live!



Educational Program Schedule

Saturday, November 24

1:00 PM – 5:00 PM

SPSP01 (CIR) / Emergency Radiology: Session of the Interamerican College of Radiology (presented in English and Spanish)

Sunday, November 25

8:30 AM – 10:15 AM

PS10 Opening Session (President’s Address and Opening Session Panel)

10:45 AM – 12:15 PM

SSA01 Breast (Ultrasound: Diagnostic and Screening)

SSA14 Musculoskeletal (Arthritis)

2:00 PM – 3:30 PM

RC101 Hot Topics in Thoracic Imaging
RC106 Sinonasal Imaging: A Practical Approach

4:00 PM – 5:45 PM

PS12 Sunday Afternoon Plenary Session (Image Interpretation Session)

Monday, November 26

8:30 AM – 10:00 AM

RC224 Sarcoidosis from Head to Toe (In Conjunction with the American Institute for Radiologic Pathology)

8:30 AM – 12:00 PM

VSER21 Emergency Radiology Series: Imaging Medical Emergencies

10:30 PM – 12:00 PM

SSC06 Gastrointestinal (Hepatocellular Carcinoma)

1:30 PM – 2:45 PM

PS20 Monday Plenary Session (New Horizons Lectures)

3:00 PM – 4:00 PM

SSE06 ISP: Gastrointestinal (Ablative Techniques and Applications)

SSE16 Neuroradiology (Dementia)

4:30 PM – 6:00 PM

SPS122 Radiation Dose in Medical Imaging: What Do the Numbers Really Mean?

SPS124 The Cost of Achieving Good Quality

Tuesday, November 27

8:30 AM – 10:00 PM

MSES31 Essentials of Cardiac Imaging

8:30 AM – 12:00 PM

VSGU31 Genitourinary Series: The Abdominal Incidentaloma: What to Report for the Liver, Pancreatic, Adrenal and Renal Incidentaloma

10:30 AM – 12:00 PM

MSES32 Essentials of Breast Imaging

1:30 PM – 2:45 PM

PS30 Tuesday Plenary Session (Annual Orations in Diagnostic Radiology)

1:30 PM – 3:00 PM

MSES33 Essential of Neuro Imaging

3:00 PM – 4:00 PM

SSJ16 Musculoskeletal (Shoulder)

3:30 PM – 5:00 PM

MSES34 Essentials of Genitourinary Imaging

4:30 PM – 6:00 PM

RC432 How to Avoid Failure: Qualities of a Successful Leader

Wednesday, November 28

8:30 AM – 10:00 AM

MSES41 Essentials of Ultrasound

RC518 Advances in Cross-sectional Oncologic Imaging

10:30 AM – 12:00 PM

SSK11 Neuroradiology (Spine)

MSES42 Essentials of Chest Imaging

1:30 PM – 2:45 PM

PS40 Wednesday Plenary Session (Annual Oration in Radiation Oncology)

1:30 PM – 3:00 PM

MSES43 Essentials of Musculoskeletal Imaging

3:00 PM – 4:00 PM

SSM02 Breast (MRI and Digital Mammography Topics)

3:30 PM – 5:00 PM

MSES44 Essentials of Pediatric Imaging

4:30 PM – 6:00 PM

SPSC43 V/Q Scans versus CT for Pulmonary Emboli

Thursday, November 29

8:30 AM – 10:00 AM

MSES51 Essentials of Nuclear Medicine

RC623 Minicourse: Current Topics in Medical Physics—Practice Quality Improvement: Basics and Issues for Medical Physicists

10:30 AM – 12:00 PM

SSQ01 Cardiac (Quantitative Imaging)

MSES52 Essentials of Gastrointestinal Imaging

1:30 PM – 2:45 PM

PS50 Thursday Plenary Session (RSNA/AAPM Symposium: Imaging Speed Demons)

3:00 PM – 4:00 PM

SPSH52 Imaging Evaluation of Inflammatory Arthritis: How I Do It

SPSH53 Functional and Quantitative Imaging of the Lung

4:30 PM – 6:00 PM

RC704 Interactive Game: Musculoskeletal Pitfalls and Pearls

RC708 Imaging of the Traumatized Spine (Traditional)



Friday, November 30

8:30 AM – 10:00 AM

RC815 Breast US

8:30 AM – 12:00 PM

VVA61 Vascular Imaging Series: MR Angiography: Principles and Technique Optimization

10:30 AM – 12:00 PM

SST03 ISP: Chest (Lung Nodules II)

12:45 PM – 3:15 PM

SPBR62 Friday Imaging Symposium: High Level Interpretation of Breast Imaging—Distinguishing Yourself from the Crowd

SPPD61 Friday Imaging Symposium: Pediatric Radiology—Challenges, Pitfalls, and Solutions.

Designation Statement

The Radiological Society of North America (RSNA) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The RSNA designates this live activity for a maximum of 78.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Exhibitor Product Theater Presentations

Watch exhibitor product presentations by Agfa HealthCare, GNAX Health, Philips Healthcare, Siemens Healthcare and TeraRecon. These exhibitors will show you the latest in medical imaging technology with live demonstrations at 10:30 a.m., 12:45 p.m. and 3:00 p.m. on Monday, Tuesday and Wednesday. For a complete schedule of exhibitor presentation topics, dates and times, visit RSNA.org/Attendees.aspx.

Program Key	Color	Description
Multisession Courses	Blue	
Plenary Sessions	Green	
Refresher Courses	Orange	
Series Courses	Purple	
Scientific Sessions	Red	
Special Courses	Light Green	

Continued from page 28

“Critical test result management is also heating up as hospitals and government agencies become more cognizant of the patient care and medicolegal risk benefits of these systems,” Dr. Hirschorn said. “I would not want to miss the papers on decision support and meaningful use, as these topics are rapidly becoming part of everyday life for radiologists.” Abstracts on alternative user input mechanisms to manipulate images are also noteworthy, he said.

For this year’s education exhibits, “we again received a large number of submissions for image processing and analysis and educational tools categories, as well as more submissions in the clinical workflow and data sharing categories,” said Katherine P. Andriole, M.D., Education Exhibits Informatics Subcommittee chair.

Along with translational and clinical research exhibits, RSNA 2012 features a number of technology-focused exhibits offering participants hands-on interaction. Dr. Andriole encourages attendees to visit the Quantitative Imaging Reading Room featuring education exhibits including academic and vendor partnerships. “These exhibits are poster- and computer-based software application demonstrations throughout the week, with three ‘meet-the-expert/author’ sessions and a formal theater presentation,” she said.

To learn more about Informatics offerings at RSNA 2012, see Page 38.

MOLECULAR IMAGING

“Attendees will see the translational efforts of molecular imaging: cutting-edge technologies developed in basic sciences and their clinical applications, i.e., oncology, neurology, cardiovascular diseases, inflammation, and other medical conditions,” said Satoshi Minoshima, M.D., Ph.D., who chairs the Education Exhibits and Scientific Program Molecular Imaging Subcommittees.

Integrated Science and Practice (ISP) sessions on Sunday, Monday and Wednesday will discuss new technologies and the future of molecular imaging, standardization of quantitative molecular imaging, and multi-modal molecular imaging, Dr. Minoshima said. “In collaboration with the RSNA Nuclear Medicine section, a special session on the emerging field of ‘theranostics’ is planned for Thursday.”

Hot topics sessions include molecular imaging of Alzheimer disease and Parkinson disease in collaboration with the Neuroradiology subcommittee, and an exciting PET-MR session, he added.

MUSCULOSKELETAL RADIOLOGY

This year, RSNA received a high number of submissions on femoroacetabular impingement and complications related to metal-on-metal hip arthroplasties, said Jon A. Jacobson, M.D., Scientific Program Musculoskeletal Subcommittee chair.

“While the first topic is certainly not new, the high number of abstracts indicates the continued difficulties in diagnosis,” Dr. Jacobson said. “The second topic is very timely given the more recently recognized complications related to metal-on-metal hip arthroplasties and the importance of diagnostic imaging.”

Musculoskeletal Education Exhibits Subcommittee chair Susanne E. Anderson, Ph.D., B.Med., noted trends including a focus on patient interaction and clinically oriented work: “This goes beyond imaging, to diagnosis, treatment and post-treatment clinical regimes with clinical guidance,” Dr. Anderson said. “There is strong input for imaging and treating tendon pathologies around joints in both elite sports and aging groups.”

“Use of ‘advanced’ in tumor imaging, such as diffusion-weighted imaging, and an increased activity in muscle anatomical and metabolic information at the microscopic level with diffusion-tensor imaging and proton MR spectroscopy are popular topics,” she said. Along with sports injury and trauma-related abstracts, she noted an increase in a new subcategory of bone marrow-related abstracts.

NEURORADIOLOGY/HEAD AND NECK

This year’s topics include morphologic and functional imaging for normal anatomy, pathophysiology and various diseases, said Education Exhibits Neuroradiology Subcommittee Chair William T. Yuh, M.D., M.S.E.E. “As more clinical experience is acquired in the brain, head and neck and spine, more researchers are applying advanced imaging or techniques for clinical applications and more detailed discussion of the pros and cons of each technique for various diseases,” he said.

With the improvement of anatomic and functional imaging, more presentations explore the smaller structures such as the hypothalamus and limbic system, Dr. Yuh added. Presentations also cover cerebrospinal fluid (CSF) dynamics, including CSF pathophysiology and flow interpretation and management of diseases such as CSF hypotension and hypertension.

“There is special focus on aging patients with dementia and techniques including MR, FDG-PET and Pittsburgh compound B (PiB)-PET,” Dr. Yuh said. Among the head and neck abstracts covering a broad spectrum this year are cancer diagnosis and staging for parotid, thyroid and rare tumors. “There are also a substantial number of presentations on topics including benign tumors, infection, trauma, congenital malformations including vascular malformations, temporal bone disease processes, skull base and cranial nerve anatomy and disease processes and new methods of disease detection,” Dr. Yuh said.

David B. Hackney, M.D., Scientific Program Neuroradiology Subcommittee chair, noted an increase in presentations—including many formal scientific sessions and a “Hot Topic” session on Thursday—addressing the role of imaging in patients with cognitive impairment.

NUCLEAR MEDICINE

The most important trend for nuclear medicine science is the early experience in using PET/MR in clinical applications, said Homer A. Macapinlac, M.D., Scientific Program Nuclear Medicine Subcommittee chair. “Particularly interesting are the integrated simultaneous acquisition techniques, reconstruction for PET quantification and shorter MR acquisition times,” he said.

Theranostic techniques, or the use of the same or similar molecular imaging agent for both diagnosis and therapy—for example, Gallium 68 PET imaging of somatostatin receptors and therapy using beta emitters or alpha emitters with somatostatin receptor agents—is another exciting topic, Dr. Macapinlac said.

OBSTETRIC/GYNECOLOGIC IMAGING

Trends include more emphasis on MR in fetal imaging and ovarian and uterine/cervical carcinoma diagnosis and cutting-edge diffusion and perfusion imaging techniques that are on their way to becoming clinically valid tools, said Robert D. Harris, M.D., M.P.H., Education Exhibits Obstetric/Gynecologic Subcommittee chair. “Fetal 3D imaging with ultrasound and MR is to be a big topic, too,” said Dr. Harris, adding that the number of international presenters is also increasing.

PEDIATRIC RADIOLOGY

“Pediatric education exhibits have something for everyone covering a broad spectrum of topics from the standard pictorial essay pathology-focused exhibit to newer teaching methods, CT radiation safety and the technical side of imaging and imaging optimization,” said Education Exhibits Pediatric Subcommittee Chair Craig E. Barnes, M.D. In pediatric science, hot topics include markers of adult disease found in children and imaging of brown fat, said Marvin D. Nelson Jr., M.D., Scientific Program Pediatrics Subcommittee chair.

PHYSICS

M. Elizabeth Meyerand, Ph.D., chair of the Education Exhibits Physics Subcommittee, noted an increase in the number of CT abstracts. “We had many interesting and timely abstracts dealing with safety,” she said.

Scientific Program Physics Subcommittee Chair Xiaochuan Pan, Ph.D., noted an increase in the number of MR imaging presentations and a continued trend toward iterative algorithm reconstruction for low-dose CT. Image-guided radiation therapy and multi-energy CT are among other topics with an increased presence, Dr. Pan said.

RADIATION ONCOLOGY AND RADIOBIOLOGY

As in the past few years, abstracts reveal strong interest in using functional imaging to evaluate the response of tumors and surrounding normal tissues to therapeutic radiation doses, said Sunil Krishnan, M.D., Education Exhibits Radiation Oncology Subcommittee chair. “In particular, there is a focus on MR for differentiating between treatment response and disease progression, a distinction that has profound implications for optimal clinical management of patients after radiation therapy,” he said. This trend highlights the vital need for a constant dialogue between radiation oncologists and diagnostic radiologists to accurately diagnose and treat patients after they have received radiation therapy, Dr. Krishnan said.

The Bolstering Oncoradiologic and Oncoradiotherapeutic Skills for Tomorrow (BOOST) programs continue to grow, said Chung-Taik Chung, M.D., Scientific Program Radiation Oncology Subcommittee chair. This year’s topics are lung, gastrointestinal, breast, genitourinary and head and neck cancers. “The programs comprise longitudinal imaging and oncologic presentations, including contouring sessions, alongside broader topics such as gynecology, benign tumors and quality of life/outcome studies,” Dr. Chung said. “There are an increasing number of abstracts on image-guided radiotherapy, stereotactic radiosurgery and stereotactic body radiotherapy.”

VASCULAR/INTERVENTIONAL RADIOLOGY

Regional and ablation cancer therapy and related imaging continue to dominate the interventional scientific program, reflecting strong growth and continued innovation, said Scott O. Trerotola, M.D., Scientific Program Vascular/Interventional Subcommittee chair. “Ultimately, patients benefit



substantially from these advances,” Dr. Trerotola said. “One interventional oncology trend observed this year is the use of adjuvant therapy in addition to the primary therapy to enhance tumor destruction and/or protect normal tissue.”

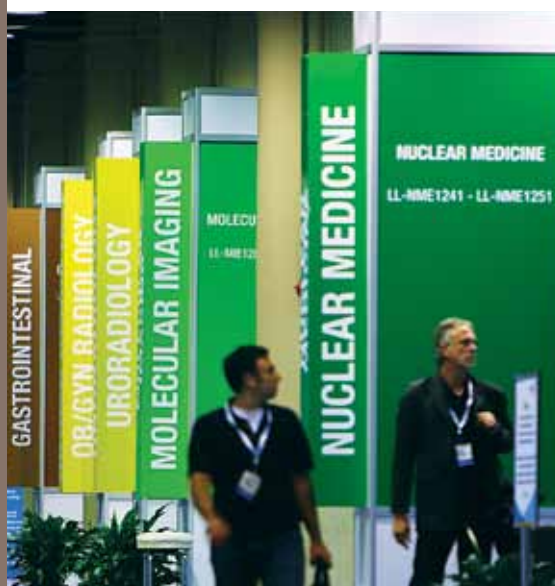
Interventional techniques in the male pelvis build on treatments for benign prostate disease and introduce other uses for embolotherapy, such as treatment of erectile dysfunction, Dr. Trerotola said. “Many abstracts describe advances in noninvasive vascular imaging both with MR angiography and CTA and a continued emphasis on radiation dose reduction.”

A strong resurgence of interest in adrenal vein sampling (AVS) includes abstracts devoted to both technical enhancements as well as imaging of the adrenal vessels, Dr. Trerotola said.

In terms of education exhibits, topics are trending more toward vascular imaging and less toward interventional oncology than expected, said David C. Madoff, M.D., Education Exhibit Vascular/Interventional Subcommittee chair. “There were also many submissions on technological advances as they relate to interventional radiology and numerous submissions on novel approaches to general embolotherapy, hepatobiliary diseases, oncology and venous disease,” Dr. Madoff said.

RSNA 2012’s scientific and educational program has “something for everyone,” with a record-high number of diverse offerings, Dr. Mauro said. He encouraged attendees to pay special attention to novel trends and hot topics: “These special sessions prove to be thought-provoking and will forecast the standard of care for imaging in the future.”

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Plenary Lectures

RSNA 2012 will feature plenary session lectures on a spectrum of healthcare topics. All lectures will be presented in the Arie Crown Theater.

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OPENING SESSION PANEL

Sunday, November 25 • 8:30 a.m.

Facial Restoration by Transplantation and the Role of Novel Imaging Technology

Facial allotransplantation has delivered superior aesthetic and functional outcomes to patients across the globe with substantial facial defects

stemming from trauma, burns or disease, and who had exhausted their reconstructive options without reaching satisfactory results.

Survival of the transplant, says **Bohdan Pomahac, M.D.**, primarily depends on successful anastomoses between the patient's and donor's blood vessels; therefore, pre-operative arterial and venous studies must be exhaustive and lead to a concrete plan. Furthermore, each potential facial transplantation candidate may present variations and complexity in the vascular anatomy of the head and neck resulting from the facial injury itself and/or prior reconstructions. Dr. Pomahac will outline novel noninvasive imaging protocols and image post-processing algorithms for the pre-operative screening of facial transplantation candidates and post-operative imaging of face transplant recipients, developed during four facial transplantations performed at Brigham and Women's Hospital (BWH).

Burn director at the BWH Burn Center since January 2009, Dr. Pomahac established the Plastic Surgery Transplantation Program and in April 2009 led the



Pomahac

nation's first male face transplant procedure. He then received a \$3.4 million contract from the U.S. Department of Defense to perform and investigate the outcomes of face transplantation. In 2011 Dr. Pomahac led the surgical team in performing the first two full face transplants and first combined face and bilateral hand transplant procedure in the U.S. and the first successful bilateral upper extremity transplantation in the Northeast.

The Doctor As Patient; The Patient As Advocate

The National Lung Cancer Screening Trial was terminated in fall 2010 when the trial's Data and Safety Monitoring Board notified the National Cancer Institute that accumulated data provided a statistically convincing answer to the study's primary question and those in the control arm must be advised. Subsequent analyses of national and international studies indicate a mortality reduction of 40 percent or more can be achieved with a protocol encompassing screening and a continuum of care in a multidisciplinary setting—an approach in which the radiologist is the linchpin. The advent of lung cancer screening presents challenges—remodeling the system of care, incorporating collection of outcome data to continuously refine the protocol, among others—but also an opportunity to redefine radiology's role in healthcare.

This presentation comes from the viewpoint of **Sheila Ross** and **Karen E. Arscott, D.O., M.Sc.**, both lung cancer survivors and advocates with the Lung Cancer Alliance.



Ross

Twelve years into a 20-year career as a staffer with the U.S. Congress, Ross was diagnosed with Stage II lung cancer. She returned to work within weeks but her annual chest X-ray failed to pick-up the tumor growing behind her sternum. A right pneumonectomy and some creative work on the left bronchus by her thoracic surgeon and her radiologist saved her life, says Ross, now a 12-year survivor.

Dr. Arscott is a Clinical Associate Professor in Clinical Sciences at Commonwealth Medical College in Scranton, Pa., and was formerly director of the Physician Assistant Program at Marywood University in Scranton. Dr. Arscott underwent surgery after being diagnosed with stage IA lung cancer in 2006; 16 months later, she received chemotherapy, radiation and underwent more surgery for stage IIIA lung cancer.



Arscott

The Lung Cancer Alliance aims to change public health policies by engaging with organizations in support of biomedical and imaging research and working on Capitol Hill to promote the role of imaging in improving healthcare outcomes. The Alliance asserts that recent scientific validation of the benefits of CT screening is the turning point for lung cancer and an opportunity for radiologists to change patient treatment and diagnosis.

EUGENE P. PENDERGRASS NEW HORIZONS LECTURES

Monday, November 26 • 1:30 p.m.

The Future of Imaging Informatics: Meaningful Use and Beyond

Evolution of the Internet, creation of high-resolution mobile computing devices and recent enactment of federal healthcare IT programs such as Meaningful Use are changing radiology practice and fueling a revolution of new opportunities and challenges, says **Keith J. Dreyer, D.O., Ph.D.** Further, the advancement of computational algorithms is providing new pathways for innovation, including: nationally standardized clinical decision support for ordering physicians and interpreting radiologists; natural language processing for real-time information access, clinical data mining, simulated training, and competency/certification testing; and cloud computing for speech recognition and image sharing across enterprise boundaries with secure access to remote providers and patients. Dr. Dreyer will explore current and near future use of innovative information technologies, the impact on radiology practice and the federal policies and regulations under way that promote and oversee their use.



Dreyer

Dr. Dreyer is vice-chair of radiology at Massachusetts General Hospital and associate professor of radiology at Harvard Medical School. His long history as an RSNA volunteer includes current service as a member of the Radiology Informatics Committee. Dr. Dreyer also holds numerous positions with the American College of Radiology, Society for Imaging Informatics in Medicine and global healthcare corporations. Dr. Dreyer has authored hundreds of scientific papers, presentations and books and has lectured worldwide on digital imaging standards, image sharing, clinical decision support, meaningful use and electronic health record initiatives.

Meaningful IT Innovation to Support the Radiology Value Proposition

Radiology practices have undoubtedly benefited from the adoption of electronic-based information technology. However, electronic tools such as PACS, RIS, and speech recognition are still relatively immature and arguably support only "commodity-level" capability. These technologies can and have been exploited to commoditize and "outsource" radiology services. **Paul J. Chang, M.D.**, says that unless radiologists are willing to dramatically re-engineer their attitudes and practices, they will not only fail to effectively use these electronic tools, but will also facilitate the perceived devaluation of radiology and participate in its marginalization. Radiologists, he says, must be "value innovators" who leverage information technology to ensure their relevance and value to patient care through measurable improvements in quality, efficiency and safety.



Chang

Professor and vice-chair of radiology informatics and medical director of pathology informatics at the University of Chicago School of Medicine, Dr. Chang is also medical director of Enterprise Imaging and the informatics architect for the Service Oriented Architecture initiative at the University of Chicago Hospitals. Dr. Chang founded the Division of Radiology Informatics at the University of Pittsburgh Medical Center and is active in numerous research and development projects related to imaging informatics and enterprise-wide informatics integration issues. A longtime RSNA volunteer, Dr. Chang is a member of the Public Information Advisors Network, served on the Radiology Informatics Committee from 1995 to 2008 and is an informatics consultant for myRSNA.

ANNUAL ORATIONS IN DIAGNOSTIC RADIOLOGY

Tuesday, November 27 • 1:30 p.m.

The Story Behind the Image

Using today's imaging technologies, radiologists can visualize aspects of human form and function that would have astounded Roentgen and Curie. Imaging

equipment serves as a kind of crystal ball, enabling the resolution of diagnostic uncertainty and increasing the quality of patient care. **Richard B. Gunderman, M.D., Ph.D.**, says radiologists play an almost oracular role within contemporary medicine, bridging the gap between the invisible and the visible, the unknown and the known. Yet to achieve their full potential, Dr. Gunderman says, radiologists must attend to the invisible aspects of their craft—the unseen but vital features of patients not revealed by images. Without images, we are blind, he says, but with images alone, we cannot see as deeply or comprehensively as needed.



Gunderman

Dr. Gunderman is a professor and vice-chair of radiology at Indiana University (IU), where he also is a professor of pediatrics, medical education, philosophy, liberal arts, and philanthropy. Dr. Gunderman is a fellow of the Tobias Center for Leadership Excellence and chairs the faculty steering committee of the IU School of Medicine. Dr. Gunderman was named RSNA Outstanding Educator in 2008 and chairs the Education Study Section of the Research & Education Foundation Grant Program Committee. He has authored more than 280 scholarly articles and published eight books including *Achieving Excellence in Medical Education*, *We Make a Life by What We Give* and *Leadership in Healthcare*.

To Disclose or Not To Disclose Radiologic Errors—Should "Patient First" Supersede Radiologist Self-Interest?

Whether to disclose every radiologic error to patients presents a dilemma for many radiologists. Reluctance or refusal to disclose, says **Leonard Berlin, M.D.**, is driven by fear—of being considered incompetent, of reduced or revoked privileges, of malpractice suits. However, medical organizations' codes of ethics mandate that physicians deal honestly with patients,



Berlin

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inform them of mistakes and offer “professional and compassionate concern” toward those who have been harmed, regardless of whether the harm was caused by physician error. Surveys of physicians in all specialties show that a majority believe all errors “should” be disclosed to patients, but only a minority admit to such disclosures. All physicians, says Dr. Berlin, are ethically and morally obligated to place the needs of their patients first.

Dr. Berlin is a radiologist with Skokie Hospital, formerly North Shore Medical Center, where he chaired the Department of Radiology for 31 years, and a professor of radiology at Rush Medical College and the University of Illinois College of Medicine. Author of *Malpractice Issues in Radiology*, Dr. Berlin has lectured nationally and internationally on radiologic malpractice and risk management. Dr. Berlin’s service to RSNA includes chairmanship of the Professionalism Committee, co-chairmanship of the RSNA-American College of Radiology Task Force to Develop a Core Curriculum on Professionalism for Radiology Residents and as a member of the Public Information Advisors Network. Dr. Berlin has served as president of the Chicago and Illinois radiological societies.

ANNUAL ORATION IN RADIATION ONCOLOGY

Wednesday, November 28 • 1:30 p.m.

Radiation Oncology and Radiology—Should We Get Married Again?

In the early 20th century, diagnosis and therapy were two sides of the radiology coin. By mid-century, however, radiation oncologists had forged a unique identity reflecting increased understanding of radiation as a therapy and specialization of some practitioners. Radiation oncology residency programs were created and journals and clinical practice styles developed. Now, says



Zietman

Anthony L. Zietman, M.D., both specialties are changing again—while the burgeoning field of medical oncology has taken some patient care responsibility away from

radiation oncologists and allowed them more time for increasingly complex treatment techniques, diagnostic radiology has developed its own therapeutic branch, interventional radiology. A reconvergence has begun as interventional radiologists develop consultation clinics and radiation oncologists move toward radiotherapeutic ablation. Dr. Zietman will discuss the overlap and contemplate novel training tracks combining the specialties.

Dr. Zietman is the Jenot W. and William U. Shipley Professor of Radiation Oncology at Harvard Medical School. He has authored more than 100 original articles and reviews on genitourinary cancer, with particular research interests in the roles of active surveillance, brachytherapy, hormone therapy and proton beam therapy in prostate cancer treatment. He also has a long-standing interest in the organ-sparing management of bladder cancer. Dr. Zietman serves as editor-in-chief of the *International Journal of Radiation Oncology, Biology, Physics*, is a trustee of the American Board of Radiology and formerly served as president and chair of the American Society for Radiation Oncology.

RSNA/AAPM SYMPOSIUM: IMAGING SPEED DEMONS

Thursday, November 29 • 1:30 p.m.

Breaking Angiographic Speed Limits: Accelerated 4D MRA and 4D DSA Using Undersampled Acquisition and Constrained Reconstruction

Accelerated angiographic methods in MRA, using novel non-Cartesian k-space sampling schemes combined with constrained reconstruction, have led to acceleration factors up to 1000 relative to Nyquist requirements. Related approaches have permitted the extension of X-ray DSA to a full 4D modality, providing 3D vascular volumes 200 times faster than conventional rotational DSA. Fast 4D angiographic techniques, according to Charles A. Mistretta, Ph.D., are useful for evaluation of dynamic phenomena such as arteriovenous malformations—in the X-ray case, the availability of all view angles at all times eliminates the need for the X-ray exposure and contrast dose associated with repeat injections. Undersampled acquisition and constrained reconstruction, Dr. Mistretta says, will play a major role in a wide variety

of medical imaging applications leading to improved diagnosis, greater interventional flexibility and dose reduction.

Dr. Mistretta is the director of the International Center for Accelerated Medical Imaging at the University of Wisconsin, where he also serves as John R. Cameron Professor of Medical Physics and vice-chairman of the Department of Medical Physics. In 2010 RSNA named Dr. Mistretta its



Mistretta

Outstanding Researcher in recognition of his decades of research into DSA—his team’s DSA technique has been distributed worldwide and is still the gold standard against which the image quality of new angiographic techniques is measured.

Ultrasound Goes Supersonic: Very-High-Speed Plane Wave Transmission Imaging for New Morphological and Functional Imaging Modes

Advances in ultra-high-speed ultrasound imaging employ the concept of plane wave transmissions rather than line-by-line scanning beams. The frame rate reaches the theoretical limit of physics dictated by the ultrasound speed and an ultrasonic map can typically be provided in tens of micro-seconds. This leap in frame rate, says Mickael Tanter, Ph.D., makes it possible to track in



Tanter

real time the transient vibrations—known as shear waves—propagating through organs. Such “human body seismology” provides quantitative maps of local tissue stiffness, of which the added diagnostic value has been recently demonstrated. For blood flow imaging, ultrafast Doppler permits high-precision characterization of complex vascular and cardiac flows and enables detection of subtle blood flow in very small vessels. In the brain, such ultrasensitive Doppler paves the way for fUltrasound (functional ultrasound), offering unprecedented spatial and temporal resolution compared to fMRI.

Dr. Tanter is a research professor at the French National Institute for Health and Medical Research and heads the Physics Methods for Biomedical Imaging and Therapy unit at Institut Langevin in Paris. He is a co-founder of SuperSonic Imagine, a French medical imaging and therapy company, and a member of the technical board of the IEEE Ultrasonics, Ferroelectrics and Frequency Society. Dr. Tanter contributes to the *Journal of the Acoustical Society of America*, *Wave Motion*, *IEEE Transactions on Ultrasonics, Ultrasound in Medicine and Biology*, *Physical Review Letters* and *Applied Physics Letters*.

Other Plenary Sessions

More information about these sessions is available at RSNA2012.RSNA.org.

SUNDAY

8:30–10:15 a.m.

President’s Address

10:45 a.m.–12:15 p.m.

Oncodiagnosis Panel

4:00–5:45 p.m.

Report of the RSNA Research & Education Foundation

Image Interpretation Session

FRIDAY

12:45–3:15 p.m.

Friday Imaging Symposia

Saturday Courses

RADIOLOGIA DE URGENCIAS: SESION DEL COLEGIO INTERAMERICANO DE RADIOLOGIA (CIR)/EMERGENCY RADIOLOGY: SESSION OF THE INTERAMERICAN COLLEGE OF RADIOLOGY (CIR)

This session is presented in Spanish with simultaneous English translation.

AAPM/RSNA PHYSICS TUTORIALS FOR RESIDENTS: TOMOSYNTHESIS—AN EMERGING ADVANCED IMAGING TECHNOLOGY

The Physics Tutorial for Residents looks at the physics of tomosynthesis, as well as reconstruction methods and quality control considerations. Immediately following is the Tutorial on Equipment Selection, which will explore commercially available systems, clinical features and challenges and building a business case for tomosynthesis.

WORK-LIFE BALANCE: SURVIVAL STRATEGIES FOR THE BUSY RADIOLOGIST

This highly interactive workshop engages physicians at all career stages and emphasizes both didactic and experiential learning.

GRANTMANSHIP WORKSHOPS

Two workshops examine the National Institutes of Health (NIH) grant application process from different perspectives. The “NIH Grantsmanship Workshop” helps applicants understand the process for preparing a competitive research or training grant application. “RSNA/ARR Study Section Reviewers Workshop—What It Takes to Be an Expert Reviewer for the NIH: The Peer Review Process Demystified” prepares reviewers with an overview of grant mechanisms and evaluation criteria. Both sessions give attendees the opportunity to learn from a mock study section.

Special Courses

SPECIAL INTEREST, HOT TOPIC, CONTROVERSIES/GAME SESSIONS

Discover radiology-related topics that are late-breaking (Hot Topics), are particularly controversial or offered in a game format (Controversies/Game), or programs the RSNA Board deems of particular importance (Special Interest). High levels of audience interest and opinion are expected.

MONDAY

7:15–8:15 a.m.

- Controversy Session: Stereotactic Radiation for Oligo-Metastasis: New Paradigm or Wishful Thinking?

- Hot Topic Session: Gold, Diamonds, and Glass: New Frontiers in Oncologic Imaging and Treatment with Nanotechnology

4:30–6:00 p.m.

Special Interest Sessions

- Providing Reports Directly to Patients: Should You Do It?

- Radiation Dose in Medical Imaging: What Do the Numbers Really Mean?

- Supporting Radiology Research: Imaging Cores, Faculty Development, and Finances

- The Cost of Achieving Good Quality

- What Imaging Measurements are Needed in Clinical Practice?
- Milestones for Diagnostic Radiology Residency Programs: Millstones or Touchstones

TUESDAY

7:15–8:15 a.m.

- Controversy Session: Preoperative Breast MR Imaging: Pros and Cons

- Hot Topic Session: Pediatric Radiology in the Future

WEDNESDAY

7:15–8:15 a.m.

- Controversy Session: The Radiologist as Gatekeeper: Should We Take a More Active Role?

- Hot-Topic Session: Whole Body Diffusion MRI for Malignancy

4:30–6:00 p.m.

Hot Topic Sessions

- Hand-held Ultrasound: Is It a Threat to Radiology?

- High Relaxivity MR Contrast Agents: Understanding the Advantages and Limitations

- V/Q Scans versus CT for Pulmonary Emboli

- Imaging of the Acute Abdomen in Pregnancy: Current Roles and Controversies (An Interactive Session)

- Screening for Diseases (Breast, Lung, etc.): Current Controversies

THURSDAY

7:15–8:15 a.m.

- Controversy Session: How Should We Deal with Outside Images?

- Hot Topic Session: Clinical Applications in Simultaneous PET-MR Imaging

3:00–4:00 p.m.

Hot Topic Sessions

- Imaging Evaluation for Alzheimer’s and Parkinson’s Diseases: New Approaches

- Imaging Evaluation of Inflammatory Arthritis: How I Do It

- Functional and Quantitative Imaging of the Lung

- Imaging of Transcatheter Valve Replacement

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RSNA DXLIVE™

Use your personal digital device to submit diagnoses for a series of interactive case studies and compete against your colleagues in a fast-paced game format. Monday's session from 4:30 to 6:00 p.m. features chest and abdomen; Wednesday from 4:30 to 6:00 p.m. is neuroradiology and musculoskeletal radiology; and Thursday from 3:00 to 4:00 p.m. is a radiology potpourri.

Scientific Paper Sessions

Scientific sessions reveal new science. Sessions are offered over nine time slots during the week and will include 1,863 papers in a range of subspecialties.

BRAZIL PRESENTS

Brazil is the latest country to be spotlighted as part of the "Presents" sessions at the RSNA annual meeting. The Brazil Presents session is scheduled for Monday, 10:30 a.m.–12:00 p.m., and offered in conjunction with the Brazilian College of Radiology and Diagnostic Imaging.

After a decade of remarkable economic progress—including a gross domestic product (GDP) growth rate of 7.5 percent in 2010 alone—Brazil surpassed the United Kingdom as the world's sixth largest economy in 2012. And while it still must overcome economic disparities within its population, the country has expanded healthcare coverage to its nearly 200 million people in the past two decades since implementing a national healthcare

program. Radiology is an integral part of that growth, with its state-of-the-art technology, research, quality of care and continued demand for radiologists and sonographers.

To be covered in the session:

- Parameters and Trade-offs in MRI (1.5 and 3.0 T)
- Congenital Posterior Fossa Malformations — New Concepts
- The Role of Advanced MRI Techniques in Demyelinating Diseases
- MRI of Hypervascular Lesions in the Cirrhotic Liver: A Diagnostic Dilemma
- Advances in Fetal 3D MRI

Refresher and Multisession Courses

RSNA 2012 offers more than 300 refresher courses covering traditional and cutting-edge topics. Multisession courses are scheduled for time blocks ranging from several hours to several days, to allow intensive study of various topics.

INTERACTIVE GAME COURSES

Attendees of select refresher courses will be able to interact with the course material via their personal digital devices. See listings for RC114, RC215, RC303, RC405, RC412, RC607, RC609, RC701, RC704 and RC829.

QUALITY CERTIFICATES OF COMPLETION

RSNA will award Quality Essentials Certificates of Completion to RSNA 2012

attendees who successfully participate in Session II and/or Session III of the Quality Improvement Symposium, (MSQ132, MSQ133) on Tuesday, 10:30 a.m. to 12:00 p.m. or 1:30-3:00 p.m. Participants who achieve a score of 80 percent or higher on the SAM test questions will be eligible to receive the certificates.

Lakeside Learning Center

The Lakeside Learning Center is home to education exhibits and scientific informal (posters) presentations, grouped according to subspecialty. Many authors of posters and education exhibits are scheduled to give lunchtime presentations of their work; see the *RSNA Meeting Program in Brief* for days and times.

New this year, select backboard panel education exhibits in each subspecialty will contain QR codes that, when scanned with a smartphone, will take users to an electronic version of the poster and supplemental materials. Copies of the panels will be located in the "Enhanced Education Exhibits" area near the entrance to the Lakeside Learning Center and copies from each subspecialty will be located in the individual subspecialty communities.

Note: The Lakeside Learning Center will close at 7:30 p.m., Sunday–Thursday, this year. Electronic scientific posters and education exhibits (excluding Enhanced Education Exhibits) are available to meeting attendees via the Virtual Meeting 24 hours a day throughout the meeting week.

QUANTITATIVE IMAGING

Located in the Lakeside Learning Center, the Quantitative Imaging Reading Room is an educational showcase highlighting products and applications that integrate quantitative analysis and structured reporting into the image interpretation and reporting process.

At the Quantitative Imaging and Biomarkers Alliance (QIBA) kiosk, see the latest efforts of the RSNA-directed group that aims to improve the value and practicality of quantitative imaging biomarkers by reducing variability across devices, patients and time.

RSNA BISTRO TABLE DISCUSSIONS

Special tables at the Lakeside Learning Center RSNA Bistro are reserved for attendees to participate in discussions with representatives of various subspecialties. Topic facilitators are present at Bistro tables Monday through Wednesday, 12:15-1:15 p.m.

Monday

- ABR: MOC—Diagnostic Radiology
- ABR: MOC—Radiation Oncology
- ABR: MOC—Radiologic Physics
- Breast: MRI
- Gastrointestinal: Small Bowel Imaging
- Informatics: Mobile Computing Devices
- Nuclear Medicine: PET/MR
- Women's Imaging: US of Adnexal Masses
- Cardiac: Imaging of Transcatheter Valve Replacement
- Pediatric Radiology: Neonatal Imaging
- Interventional Oncology: Nanotechnologies for Interventional Oncology

Tuesday

- ABR: MOC—Diagnostic Radiology
- ABR: MOC—Radiation Oncology
- ABR: MOC—Radiologic Physics
- Informatics: IT Tools for improving Safety & Quality
- Chest: Quantitative Imaging in Lung or Airway Diseases
- Emergency Radiology: Imaging the Pregnant Patient
- Musculoskeletal: MR Imaging Evaluation of Cartilage and Osteochondral Injuries
- Interventional Oncology: Liver/Bone
- Molecular Imaging: Breast Imaging in the Era of Molecular Medicine
- Whole Body Diffusion in Oncology
- Neuroradiology: Brain Neoplasms

Wednesday

- ABR: MOC—Diagnostic Radiology
- ABR: MOC—Radiation Oncology
- ABR: MOC—Radiologic Physics
- Cardiac: Multimodality- PET/SPECT CT Myocardial Perfusion and Viability
- Genitourinary: Abdominal Incidentalomas
- Neuroradiology: Dementia Imaging
- Musculoskeletal: Osteoporosis and Marrow Imaging
- Chest: Ground-glass Nodules

- Physics: Recording & Reporting Radiation Dose
- Radiation Oncology: Image-guided Radiation Therapy (IGRT)
- Vascular: Aortic Diseases—Treatment and Follow-up Imaging

Radiology Informatics

IMAGE SHARING DEMONSTRATION

Visit the IHE® Image Sharing Demonstration in the Lakeside Building, Hall D, Booth 1628, to see how medical images and reports can be shared through personal health record (PHR) accounts using standards defined by Integrating the Healthcare Enterprise®. These same methods are in clinical use in the RSNA Image Share pilot project, funded by the National Institute of Biomedical Imaging and Bioengineering (NIBIB). The demonstration also includes standards-based methods for dose reporting, ordering and scheduling of radiology procedures using the RSNA RadLex® Playbook, reporting using structured templates developed by the RSNA Reporting Committee and authoring teaching files using the RSNA MIRC® Teaching File Software.

RSNA INFORMATICS OVERVIEW

"Decoding the Alphabet Soup (IHE®, MIRC®, RadLex®, Reporting): Whirlwind Tour of RSNA Informatics Projects" is designed for those who want to learn more about, or who are just beginning to use, RSNA informatics products. Presenters will discuss these RSNA-sponsored projects: Integrating the Healthcare Enterprise (IHE); The Medical Imaging Resource Center (MIRC); RadLex comprehensive lexicon; and reporting.

PEDIATRIC AND NUCLEAR MEDICINE/MOLECULAR IMAGING CAMPUSES

This year, separate Pediatric and Nuclear Medicine/Molecular Imaging campuses feature many components—including refresher and series courses, scientific presentations, and education exhibits—of these subspecialties, to facilitate focused study during the week.

The Pediatric Campus is located in Rooms S101AB and S102AB of McCormick Place. The Nuclear Medicine/Molecular Imaging Campus is located in S503AB, S504CD and S505AB. Lunch hour and afternoon presentations of scientific posters and education exhibits in the pediatric and nuclear medicine/molecular imaging subspecialties will take place in the campuses.

INFORMATICS AREA—LAKESIDE LEARNING CENTER

Visit the Informatics area in the Lakeside Learning Center to take guided tours of IHE, MIRC, RadLex and Reporting. For more information, go to RSNA.org/Informatics.aspx.

RSNA Education

EARN SAM, CME CREDITS

Forty in-person, self-assessment module (SAM) courses will be offered at RSNA 2012, allowing participants to obtain both continuing medical education (CME) and SAM credit for each course attended. With the help of SAM faculty, this year's courses have been designed to cover a wide range of subspecialties.

All SAM courses are qualified by the American Board of Radiology (ABR) in meeting self-assessment criteria toward fulfilling ABR Maintenance of Certification Program requirements. Participants earn 1.5 SAM credits per course attended. In addition, each course has been approved for *AMA PRA Category 1 Credit™*.

RSNA annual meeting in-person SAMs are accredited by the new MOC program of the Royal College of Physicians and Surgeons of Canada and approved by the Canadian Association of Radiologists.

Guarantee spots in SAM courses by pre-registering at RSNA.org/Registration_and_Housing.aspx by November 21. Attendees interested in sold-out SAM courses can go directly to the SAM course room and attendees will be seated on a

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first-come, first-served basis after all ticketed attendees have been seated.

Members attend RSNA 2012 SAM courses free; non-members pay a fee of \$50.

RSNA STORE FEATURES CD REFRESHER COURSES, NEW COLLECTIONS, DEMONSTRATIONS

Visit the RSNA Store to experience all the educational products and services that RSNA has to offer and talk to RSNA staff about maintenance of certification, online education and more.

This year, the RSNA Education Center offers 20 new refresher courses for purchase on CD at the RSNA Store, including "Gastrointestinal: Liver," "Great Cases in Abdominal US" and "Brain Imaging Work-up for Dementia." Most courses focus on specific imaging challenges and cover a broad range of subspecialty topic areas. Individual CDs are \$55 for members and \$80 for non-members.

The RSNA Store also features two new CD collections: the Pediatric Gastrointestinal Collection and the Abdominal Collection. Each collection contains a set of refresher course CDs pertaining to a particular subspecialty. The Pediatric Gastrointestinal collection offers 2.75 *AMA PRA Category 1 Credits*[™], while the Abdominal Collection features three CDs offering 4.50 *AMA PRA Category 1 Credits*[™]. Collections offer the opportunity to earn multiple CME credits and are priced at a 25 percent discount as compared to individual CD purchases.

CD collections from previous annual meetings will also be available for purchase at the RSNA Store. Collections are priced based on the number of CDs per collection but generally range from \$80-\$175 per collection.

RadioGraphics special editions from 2008-2012 will be available for browsing and purchase. New this year, the RSNA Store will also feature the print version of *Radiology Select Volume I: Pulmonary Nodules* and *Volume II: Stroke*.

PATIENTS FIRST

In keeping with the "Patients First" theme of the annual meeting, RSNA will offer a spectrum of programming focusing on patient-centered care, including these refresher courses:

- Vignette-based Disclosure of Medical Error in Radiology (RC216)
- What the Referring Physician Needs to Know (RC316)
- Patient-centered Radiology: It's Good Business (RC416)

Also being presented at RSNA 2012 is the workshop, Program to Enhance Relational and Communication Skills (PERCS)



for Radiologists. The workshop is made possible through a GE Healthcare/RSNA Research & Education (R&E) Foundation Education Scholar Grant.


Attendees should also stay alert for information on the launch of Radiology Cares, RSNA's new patient-centered radiology campaign to encourage and facilitate radiologists' meaningful engagement in the patient experience.

RSNA staff will also give demonstrations of the RSNA/AAPM Physics Modules, online Education search and CME Credit Repository.

ACADEMY OF RADIOLOGY LEADERSHIP AND MANAGEMENT

More than three dozen courses at RSNA 2012 count toward the Certificate of Achievement offered by the new Academy of Radiology Leadership and Management (ARLM). RSNA collaborates with the Association of Administrators in Academic Radiology Departments, American Roentgen Ray Society, Association of University Radiologists, and the Society of Chairs of Academic Radiology Departments in the ARLM.

Medical imaging professionals can earn an ARLM certificate by participating in 50 hours of education—including at least 30 in person—across a spectrum of domains including financial, human resources, professionalism, and academic mission.

Learn more about eligible courses by picking up an ARLM subspecialty brochure at McCormick Place and looking for the  in the *RSNA Meeting Program*. RSNA Store staff can answer questions regarding ARLM achievements or courses.

Associated Sciences

Associated sciences offerings are tailored to the various disciplines that function within the radiology department.

RADIOLOGIST ASSISTANTS SYMPOSIUM

Four refresher courses on Sunday designed to meet the educational needs of the radiologist assistant (RA) as defined by ARRT[®].

ASSOCIATED SCIENCES SYMPOSIUM

This set of 10 refresher courses over 2½ days begins Monday morning with "Are You Ready: The Business Case for Cultural Competence."

ASRT @ RSNA 2012

This 10-session course, held Wednesday and Thursday, offers continuing education credits for radiologic technologists. ASRT @ RSNA 2012, offered in collaboration with the American Society of Radiologic Technologists, will feature discussions of such wide-ranging topics as digital radiography image process and challenges in imaging the obese patient.

McCormick Place & Chicago

Getting around McCormick Place and the RSNA annual meeting is easy thanks to an easy-to-follow, intuitive floorplan and technological offerings to aid you every step of the way. Along with the latest technology, bustling technical exhibit halls and a broad spectrum of RSNA services and dining options, RSNA also offers resources to help you get the most out of your trip to the Windy City.

Technology

Take advantage of these digital resources to learn more about specific sessions, get general information and find your way around RSNA 2012 and McCormick Place.

MOBILE CONNECT

Visit this new area of RSNA Services to get the most out of your personal digital devices, including the on-the-go flexibility offered by RSNA's mobile apps. Tech experts will be on hand in this casual, open environment to help attendees get familiar with their mobile device functions and introduce them to the apps RSNA offers for the *Meeting Program*, *Radiology*, *RadioGraphics*, *RSNA News*, and *RadiologyInfo.org*, as well as the technology used for RSNA DxLive[™]. Stop by anytime during RSNA Services hours for personalized, hands-on help from an RSNA expert. Along with a "Genius Bar" style layout featuring iPads, iPhones and Android phones and tablets, Mobile Connect offers two "theaters" where users can watch mobile app demonstrations.

RSNA 2012 WEBSITE

The official annual meeting website, *RSNA.org/Annual_Meeting.aspx*, is your source for the very latest, up-to-date information on the annual meeting program, including course and exhibitor listings, maps and more:

• RSNA Meeting Program

The online *RSNA Meeting Program* offers easy-to-search, detailed information about each of the hundreds of presentations happening at RSNA 2012. Along with searching for courses by title and name of presenter, users can search the online program by day, area and subspecialty, and sort findings from earliest to latest. The program will remain online after the meeting.



• Online Help Center


Whether you're wondering where to pick up your badge, how to make travel arrangements, how to access the RSNA 2012 *Meeting Program* or what the weather is like in Chicago, RSNA's all-new Online Help Center has the answers to RSNA 2012-related questions. The center is divided into "Before You Go," "While You're Here" and "After the Meeting" categories.

FROM YOUR DEVICE

• RSNA Mobile

Smartphone users can easily browse the mobile version of the RSNA 2012 website at *m.rsna.org*.

• Scan QR Codes for Quick Info

 Look for the QR codes accompanying scientific sessions and multisession and refresher courses listed in the printed *RSNA Meeting Program in Brief*. Use your smartphone to scan the code (try the sample at left to access information about the *RSNA News* iPad edition) and

automatically download abstract information for the session or course. Information can also be downloaded using the QR codes on signs outside meeting rooms at McCormick Place. Also look for QR codes in RSNA Services—get information without having to pick up and carry multiple brochures.

• Tweet Your RSNA 2012 Experience

Access Twitter to follow live feeds about RSNA 2012 and contribute Tweets of your own. RSNA staff members will be Tweeting live buzz and information at @RSNA and want you to join in the discussion. Tweet about your experience and interact with others using the hashtag #RSNA12.

INSIDE MCCORMICK PLACE

• Digital Navigators

Explore and map RSNA courses and exhibits with touch-enabled digital navigators onsite at McCormick Place and let them point the way to your next destination. Ten interactive units will be placed throughout the public areas and

Continued on next page

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exhibit floor entrances. The touch screens guide you through the *Meeting Program* and technical exhibitor listing, help you find facility services and direct you with visual walking paths to meeting rooms, exhibit booths and service areas. The Digital Navigator will also be integrated into RSNA Mobile at m.rsna.org.

• **Internet Zones**

Computers will be available at Internet Zones throughout McCormick Place for use in accessing the RSNA 2012 website for the most current meeting and exhibitor information.

• **WiFi**

Get connected with wireless connectivity, using 802.11 b/g WiFi protocol, available throughout McCormick Place. These wireless networks are not secure and should not be used for sending sensitive information. These connections will use DHCP service to automatically supply IP addresses and Internet access.

• **Charging Stations**

Charge your laptop, cellular phone or other device at one of the Charging Stations located throughout McCormick Place.

Technical Exhibition

Technical Exhibits at RSNA 2012 will feature nearly 700 exhibitors in three halls: Hall A in the South Building, Hall B in the North Building, and Hall D in the Lakeside Center. A balanced mix of companies will be located in each hall.

Featured at the Technical Exhibition:

NEW: Exhibitor Product Theater: Learn about new products being displayed in an educational environment in South Building, Hall A.

Country Pavilions: Exhibitors from France, China, Korea, Germany and Canada (Ontario) will be showcasing their products and services.

Publishers Row: Browse educational titles in all areas of medical imaging in South Building, Hall A.

Vendor Workshops: Get hands-on tutorials of vendor software systems.

Associated Sciences: Organizations for allied professionals are located together in Lakeside Center, Hall D.

ESTATE PLANNING, KEEPING UP WITH TAX ENVIRONMENT, FOCUS OF SESSION

Understanding the fundamentals of estate planning, planning for retirement and strategies for leveraging taxable gifts are among the topics to be covered at the Monday session, "Estate Planning for the Changing Tax Environment."

Alicia K. Waltenberger, Esq., Director, Wealth Planning Strategies, TIAA-CREF Financial Services, will discuss issues including retirement needs analysis, Roth conversions, estate planning basics, leveraging taxable gifts, non-tax-related planning and charitable planning.

"Estate Planning for the Changing Tax Environment" will be held from 3-5:30 p.m., Monday, November 26, in Room S104B.

Private Consultations Offered in R&E Donor Lounge

Waltenberger will also provide complimentary private, no-obligation consultations to donors at the Research & Education (R&E) Foundation Donor Lounge on Monday and Tuesday. She will answer questions, review current plans and provide guidance for specific situations. R&E staff will set up appointments for those interested.

Detailed maps of exhibit halls are available on the annual meeting website (RSNA.org/Annual_Meeting.aspx). Browse a comprehensive, up-to-the-minute list of the exhibitors and their products and services to map your visits to the exhibit floors. Smartphone users can search the list on the RSNA mobile site at m.RSNA.org.

Again this year, exhibitors were invited to participate in the Virtual RSNA 2012 (See more information on Virtual RSNA 2012 on Page 29).

TECHNICAL EXHIBITION GUIDE

The *Technical Exhibition Guide* is your go-to source of information for navigating the annual meeting. In addition to floor plans and contact information for the more than 700 technical exhibitors, the Guide provides a detailed map of the three Technical Exhibit Halls. Distributed in bins adjacent to the *Daily Bulletin* and at exhibit hall entrances, the *Technical Exhibition Guide* is an essential navigational tool for RSNA attendees.

For the most up-to-date meeting and exhibitor information, visit the Internet Zones and Digital Navigation units located throughout McCormick Place.

Technical Exhibition Hours

Hall A (South Building), Hall B (North Building) and Hall D (Lakeside Center)

Sunday–Wednesday
10 a.m. – 5 p.m.

Thursday
10 a.m. – 2 p.m.

RSNA Services

An expanded international reach at the Global Connection booth and a new technology-focused booth (see Mobile Connect, previous page) headline the bustling RSNA Services area at RSNA 2012. As always, RSNA staff will demonstrate resources, provide information and answer questions about RSNA's full array of products and services. Anchored by the RSNA Plaza, RSNA Services on Level 3 of the Lakeside Center offers:

RSNA Global Connection: Learn about training programs, grants and fellowships, free and discounted resources for international institutions, online education opportunities, journals, international membership and more. Staff will be available to answer questions about opportunities offered by the RSNA Committee on International Relations and Education and the RSNA Research & Education (R&E) Foundation. This year, meeting attendees are encouraged to stop by the booth and bring information on international outreach programs they know about or are involved in—following the RSNA Annual Meeting, this informa-

tion will be added to the RSNA International Radiology Outreach Resources (IROR) Webpage at RSNA.org/IROR.aspx.

Career Connect: Looking for a job? All attendees are invited to stop by our Career Connect booth to view current job openings and post their résumé to our website. If you're an employer with a current job opening, stop by and post your position for FREE—a \$225 savings!

Journals, News & RadiologyInfo.org:

Check out RSNA's print, online and mobile publications and news including *Radiology*, *RadioGraphics*, *Radiology Legacy Collection*, *Radiology Select* and *RSNA News*. RSNA staff will help with subscriptions, demonstrate mobile and online publications, and show you *RadiologyInfo.org*, the RSNA-American College of Radiology public information website. Visitors to *RadiologyInfo.org* can enter a drawing to win a Kindle Fire and can also pledge to "Image Wisely."

Membership: Visit this booth for answers to questions about membership, journal subscriptions, dues payment or making the most of your benefits.

myRSNA®: Learn from experts with a presentation or hands-on tutorial on myRSNA®, a collection of online tools for RSNA members. Features include enhanced searching, file sharing, bookmarking, CME management and more.

RSNA Store: Shop for CME refresher course CDs, *RadioGraphics* special issues and much more. Staff members are happy to demonstrate CME programs, self-assessment modules (SAMs), RSNA/AAPM physics modules for residents and the RSNA CME Credit Repository. The Store also features RSNA branded merchandise and apparel—great as souvenirs and gifts.

Research & Education (R&E) Foundation:

Learn more about R&E activities in this booth featuring current grant and award recipients as well as individual, private practice and corporate donors. A Donor Wall lists all individuals who have contributed to the Foundation during the giving year. Donations are accepted onsite.

The R&E Donor Lounge: Offers computers, a coat room and comfortable furniture for relaxation and refreshments for those who have received a donor ribbon as well as those who have contributed at least \$250 onsite. Contributors to the R&E Foundation wear distinctive ribbons.

RSNA Studio: Attendees are invited to videotape a congratulatory message to help RSNA prepare for its 2014 centennial celebration.

Help Center

Look for the "I" icon throughout McCormick Place to find help. Visit one of the RSNA Help Centers located in the Grand Concourse, Level 3, or Lakeside Center Ballroom, Level 3, where RSNA staff can assist with general information or any of the following:

- Attendance voucher replacement
- Badge replacement/correction
- Chicago tourism information
- Hotel information
- Interpretation services
- Lanyard pickup
- Replacement course tickets

Also in the Grand Concourse, visit the **RSNA Concierge Services Desk**, where staff will assist with the following services:

- RSNA Tours & Events
- Chicago restaurant reservations
- Bistro RSNA Tickets
- Ribbon Pick-up

Registration & Housing

There are four ways to register for RSNA 2012:

1 Internet

Go to RSNA.org/register

Fastest way to register!

2 Telephone

(Mon.-Fri. 8:00 a.m. – 5:00 p.m. CT)

1-800-650-7018

1-847-996-5876

3 Fax (24 hours)

1-800-521-6017

1-847-996-5401

4 Mail

Experient/RSNA 2012

568 Atrium Drive

Vernon Hills, IL 60061 USA

REGISTRATION FEES

BY NOV. 2 AFTER NOV. 2

BY NOV. 2	AFTER NOV. 2	
\$ 0	\$100	RSNA/AAPM Member
0	0	RSNA/AAPM Member Presenter
0	0	RSNA Member-in-Training, RSNA Student Member and Non-Member Student
0	0	Non-Member Presenter
165	265	Non-Member Resident/Trainee
165	265	Radiology Support Personnel
750	850	Non-Member Radiologist, Physicist or Physician
750	850	Hospital or Facility Executive, Commercial Research and Development Personnel, Healthcare Consultant and Industry Personnel
300	300	One-day registration to view only the Technical Exhibits

ONSITE REGISTRATION

Those who registered after the mail deadline (10/19 international, 11/2 domestic) and/or who did not receive badges in advance should proceed to the Professional Registration, Already Registered line in either the Grand Concourse, Level 3, or Lakeside Center, Level 2, Arie Crown Lobby. Those that did not register in advance and wish to obtain a badge should proceed to the Professional Registration, New Registration line in the Grand Concourse, Level 3 or Lakeside Center, Level 2, Arie Crown Lobby. RSNA encourages attendees to do this on Saturday, November 24, to avoid long lines later in the week.

Hours of Operation

Saturday, November 24
12 – 6 p.m.

Sunday, Nov. 25 – Thursday, Nov. 29
7:30 a.m. – 5 p.m.

Friday, November 30
7:30 a.m. – 12 p.m.

For more information, visit RSNA2012.RSNA.org, e-mail reginfo@rsna.org, or call 1-800-381-6660 x7862.

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RESERVE YOUR ROOM NOW

Discounted hotel room rates are available for RSNA attendees. To see the hotel list and room rates go to RSNA2012.rsna.org. Don't delay and miss your chance to save. The deadline for housing reservations and changes through RSNA is November 2.

A \$300 deposit is required to confirm your hotel reservation. Reservations may be secured with a major credit card at the time of booking. The credit card must be valid through December 2012 and will be charged by the hotel approximately two weeks before the annual meeting. Registrants can also send a check, money order or wire transfer (payable to RSNA) for the hotel deposit (guests are responsible for all wire transfer fees).

EXCLUSIVE AIRLINE DISCOUNTS

American Airlines

AA.com offers a 5 percent discount on the lowest applicable published airfare. Use promotional code 69N2BK when booking your reservation on AA.com. You can also call American (1-800-433-1790) and mention the American promotional code to be eligible for discounted fares. Service fees will apply when booking over the phone. Discounts are available on American Airlines, American Eagle, American Connection, and all oneworld alliance carriers (as long as one segment is on American). Reservations involving any oneworld Alliance or codeshare partner airlines must be booked via phone.

Delta

Delta.com offers a 5 to 10 percent discount based on the fare and class of travel booked. Use promotional code NMAZY when booking your reservation on Delta.com. You can also call Delta (1-800-328-1111) and mention the Delta promotional code to be eligible for discounted fares. Service fees will apply when booking over the phone. Discounts applicable to U.S. and Canada originating passengers.

United

United.com offers a 2 to 10 percent discount off published fares and class of service. Save an additional 3 percent if booked online. Use promotional code ZMY9901427 when booking your reservation on United.com. You can also call United

(1-800-426-1122) or your personal travel agent and mention the United promotional code to be eligible for discounted fares. Service fees may apply. Discounts applicable for the following travel dates: November 22, 23 and November 26–Dec 2, 2012.

Gant Travel has been RSNA's official domestic travel agency for the past 12 years. Custom travel itineraries may be booked by phone and e-mail Monday–Friday, 7 a.m. to 6 p.m. CT. Additional taxes and booking fees will apply to airline ticket prices and after-hours emergency assistance. Contact Gant at 1-877-613-1192 or 1-630-227-3873 (outside of U.S. and Canada) or RSNA@ganttravel.com.

Meeting Materials and Publications

Name Badge

A name badge is required to attend RSNA courses or events or to enter the exhibit halls. RSNA now encodes a simple bar code on name badges with the registrant's name, institution, address, e-mail address, phone/fax numbers and radiologic specialty as provided at the point of registration. This barcode can be scanned by a technical exhibitor when choosing to request information or follow-up. There is no longer an ExpoCard™. If you prefer that exhibitors contact you at a different address than is shown, provide alternate information directly to the exhibitor at the point of contact or at the RSNA Help Center.

RSNA continues to use radiofrequency identification (RFID) badge scanning technology within the Technical Exhibit Halls. No personal information is stored in the RFID badge, only an ID number. Should you wish to "opt out" of this program, please visit either Help Center onsite located in the Grand Concourse or Lakeside Center.

Pocket Guide

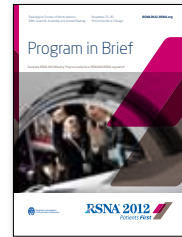
The RSNA 2012 Pocket Guide is an important, easy-to-use reference guide to items such as:

- Complete A-Z listing of everything available to attendees
- Room assignments for all courses and events
- Floor plans of each building and each floor of McCormick Place
- Shuttle bus schedules, routes and boarding locations
- Taxi fees, loading and unloading areas
- Airport transportation service with times, costs and boarding information
- Complete Metra Electric Line Train System schedule outlining station locations, times and drop-off destinations
- Parking lot locations, hours and fees



RSNA Program in Brief, Official Meeting Bag and Lanyard

One complimentary copy of the *RSNA 2012 Program in Brief*, official meeting bag and lanyard are available with the presentation of a voucher at the distribution counters located in the Lakeside Center, Level 2, Hall E (near coat check), or in the Grand Concourse, Level 3 (near Starbucks). Additional copies of the *Program in Brief* will be available for purchase at the RSNA Store.



In addition to the printed *RSNA 2012 Program in Brief*, RSNA offers an online program with a user-friendly search engine to find presentations to fit your schedule. The complete roster of special interest/controversies/hot topic sessions, multisession and refresher/informatics courses and vendor computer workshops are available in RSNA's online meeting program. Along with searching for courses by title and name of presenter, users can search the online program by day, area and subspecialty, and sort findings from earliest to latest. To confirm tickets for courses you must be registered for RSNA 2012 and guarantee your seat at RSNA.org/register before Nov. 22.

Daily Bulletin

This year's *Daily Bulletin*—the official newspaper of the annual meeting—is bigger and better than ever. Along with an additional four pages in the Monday and Tuesday

editions, you will find the enhanced New Products & Services section offered Sunday–Wednesday. Readers can also download, read and navigate the *Daily Bulletin* in a mobile-friendly version.

The *Daily Bulletin* can be found in bins throughout McCormick Place. Each day's paper also includes a New Products & Services section to alert attendees to new radiologic technology and services demonstrated by technical exhibitors at the meeting.

Press Conferences

While the *Daily Bulletin* is your direct source for RSNA 2012 news, more than 170 members of the news media typically attend the annual meeting, to capture the breaking news coming out of the event. Print, broadcast and online media throughout the world carried nearly 15,000 stories about RSNA 2011.

Press conferences will again be held onsite at the 2012 meeting to highlight some of the newsworthy research being presented. This year's press conferences will feature a lineup of current topics of great interest to the general public and will showcase radiology's contributions to disease detection, diagnosis and treatment.

Residents and Fellows

RSNA 2012 offers a full roster of Resident and Fellow-focused programming along with unparalleled networking opportunities and perks for trainees.

Residents/Fellows Program—Tailored specifically for radiology residents and fellows, the program launched in 2011 continues with a two-part Wednesday symposium, "Planning for Success After Residency," from 1:30–3:30 p.m., addressing the future of the radiology job market, when and where to look for a job and how to get hired, teleradiology, among other issues. "Legal Aspects of Radiology," from 4–5:45 p.m., will cover contract negotiations, medical malpractice and dealing with lawsuits.

Residents Lounge—Located in the Lakeside Learning Center, the lounge offers RSNA members-in-training and non-member residents a place to relax and network while

enjoying complimentary refreshments. The lounge is open Sunday — Thursday, 8 a.m.–6 p.m.

Residents Reception—Offered in conjunction with the American College of Radiology, the reception gives residents a chance to eat, mix and mingle with their peers and network with longtime RSNA members and leaders. The reception is held Monday, 4–5 p.m., in the Hyatt Regency McCormick Place.

RSNA Research & Education Foundation—Visit the Foundation area in RSNA Services to explore grants available to residents and fellows. Learn about the work of past grant recipients and the application process.

In addition, residents and fellows attending the meeting will want to pick up the "Resident/Fellow" brochure listing other courses of sessions with content of interest to residents and fellows.

RSNA annual meeting registration is free for RSNA members-in-training. Go to RSNA.org/Registration_and_Housing.aspx.

Transportation

RSNA offers complimentary shuttle bus service to and from McCormick Place. A dedicated bus lane makes the trip quick and easy, even during rush hours. Check signage in your hotel lobby and at McCormick Place Convention Center for exact pick-up and drop off locations.

Ride the Metra Electric Train for free using the Metra ticket located in your registration envelope. Trains run from downtown Chicago stations to the McCormick Place Convention Center Station in just 7 minutes. Stations are located within walking distance to many hotels. The ticket must be shown to the conductor when requested.

For more information about shuttle bus service and Metra, including the arrival and departure schedules, go to RSNA2012.RSNA.org and click Transportation.

International Attendees

- **Certificate of Attendance**—Use the computers in the Internet Zones to print a personalized certificate of attendance.

- **Interpretation Services**—International attendees will be assisted at the Help Centers and at Professional Registration with their conference questions in the following languages: Chinese, Dutch, French, German, Italian, Japanese and Spanish.
- **Travel Services**—ESA Voyages, the official international travel provider at RSNA 2012, will be available at the Help Center (Grand Concourse, Level 3) and at Professional Registration (Lakeside Center, Level 2, Arie Crown Lobby) to assist with questions.
- **Currency Exchange** services are no longer offered at McCormick Place, but various locations can be found in Chicago and within both Chicago airports. Visit www.choosetchicago.com/articles/view/FOREIGN-CURRENCY-EXCHANGES/117/ or www.travelex.com/US/Store-Locator/ for locations.

Tours and Events

RSNA has teamed up with Hosts Chicago and Bloomington to offer you exclusive ways to experience Chicago during your stay for RSNA 2012. This year's lineup offers multiple city tours, shopping excursions, culinary experiences, museum exhibits, and theater performances. Six days of action-packed tours are offered. The RSNA Tours & Events brochure is available at RSNA.2012.RSNA.org.

"Patients First" 5k Fun Run

Tuesday, November 27, 6:30 a.m.
Avery Field, South Grant Park, Chicago

Enjoy a 5k event with your colleagues along beautiful Lake Michigan and help fuel critical research to enable the best care for our patients. During online registration or onsite at McCormick Place, you can sign up as a runner or walker for the "Patients First" 5k Fun Run sponsored by Intelrad. The sign-up donation is \$30, which will benefit the RSNA R&E Foundation, and is fully tax deductible. You'll also receive a commemorative T-shirt.





RSNA 2012 Honorees

RSNA will pay tribute to a number of distinguished physicians during the 98th Scientific Assembly and Annual Meeting. All presentations will take place in the Arie Crown Theater.

Honorary Members

Presented Monday, Nov. 26 • 1:30 p.m.

Honorary Membership in RSNA is presented for significant achievements in the field of radiology. At RSNA 2012, Honorary Membership will be given to Giovanni G. Cerri, M.D., Ph.D., of São Paulo, Brazil, Mukund S. Joshi, M.D., of Mumbai, India, and András Palkó, M.D., Ph.D., of Szeged, Hungary.

As secretary for health of São Paulo State, Brazil, **Giovanni G. Cerri, M.D., Ph.D.**, works to strengthen the role of regional healthcare and address other local issues such as organ transplantation, oncology treatment, child mortality and the need for more hospital beds.

At the same time Dr. Cerri has worked to bring his international radiology colleagues to São Paulo—the World Federation for Ultrasound in Medicine and Biology (WFUMB), Latin American Federation of

Ultrasound in Medicine and Biology (FLAUS), and Radiological and Diagnostic Imaging Society of São Paulo (JPR) will host a joint meeting in São Paulo in May 2013.

Dr. Cerri also serves as director of the Institute of Radiology at the Hospital das Clinicas, School of Medicine, University of São Paulo (FMUSP) and as president of the Council of the Cancer Institute of São Paulo State. “He epitomizes the type of person we want to recognize with honorary membership in our society,” said 2012 RSNA President George S. Bisset III, M.D.

Immigrating to Brazil from his native Italy, Dr. Cerri received his medical degree from São Paulo University, where he subsequently completed his radiology residency and earned his doctorate. Dr. Cerri completed fellowships at the University of Birmingham, United Kingdom, and the Hospital Saint-Antoine at the University of Paris.

Dr. Cerri has served as president of the São Paulo Radiology Society and president of

the Brazilian College of Radiology, as well as editor of the *Brazilian Journal of Radiology*. Dr. Cerri also has served as WFUMB president, was a charter member of the board of the International Society of Radiology and has been RSNA member since 1983.

Dr. Cerri has received more than 30 awards, including honorary membership in the French Society of Radiology and honorary fellowship in the American College of Radiology.

Mukund S. Joshi, M.D., a consultant radiologist in the Department of Radiology at Jaslok Hospital and Research Center and medical advisor in radiology at Kohinoor Hospital, both in Mumbai, is known the world over for his efforts to teach and promote ultrasound in his native India and abroad—so much so that to many, his name is synonymous with the modality.

“When I mention Dr. Joshi’s name to any of my Asian colleagues they light up with enthusiasm,” said 2012 RSNA President

George S. Bisset III, M.D. “His teaching has touched so many people around the world.”

After completing his bachelor of medicine and bachelor of surgery degrees, diploma in medical radio-diagnosis and medical doctorate in India, Dr. Joshi completed training in ultrasound in Denmark, the United Kingdom, Australia and the U.S.

Dr. Joshi established “Mumbai Ultrasound Course,” India’s first and still extremely popular teaching program in ultrasound. He has served as editor-in-chief of the *Indian Journal of Radiology & Imaging* and currently is editor of the *Indian Journal of Ultrasound*. He is a past-president of the Indian Radiological & Imaging Association and the Indian Federation of Ultrasound in Medicine & Biology.

Dr. Joshi has served on RSNA’s International Advisory Committee as well as the Advisory Committee on Education for the International Society of Radiology. He has also served the Expert Working Group on the Planning Commission of India for Supportive and Diagnostic Services at Primary, Secondary and Tertiary Health-care levels, and the Medical Imaging Partnership, a U.S.-based non-profit organization that seeks to enhance global health in imaging to developing countries.

Dr. Joshi has received Lifetime Achievement Awards from the Association of American Radiologists of Indian Origin and the UP Branch of Ultrasound.

As a co-founder of the first European Day of Radiology in 2011, internationally



Cerri



Joshi



Palkó

renowned radiologist **András Palkó, M.D., Ph.D.**, held the role that perfectly captures his lifelong passion for the specialty.

Then vice-president of the European Society of Radiology (ESR), Dr. Palkó envisioned a day to build greater awareness of the value and significance of radiology throughout Europe. Celebrated by 19 European radiological societies, the success of the event led to the first International Day of Radiology sponsored by ESR, RSNA, and the American College of Radiology in November 2012. Dr. Palkó, who serves as professor and chair of the Department of Radiology at Szeged University Medical School in Hungary, has aspirations for an even bigger World Radiology Day.

Born in Budapest, Hungary, in 1953, Dr. Palkó’s devotion to radiology began at the University of Pécs, where he graduated from medical school in 1977, began his radiology training in 1979, and swiftly completed his doctoral thesis on “CT in the Diagnosis and Staging of Renal Cell Carcinoma.” In 1987, he rose to the position of assistant professor of radiology at the

University of Pécs. He has served in his current position at Szeged University Medical School since 1998.

Dr. Palkó has built an international reputation in clinical and academic radiology, focusing primarily on CT and MR imaging of the gastrointestinal tract and MR imaging of the liver.

As an educator, Dr. Palkó stresses the unique, multifaceted role radiology plays in medicine by blending elements of physics, informatics, engineering, biochemistry, molecular science, and nanotechnology with the diagnostic and therapeutic sides of patient care. Dr. Palkó has given more than 200 invited lectures across the globe

Dr. Palkó served as president of the Hungarian Society of Radiology from 2002 to 2004 and of the Hungarian College of Radiology from 2004 to 2011.

For expanded versions of the biographies of Drs. Cerri, Joshi and Palkó, see the *RSNA Meeting Program in Brief*.

Continued on next page

RSNA 2012 Dedications

Malcolm A. Bagshaw, M.D.—The Annual Oration in Radiation Oncology is being dedicated to the memory of Dr. Bagshaw, one of the world’s foremost experts in radiation therapy, who died in September 2011.

Gary M. Glazer, M.D.—The *RSNA Meeting Program* is being dedicated to the memory of Dr. Glazer, whose research placed him at the hub of some of the most significant breakthroughs in CT and MR imaging. Dr. Glazer died in October 2011.

Jerome F. Wiot, M.D.—The Annual Oration in Diagnostic Radiology is being dedicated to the memory of Dr. Wiot, a world expert in pneumoconiosis, who died in January 2010.



Bagshaw



Glazer



Wiot

Continued from previous page

Gold Medalists

Presented Tuesday, Nov. 27 • 1:30 p.m.

RSNA will award three individuals its Gold Medal—RSNA's highest honor—at the 98th Scientific Assembly and Annual Meeting. They are: R. Gilbert Jost, M.D., St. Louis, William W. Olmsted, M.D., Potomac, Md., Stephen R. Thomas, Ph.D., Cincinnati.

A globally recognized leader in computer applications in radiology and informatics, 2007 RSNA President **R. Gilbert Jost, M.D.**, played a critical, visionary role in guiding the specialty into the digital age decades before electronic health records ever had been conceptualized.

An equally renowned clinical diagnostic radiologist, Dr. Jost has devoted his career to using information technology to improve and serve diagnostic radiology and the specialty overall.

"I can't say enough about what Dr. Jost has done for our Society," said 2012 RSNA President George S. Bisset III, M.D. "As a junior Board member, I watched him navigate issues in a thoughtful, considerate and collaborative way. His constant focus on the issue at hand and his dedication to arriving at a consensus solution epitomize what I would characterize as 'leadership.' Dr. Jost clearly deserves our highest award, and while we recognize his many past accomplishments, we are also confident that he will continue to contribute to the RSNA in the future."

Dr. Jost quickly found his niche as a radiology resident in 1972 at Mallinckrodt Institute of Radiology (MIR) in St. Louis, Mo., where he has spent the duration of his career. He currently serves as the Elizabeth Mallinckrodt Professor of Radiology, radiology department chair for the Washington University School of Medicine and director of MIR.

He became a professor of radiology and an affiliate professor of computer science at MIR in 1985, the same year he was named chief of diagnostic radiology—a position he held until 1999 when he assumed the chairmanship of the department.

An RSNA member since 1973, Dr. Jost served on the RSNA Board of Directors from 1999 to 2004 and as board chairman in 2005.



Jost

Dr. Jost was named the Inaugural Fellow of Society for Computer Applications in Radiology (SCAR) in 2000 (later the Society for Imaging Informatics in Medicine) and received Honorary Membership in the European Society of Radiology in 2008.

When he took the helm of *RadioGraphics* in 1990, **William W. Olmsted, M.D.**, was determined to build on the publication's solid beginnings and make it the premier education journal in diagnostic radiology. When he stepped down at the end of 2011, Dr. Olmsted had not only realized that goal, but also had taken *RadioGraphics* in exciting new directions that laid the groundwork for future success.

"Dr. Olmsted has played a vital leadership role in education at the RSNA for 23 years," said 2012 RSNA President George S. Bisset III, M.D. "His contributions to our entire educational program, in addition to his critical role as editor of *RadioGraphics*, establish a sturdy foundation upon which we can build. Dr. Olmsted will undoubtedly have a lasting effect on our Society and, from a personal perspective, personifies our gold medal award."

Dr. Olmsted is a staff radiologist at the Baltimore Veterans Administration Hospital and clinical professor of diagnostic radiology and nuclear medicine at the University of Maryland School of Medicine in Baltimore, Md.



Olmsted

After earning his medical degree at Marquette University School of Medicine and the University of Rochester School of Medicine in 1968, Dr. Olmsted served as chief of the Gastrointestinal and Neurological Radiologic Pathology Branches at the Armed Forces Institute of Pathology from 1973 to 1976.

He spent a decade as director of the Division of Diagnostic Radiology at The George Washington University Medical Center in Washington, D.C., before stepping down to become the editor of *RadioGraphics* in 1990, taking the reins from journal founder William J. Tuddenham, M.D., who had overseen the publication since 1981.

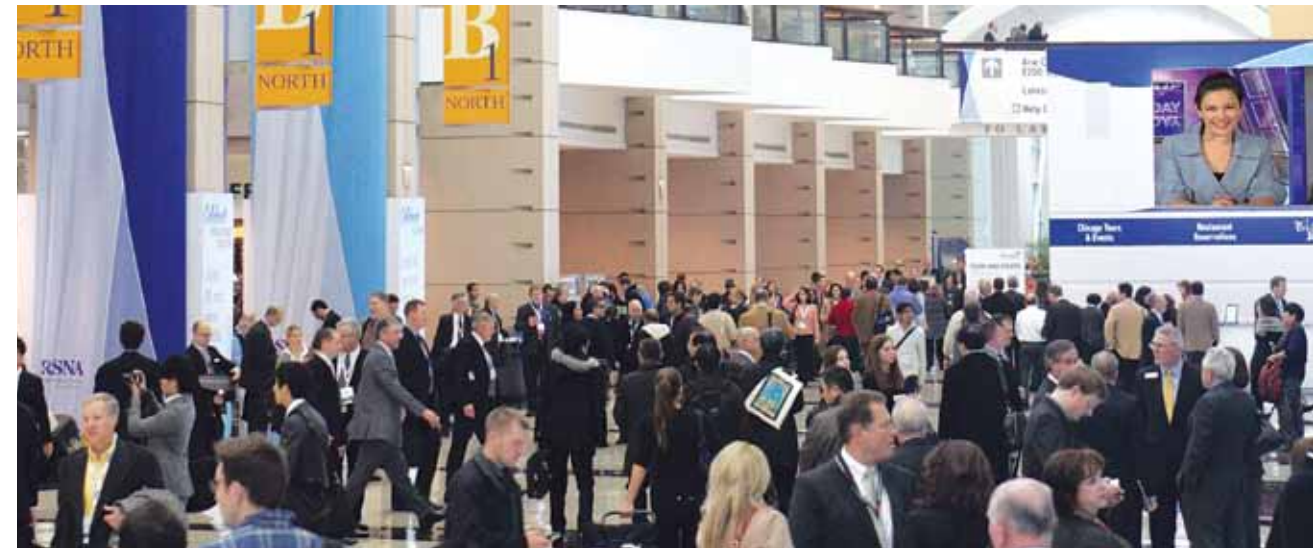
Dr. Olmsted implemented a number of features that flourished under his leadership—most notably, CME which expanded tremendously since first introduced in *RadioGraphics* in 1991.

Earlier this year, the RSNA Board of Directors approved renaming RSNA's trainee editorial fellowship the RSNA William W. Olmsted Editorial Fellowship for Trainees, beginning in 2013.

Stephen R. Thomas, Ph.D., a professor emeritus of radiology and medical physics at the University of Cincinnati Medical Center, is renowned not only for his work in diagnostic radiology and nuclear medicine but also for his tireless efforts to share his knowledge and experience by volunteering and mentoring.



Thomas



2012 RSNA President George S. Bisset III, M.D., was trained by Dr. Thomas as a resident. "His passion for life, his commitment to research, his devotion to his family and career, and his dedication to the RSNA make Dr. Thomas an obvious choice for this award," Dr. Bisset said.

An RSNA member since 1992, Dr. Thomas has served extensively with the Research & Education (R&E) Foundation and started the Exhibitors Circle program aimed at attracting smaller annual meeting exhibitors as contributors to the Foundation. He currently chairs the R&E Fund Development Committee and serves on the RSNA Centennial Committee.

Dr. Thomas ushered the American Association of Physicists in Medicine (AAPM) into the MR imaging era by founding and chairing the Task Group on Nuclear Magnetic Resonance. He has received the William D. Coolidge Award from AAPM and the Loevinger-Berman Award of SNM (now the Society of Nuclear Medicine and Molecular Imaging).

On the faculty at the University of Cincinnati (UC) since 1974, Dr. Thomas directed the development of a 0.15 T whole body MRI system within the Division of Medical Physics in the Medical Center, UC College of Medicine. The first patient receiving a clinical MR procedure within Cincinnati was

scanned on the Division of Medical Physics unit in 1985.

Dr. Thomas helped develop the American Board of Radiology (ABR) Maintenance of Certification (MOC) program and served as an ABR Trustee from 2001 to 2005 and associate executive director for medical physics from 2006 to 2011.

For expanded versions of the biographies of Drs. Jost, Olmsted and Thomas, see *the RSNA Meeting Program in Brief*.

Continued on next page

Alexander R. Margulis Award for Scientific Excellence

This new annual award recognizes the best original scientific article published in *Radiology*. Named for **Alexander R. Margulis, M.D.**, a distinguished investigator and inspiring visionary in the science of radiology. The name of the honoree will be revealed at the beginning of the Monday Plenary Session.

Other Awards

Trainee Research Prize

RSNA awards the Trainee Research Prize to honor an outstanding scientific presentation in each subspecialty presented by a resident/physics trainee, fellow or medical student. This year one trainee research prize in breast imaging is endowed by Tapan K. Chaudhuri, M.D.

A list of Trainee Research Prize recipients can be viewed in the Arie Crown Theater lobby.

Molecular Imaging Travel Award

The Travel Awards for Young Investigators in Molecular Imaging support candidates invited to present high-quality science. To be eligible, abstract presenters or poster exhibitors must pre-doctoral students or have been awarded their doctoral degrees no more than seven years prior to submission. A list of recipients of the Molecular Imaging Travel Awards can be viewed in the Nuclear Medicine/Molecular Imaging Campus.

Brazil Presents

In recognition of the contribution from Brazil for the "Brazil Presents" session, select proffered abstract presenters receive an award from RSNA. See a list of the presenters at the Global Connection booth in RSNA Services.

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Outstanding Researcher and Educator

Presented Sunday, Nov. 25 • 8:30 a.m.

RSNA will honor two individuals at RSNA 2012 for their contributions to research and education. A. James Barkovich, M.D., of San Francisco, is Outstanding Researcher. Marilyn J. Goske, M.D., of Cincinnati, is Outstanding Educator.

Outstanding Researcher

Inspired by a lifelong fascination with the central nervous system, world-renowned neuroradiologist **A. James Barkovich, M.D.**, has changed the landscape of pediatric neuroradiology through his visionary research in neonatology, metabolic disease, medical genetics and epilepsy.

Dr. Barkovich is a professor of radiology and biomedical imaging, neurology, pediatrics and neurosurgery and Chief of Pediatric Neuroradiology at the University of California at San Francisco (UCSF), where he helped pioneer the use of MR imaging to search for evidence of injury or abnormal development in the brains of newborns.

After earning a master's degree in chemistry at the University of California, Berkeley, he joined the U.S. Army in 1976 and earned his medical degree at George Washington University in 1980. He completed his radiology residency at the Letterman Army Medical Center in San Francisco in 1984, followed by a neuroradiology fellowship at the Walter Reed Army Medical Center in Washington, D.C., in 1986. After serving as a neuroradiologist at Letterman Army Medical Center for three years, Dr. Barkovich joined UCSF in 1989, where he has spent the duration of his career.

Combining embryology, genetics and molecular biology with basic physical and biological sciences, Dr. Barkovich collaborated with fellow researchers to better understand and classify steps in normal and abnormal brain development, which led to a series of grants funded by the National Institutes of Health (NIH). Dr. Barkovich has enjoyed lengthy partnership with NIH which has funded much of his work since 1993.

As part of the world-renowned neuroimaging team at UCSF, Dr. Barkovich is currently studying the mechanisms of normal development and maldevelopment of the brain, correlation of cerebellar abnormalities with neurodevelopmental outcome



Barkovich



Goske

in prematurely born neonates, early detection of brain injury and repair after encephalopathy and high-resolution anatomic and functional imaging of brain malformation.

Outstanding Educator

While her achievements in radiologic education are numerous, **Marilyn J. Goske, M.D.**, is perhaps best known for her work with Image Gently™, the campaign she founded to promote "child-sized" imaging.

Dr. Goske is the Corning Benton Endowed Chair for Radiology Education and professor of radiology at the University of Cincinnati School of Medicine and staff radiologist at Cincinnati Children's Hospital Medical Center in Cincinnati, Ohio. Her innovative approach to education capitalizes on technology and strategy to maximize impact and effectiveness.

After joining the Cleveland Clinic in 1990 as the first full-time section head of pediatric radiology, Dr. Goske helped found the Cleveland Clinic Web Based Curriculum, a free website now used by more than 200 radiology residency programs nationally and internationally.

A 2004-2005 medical education fellowship, focused on professionalism, within the Cleveland Clinic Lerner College of Medicine helped Dr. Goske refine her teaching

approach. RSNA has benefited from Dr. Goske's expertise, as she has served as a member of the Professionalism Committee since 2004 and concludes a three-year term as chairman this year.

Dr. Goske served as a member, secretary, president, and chair of the Society for Pediatric Radiology board of directors. As chairman she became increasingly concerned about the apparent lack of change in practice by pediatric radiologists, despite reports of adverse side effects from radiation dose. Her answer was an awareness campaign. The Alliance for Radiation Safety in Pediatric Imaging and the Image Gently campaign initially focused on CT and has expanded to other modalities. Nearly 70 organizations with more than 800,000 members have joined the Alliance.

Among the 16 grants that have funded Dr. Goske's research is a Harvey and Jean Picker/Derek Harwood-Nash Education Scholar Grant from the RSNA Research & Education Foundation, with which she completed her "Developing a 'Best Practice' National Registry for CT Scans in Children" project.

A full biography of Dr. Barkovich will appear in the December 2012 issue of *Radiology*. A full biography of Dr. Goske will appear in the November-December issue of *RadioGraphics*.



Honored Educator

To be recognized at RSNA 2012 are the first recipients of the RSNA Honored Educator Award. Established in 2011, the award recognizes RSNA members who have produced RSNA educational resources in the past calendar year. To be eligible for the award, members may participate in qualifying activities including:

- Serving as faculty at one or more of RSNA's educational meetings
- Authoring an education exhibit, Quality Storyboard and/or Cases of the Day track for the RSNA Annual Meeting
- Authoring educational articles in *Radiology* and *RadioGraphics*
- Authoring online education materials, including online modules or original SAMs, and/or creating CME questions in support of repurposed for online SAMs
- Donating a refresher course and writing CME questions for online learning

Eligible candidates must participate in at least two educational categories to be considered for the award and may not earn credit for more than two activities in any given category. Based on the number of qualifying activities completed, the most eligible RSNA members are presented with the RSNA Honored Educator award in recognition of their contributions. This year's recipients are:

Paul S. Babyn, M.D.
Priya R. Bhosale, M.D.
Phillip M. Boiselle, M.D.
William W. Boonn, M.D.
Felix S. Chew, M.D.
Theodore J. Dubinsky, M.D.
Damian E. Dupuy, M.D.
Ronald L. Eisenberg, M.D., J.D.
Riham H. El-Khouli, M.D.
Elliot K. Fishman, M.D.
Debra A. Gervais, M.D.
Ali Guermazi, M.D., Ph.D.
Jon A. Jacobson, M.D.
Charles E. Kahn Jr, M.D., M.S.
Heoung-Keun Kang, M.D.

Jeffrey P. Kanne, M.D.
Venkata S. Katabathina, M.D.
Woojin Kim, M.D.
Lale Kostakoglu, M.D.
Jonathan B. Kruskal, M.D., Ph.D.
Grant E. Lattin Jr, M.D.
Jonathan S. Lewin, M.D.
Katarzyna J. Macura, M.D., Ph.D.
H. Page McAdams, M.D.
Frank H. Miller, M.D.
Peter R. Mueller, M.D.
Anwar R. Padhani, M.D.
William Pavlicek, Ph.D.
Jeffrey J. Peterson, M.D.
Srinivasa R. Prasad, M.D.

James M. Provenzale, M.D.
Carlos S. Restrepo, M.D.
Melissa L. Rosado De Christenson, M.D.
Daniel L. Rubin, M.D.
Dushyant V. Sahani, M.D.
Alampady K. Shanbhogue, M.D.
Jacob Sosna, M.D.
Naoki Takahashi, M.D.
Jorge A. Vidal, M.D.
Raghunandan Vikram, M.B.B.S., F.R.C.R.
Richard H. Wiggins III, M.D.
Vahid Yaghmai, M.D.
Atif Zaheer, M.D.
Stefan L. Zimmerman, M.D.



DON'T MISS ACR AT RSNA 2012!

Be sure to visit **ACR booth #4429** to see featured presentations on ACR programs including:

- Radiology Leadership Institute™
- Accreditation
- Harvey L. Neiman Health Policy Institute™
- ACR Education Center
- National Radiology Data Registry (NRDR™)
- ACR membership benefits
- American Institute for Radiologic Pathology (AIRP™)
- ACR IMAGE METRIX™ and more!

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McCormick Place Convention Center, Chicago
Nov. 25–29

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