RSNA News™

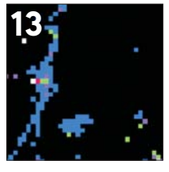
July 2010 Volume 20, Number 7

Solution to Isotope Shortage Lies in Domestic Production

ALSO INSIDE:

CELEBRATING 20 YEARS

RSNA News proudly celebrates 20 years of providing high-quality, timely coverage of radiology research and education and critical issues in private and academic practice, along with comprehensive information about RSNA programs, products and other member benefits.



facebook
twitter
Follow us for exclusive news, annual meeting offers and more!

PRESIDENT BILL CLINTON AMONG LECTURERS ANNOUNCED FOR RSNA 2010

SPECIAL LECTURE
Sunday, November 28
John Mendelsohn, M.D.

ANNUAL ORATION IN DIAGNOSTIC RADIOLOGY
Sunday, November 28
Christian J. Herold, M.D.

SPECIAL LECTURE
Monday, November 29
Atul Gawande, M.D.

NEW HORIZONS LECTURE
Monday, November 29
Sanjiv S. Gambhir, M.D., Ph.D.

SPECIAL ADDRESS
Tuesday, November 30
President Bill Clinton

ANNUAL ORATION IN RADIATION ONCOLOGY
Wednesday, December 1
Zvi Fuks, M.D.

More information on these lectures will be published in an upcoming issue of RSNA News.

RSNA 2010
PERSONALIZED MEDICINE:
In Pursuit of Excellence


Mendelsohn


Gambhir


Herold


Fuks


President Clinton

Gawande

RSNA Editorial Fellows Named

RSNA has named **Edward Y. Lee, M.D.,** a pediatric radiologist at Children's Hospital Boston and assistant professor of radiology at Harvard University, as the 2010 William R. Eyler Editorial Fellow.

The 2010 Trainee Editorial Fellow is **Amy M. Fowler, M.D., Ph.D.,** a resident in diagnostic radiology at the Mallinckrodt Institute of Radiology in St. Louis.

With a special interest in pediatric thoracic imaging, Dr. Lee practices in the Division of Pulmonary Medicine at Children's Hospital Boston. He is the radiologist-in-charge within several of the hospital's pediatric pulmonary programs, including the Cystic Fibrosis Center and Center for Healthy Infant Lung Development. He has served as a reviewer for more than 20 journals, has been appointed to the editorial boards of four journals and is an assistant editor of the pediatric section of the *American Journal of Roentgenology.* Dr. Lee received his medical degree from the University of Chicago.


Lee


Fowler

Dr. Fowler has a special interest in breast and women's imaging and has received grants from the U.S. Department of Defense, National Institutes of Health and Endocrine Society. She has served as a reviewer for the journal *Breast Cancer Research.* Dr. Fowler received her medical degree and doctorate in cellular and molecular biology from the University of Wisconsin in Madison.

Both fellows will work with *Radiology* Editor Herbert Y. Kressel, M.D., in Boston and *RadioGraphics* Editor William W. Olmsted, M.D., in Bethesda, Md. The Eyler fellowship lasts one month and trainee fellowship lasts one week. Each fellow will also visit the RSNA Publications and Public Information Departments at RSNA Headquarters in Oak Brook, Ill. During the final weeks of fellowship, Dr. Lee will work with the RSNA editorial team at RSNA 2010.

Hricak Receives Honorary Membership in Japanese Society

2010 RSNA President **Hedvig Hricak, M.D., Ph.D., Dr. h.c.,** recently received honorary membership in the Japan Radiological Society (JRS). At its annual meeting in Yokohama earlier this year, JRS honored Dr. Hricak *(left, with JRS President Kazuro Sugimura, M.D.)* for her "great contribution to the field of medical radiology and tireless efforts to promote scientific exchange and cultural understanding between U.S. and Japan."

Dr. Hricak is chair of the Department of Radiology at Memorial Sloan-Kettering Cancer Center in New York, a professor of radiology at Cornell University Medical College and an attending radiologist at Memorial Hospital in New York.

Also receiving honorary membership in JRS were Bernd K. Hamm III, M.D., of Berlin and Byung Ihn Choi, M.D., Ph.D., of Seoul, Korea. Dr. Choi became an RSNA honorary member in 2007. Dr. Sugimura will receive RSNA honorary membership at RSNA 2010.

Image Wisely Campaign to Address Radiation Exposure in Adults

RSNA and the American College of Radiology have joined forces with the American Association of Physicists in Medicine and American Society of Radiologic Technologists to create an Image Wisely campaign to raise awareness about limiting radiation exposure in adults.

The increasing amount of radiation to which people are exposed through medical imaging has become the subject of widespread media coverage and public concern, prompting some in the radiology field to call for a comprehensive and targeted response. Image Wisely is the adult counterpart to the Image Gently campaign to limit radiation exposure in children. Image Gently was launched in 2008 by the Alliance for Radiation Safety in Pediatric Imaging, a coalition of more than 40 organizations.

Using the Web and other media, Image Wisely will address CT, nuclear medicine and interventional radiology, including fluoroscopy. Information will be tailored for radiology professionals, referring physicians and patients. *RSNA News* will report as various aspects of the campaign are unveiled.


Bulas Named SPR President
A change in leadership was announced at the recent annual meeting of the Society of Pediatric Radiology (SPR). SPR's 2010-11 president, Dorothy Bulas, M.D., is a professor of pediatrics and radiology at George Washington University Medical Center and program director for the Pediatric Radiology Fellowship Program for the Department of Diagnostic Imaging and Radiology at Children's National Medical Center, both in Washington, D.C. Also pictured is SPR 2010-11 Board Chair Neil David Johnson, M.B.B.S., of the Department of Radiology at Children's National Medical Center in Cincinnati.


QIBA Holds Third Annual Meeting
RSNA Science Advisor Daniel Sullivan, M.D., leads a panel of industry representatives discussing the impact of quantitative imaging from the equipment manufacturer perspective during the third annual working meeting of the Quantitative Imaging Biomarkers Alliance (QIBA) held in May in Rosemont, Ill. Members of QIBA's quantitative PET, CT, MR imaging, fMR imaging and COPD/asthma committees reported on the past year's progress and planned next steps and future activities.

RADIOLOGY IMPACT FACTOR JUMPS

The impact factor for *Radiology*, RSNA's peer-reviewed science journal, is now 6.341, according to the recently released 2009 Citations Reports® from the Thomson/Institute for Scientific Information Annual Citation. That's an almost 6 percent rise over the 2008 impact factor of 5.996, and the second highest impact factor in a field of 104 radiology journals. Citations from *Radiology* totaled 44,847, more than any other imaging journal.

RSNA Journals

RSNA's peer-reviewed education journal, *RadioGraphics*, posted a 2009 impact factor of 2.747. Citations Reports covers more than 7,500 of the world's peer-reviewed journals in approximately 200 disciplines.

My Turn

Radiologists' Response to Concerns about Radiation Exposure Must Put Patients First

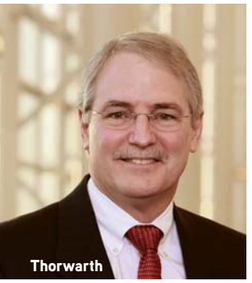
This year has seen increasing attention to radiology and radiation oncology accidents involving radiation overexposure. Adverse events captured the attention of the media and prompted the U.S. Food and Drug Administration to conduct hearings. How are we to respond when this happens? By refocusing our attention on patient safety, not just image quality. We need to think first of patients and their effective and cumulative doses and work to protect them from harm. As we seek to improve care by obtaining better, higher resolution images, we must keep in mind that this strategy often results in higher doses to patients.

Carol M. Rumack, M.D., is a professor of radiology and pediatrics and associate dean for graduate medical education at the University of Colorado Denver School of Medicine. She is immediate past-president of the American College of Radiology.

Patient protection from radiation overexposure requires oversight by radiologists, not just equipment companies. It is an opportunity for us to be the "Face of Radiology." If we distance ourselves from taking responsibility for radiation dose, we risk our position as the radiation protection experts, whose duty is not only to protect patients from harm, but also scare tactics that might needlessly limit utilization of imaging and jeopardize optimal patient care. Wherever radiology services are provided, radiologists, radiation oncologists and medical physicists comprise a team of specialists responsible for maintaining safe radiology practices. We must remind our colleagues and patients that we are the ones to go to for addressing radiation-related issues.

We have reached new heights of quality with advanced imaging techniques but at the same time have significantly increased the radiation dose to the U.S. population, particularly from multidetector row CT and PET/CT scanning. Cumulative doses need to be tracked over time, and we need to save dose data as well as images, but effective dose is what really matters. Radiologists will need to adopt the American College of Radiology Dose Index Registry, now in pilot phase, which will collect data on each facility and each patient. The registry is built to give direct feedback to facilities, with an alert if the dose is over a threshold, so that we may all learn how to improve our practices. The potential for saving patients from serious adverse radiation events is real. Having data to understand trends in radiology and track outcomes will continue to help us to justify when imaging studies are truly necessary, as we adopt new methods and procedures in the future.

A report on a pilot project to establish a national dose registry for children will appear in the August issue of *RSNA News*.



Thorwarth

Hendee

Sanders

ACR Awards Gold Medals

RSNA Liaison-designate for Publications and Communications William T. Thorwarth Jr., M.D., and 2007 RSNA Gold Medal recipient William R. Hendee, Ph.D., received gold medals at the American College of Radiology (ACR) 2010 annual meeting. A nationally recognized expert on radiology economics and reimbursement, Dr. Thorwarth has practiced radiology for 25 years with Catawba Radiological Associates in Hickory, N.C. Dr. Hendee is a distinguished professor of radiology, radiation oncology, biophysics and community and public health at the Medical College of Wisconsin in Milwaukee. ACR also presented a gold medal to Isaac Sanders, M.D., who served as director of the Residency Training Program, chair of the Department of Radiology and chief of staff at White Memorial Medical Center in Los Angeles, which bestowed Dr. Sanders with Lifetime Staff status in 1999. RSNA dedicated its Annual Oration in Diagnostic Radiology to Dr. Sanders at RSNA 2003.

Letter to the Editor

Radiology's Olympic Role Evolves

I commend Dr. Forster and the rest of the 2010 Imaging Team for their work at the Vancouver Winter Olympics. ("Imaging Team Scores 'Firsts' at 2010 Olympics," *RSNA News,* April 2010).

The Olympic Village in Vancouver, however, was not the first to house state-of-the-art radiology services. At the Atlanta 1996 Summer Olympics, MR, digital radiographs and ultrasound were provided at the Polyclinic within the athletes' village.

The Vancouver Imaging Team's implementation of "on-venue ultrasound" (OVUS) is innovative. Every four years each host city is charged with providing medical care for the athletes and Olympic "family." I expect this sets a new standard for radiology services for future Olympic games.

Barbara E. Robertson, M.D.
Radiology Medical Volunteer
Atlanta 1996 Summer Olympics

Editor's note: *We apologize for the apparent confusion. As was correctly pointed out, MR, digital radiographs and ultrasound were indeed provided at the Polyclinic within the athletes' village at the Atlanta Summer Games; however, Vancouver was the first Winter Olympics to offer those modalities within the athletes' village. We agree that innovations like OVUS have again raised the bar—it will be interesting to see what new things radiology has in store for the next Olympic games.*

Numbers in the News

1.3

Amount, in trillions of dollars, of investment real estate that must be refinanced between now and 2012. (See "Real Estate, Retirement Focus of RSNA 2010 Financial Seminars," Page 19.)

40

Percent of the world's supply of Mo-99—used to create technetium-99m for nuclear medicine procedures—produced by Canada's Chalk River reactor, scheduled to go permanently offline in 2016. (Read "Solution to Isotope Shortage Lies in Domestic Production," Page 9.)

153

Residents and fellows receiving RSNA Research & Education Foundation Roentgen Resident/Fellow Research Awards this year. Roentgen Awards recognize and encourage residents and fellows, nominated by their program directors or department chairs, who have played active and outstanding roles in radiologic research. See *RSNA.org/Foundation/Roentgen.cfm* for a list of awardees.

50,000,000

Number of "tweets" per day on the social medium Twitter, compared to 5,000 per day in 2007. (Read "Radiologists Join Social Media Revolution," Page 5.)

State of Coronary CTA, CMR Outlined in Consensus Documents

Important points to remember in using coronary CT angiography (CTA) and cardiovascular MR (CMR) are detailed in new consensus documents published in the May 2010 issue of the *Journal of the American College of Cardiology.*

The American College of Radiology, North American Society for Cardiac Imaging and Society of Cardiovascular Computed Tomography collaborated with the American College of Cardiology Foundation and other organizations on the consensus documents. Read more at *www.cardiosource.org.*

Pelloski is Pediatric Radiology Oncology Director at OSU

Christopher Pelloski, M.D., has been named the first director of pediatric radiation oncology at The Ohio State University (OSU) Comprehensive Cancer Center—Arthur G. James Cancer Hospital and Richard J. Solove Research Institute in Columbus. Dr. Pelloski also serves as director of the radiation oncology residency program and medical student education.

Dr. Pelloski's research has focused on radiation resistance in pediatric cancers along with molecular biomarkers and translational research.

Gilbert Appointed to RTOG Brain Tumor Committee

Mark R. Gilbert, M.D., of the University of Texas MD Anderson Cancer Center in Houston, has been appointed co-chair of the Brain Tumor Committee for the Radiation Therapy Oncology Group (RTOG) administered by the American College of Radiology.

Dr. Gilbert is the Blanche Bender Professorship in Cancer Research in the Division of Cancer Medicine at MD Anderson, where he is also a professor and deputy chair of the Department of Neuro-oncology.

Grossman Receives Gold Medal

Renowned scientist and educator Robert I. Grossman, M.D., was awarded the gold medal of the International Society for Magnetic Resonance in Medicine (ISMRM) by Queen Silvia of Sweden at the recent ISMRM-European Society for Magnetic Resonance in Medicine and Biology's joint annual meeting in Stockholm.

Currently the Saul J. Farber Dean and CEO of NYU Langone Medical Center in New York, Dr. Grossman received the Javits Neuroscience Investigator Award from the National Institutes of Health in 1999 for his work on multiple sclerosis. He is past-president of the American Society of Neuroradiology.

RSNA News
July 2010 • Volume 20, Number 7
Published monthly by the Radiological Society of North America, Inc.
820 Jorie Blvd., Oak Brook, IL 60523-2251. Printed in the USA.

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

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

LETTERS TO THE EDITOR
rsnanews@rsna.org
1-630-571-7837 FAX

SUBSCRIPTIONS
subscribe@rsna.org
1-888-600-0064
1-630-590-7770

REPRINTS AND PERMISSIONS
permissions@rsna.org
1-630-571-7829
1-630-590-7724 FAX

ADVERTISING
advertise@rsna.org
Jim Drew, Director
1-630-571-7819

RSNA MEMBERSHIP
1-877-RSNA-MEM

RECYCLED PAPER
RECYCLABLE PAPER
PRINTED WITH SOY INK

Radiologists Join the Social Media Revolution

Before launching the social networking site Pediatric Commons in 2009, Michael D'Alessandro, M.D., found himself in the same somewhat isolated position as many other radiologists whose interaction with other clinicians has waned considerably since the advent of PACS.

Now 400 members strong, the educational social network for pediatricians and pediatric radiologists *(www.pediatriccommons.org)* has opened up a whole new world of information sharing—cases, photos, videos, ideas—for clinicians from across the globe who might not otherwise have ever interacted.

"I get to see interesting pediatric cases that we never see in the U.S.," said Dr. D'Alessandro, a professor of radiology and a pediatric radiologist at the University of Iowa Children's Hospital in Iowa City. "I am amazed at the high level of discourse among members, including discussions annotated with citations of the literature and the acknowledgement of legitimate differences in practice management."

Social media—defined as websites driven by user participation and user-generated content, such as blogs, networking sites like Facebook and the *Del.icio.us* bookmarking site—are offering radiologists new ways to network, interact and stay connected to each other and the general public.

About 60 percent of U.S. physicians are actively using social media networks or are interested in doing so, according to an early 2009 survey published by Manhattan Research and reported by *The New England Journal of Medicine Career Center.*

What's Out There?

Social media, once perceived as the franchise of attention-seeking teens sharing pictures and bands seeking to promote their new albums, now exist for every imaginable interest or pursuit, from raw food dieting to reindeer husbandry to, yes, radiology.

Sites with a medical imaging focus include "Radiolopolis," billing itself as "The International Radiology Community for Education, Research and Clinical Practice," and "Radiopaedia," radiology's answer to the popular Wikipedia website. Blog topics range from the gadget and technology updates on "A Radiology Geek's Blog," to images and discussion from a consultant radiologist in the United Kingdom who writes the "Daily Dose."

RSNA has a social media presence as well, leading the way among radiology member organizations connecting radiologists online. Since establishing a Facebook page in June 2008, RSNA has amassed more than 3,600 fans and its Twitter page has nearly 1,400 followers.

Recent RSNA Facebook posts range from an update on happenings at RSNA Headquarters to greetings from a radiologist in Morocco to a reminder about the upcoming annual conference of the Egyptian Society of Radiology. (See sidebar for addresses of RSNA's websites and other various radiology-focused social media.)

"Collective Knowledge" Reaches New Scale

Peer-to-peer exchange among radiologists via social media may usher in a new era of radiology consulting, according to Ali Moein, B.Sc., a biomedical engineer and researcher and medical imaging informatics project developer who administers the "Medical Imaging Informatics" page and other groups on Facebook. He's exploring the potential of online collaboration with teleradiology and Web 2.0 tools.

"Collective knowledge could greatly enhance peer review and quality standards, provide a platform for real-time patient monitoring, introduce new techniques and services, and provide support between residents and attending physicians," said Moein.

Moein cited projects like Yottalook, the radiology-specific search engine that powers myRSNA®, and Wiki forums, such as the one utilized by Integrating the Healthcare Enterprise (IHE®), the worldwide initiative to achieve standards-based interoperability for health information technology.

Myths Cleared as Specialty Promoted

Just as surely as they are connecting medical peers, social media are also emerging as a way to educate the general public about radiology and how it works.

> "There's a definite need for healthcare workers to provide information to the public."
>
> **Vijay Sadasivam, M.D.**

"There's a definite need for healthcare workers to provide information to the public," said Vijay Sadasivam, M.D., a radiologist practicing in southern India and author of the popular blog "scan man's notes" *(catscanman.net/blog),* focusing on radiology and general medicine and featuring a collection of radiology links and case logs.

Another blog, Science-Based Medicine *(sciencebasedmedicine.org),* includes radiology in its mission to dispel unfounded medical myths, debunk pseudoscientific therapies and help readers understand the basic scientific process. Written and edited by a team of physicians, Science-Based Medicine also has a sister site, Quackwatch, with a "Quackometer" that enables users to scan websites for dubious language.

"The Internet is full of mis- or disinformation peddled by snake oil merchants," Dr. Sadasivam said. "Medical professionals should provide accurate information, either from their own life and work experience or via links to appropriate repositories."

Physicians Advised to Tread Carefully

Seeing misinformation propagated can give physicians one more reason to join social conversations, but some experts caution physicians against jumping in too quickly. While social media opportunities are seemingly endless, so are potential HIPAA violations and other abuses of the patient-physician relationship.

Continued on Page 8

FANS FLOCK TO RSNA'S SOCIAL MEDIA SITES

While continuing to expand its social media presence, RSNA offers members, friends and fans the following resources:

myRSNA ***(myrsna.RSNA.org):*** This customizable radiology desktop application features a sophisticated search engine, file storage and sharing capability free to RSNA members. The site is password-protected.

RSNA on Facebook ***(www.facebook.com/RSNAfans):*** Fans post news, scientific articles, alerts about grants and educational opportunities, and updates from RSNA and beyond.

RSNA on Twitter ***(twitter.com/rsna):*** Follow "tweets" to the latest radiologic news and offerings from RSNA followers.

RSNA on LinkedIn ***(linkedin.com):*** Click "Groups" to locate RSNA on this professional network with more than 70 million members.

RadiologyInfo.org™: This public information website co-founded by RSNA and the American College of Radiology informs and educates the public about radiologic procedures and the role of radiologists in healthcare and improves communications between physicians and patients. The site recently launched a Facebook page at *Facebook.com/RadiologyInfo.*

A sampling of other noteworthy radiology networks, resources and blogs include:

Radiolopolis ***(www.radiolopolis.com):*** An international radiology network/community that connects people worldwide interested in radiology.

Radiopaedia ***(www.radiopaedia.org):*** The Wiki-based radiology resource allows users to browse thousands of articles and illustrative cases or get involved and edit or add content.

radRounds ***(www.radrounds.com):*** Radiology and medical imaging professional network for building relationships in clinical practice, education, career, research and industry.

A Radiology Geek's Blog ***(radiologygeek.wordpress.com/gadgets):*** Updates on new radiology gadgets and technologies.

Daily Dose ***(radiologyimages.blogspot.com):*** Images and discussion offered by a consultant radiologist in the U.K.

Dalai's PACS Blog ***(doctordalai.blogspot.com):*** This site from "an average radiologist in an average practice in an average town in the south," suggests an alternate acronym for PACS: "Pain and Constant Suffering."

MRI Metal Detector Blog ***(mrimetaldetector.com/blog):*** MR imaging safety director Tobias Gilk offers information on ferromagnetic detection and MR imaging safety and screening.

Not Totally Rad ***(nottotallyrad.blogspot.com):*** Known for "Shedding Light on Invisible Imaging," the blog was founded by anonymous interventional radiologist, the Samurai Radiologist.

Embedded Images in Radiology Reports Improve Communication

Embedding images of certain pertinent findings into radiology reports improves efficiency and communication between radiologists and referring clinicians and can improve patient care, according to researchers from Massachusetts General Hospital in Boston.

Referring physicians in the retrospective study published in the March 2010 issue of the *Journal of the American College of Radiology* were shown text-only reports followed by the same reports which included embedded images of relevant findings. Of the 35 cases referred for abdominal CT in the study, referring physicians reported that 32 text-only reports answered clinician queries satisfactorily. But the reports with embedded images helped clinicians make more confident management decisions and saved time.

A questionnaire included in the study showed consultations with radiologists would decrease by 50 percent if embedded-image reports were used.

"That was one of the most important findings," said lead author Veena R. Iyer, M.B.B.S. "In all cases, physicians found that embedded-image reports saved time, even for a consultation."

In two cases, one of the participants said that the management plan was modified after viewing the images embedded in the reports.

"Had the referring physician just seen the text report only, and not come down for a consultation, they would not have changed the management plan ultimately chosen for the patient," Dr. Iyer said. "But seeing the images changed their management decisions. That was surprising, for sure."

Potential Disadvantages Recognized

Viewing the embedded images could also have had the reverse effect in terms of management decisions, Dr. Iyer said. "Sometimes a non-radiologist may skip over important findings in the text and make an inappropriate management decision based on the image alone. There could be a lasting negative impact on radiologists' perceived value as interpreters and consultants, and radiologists themselves might unwittingly play a role."

Another potential downside of using embedded-image reports is diminishment of the radiologists' role.

"I am concerned that radiologists will shorten their reports, relying on images with arrows and circles to demonstrate where abnormalities are located, rather than words," said Kenneth Buckwalter, M.D., a professor of radiology in the Department of Radiology and Imaging Sciences at Indiana University and a member of RSNA's Professionalism Committee. "I am hoping that this won't come to pass, as it would decrease the value of the report and turn the radiologist into an image markup specialist. It may also further insulate the radiologist from the clinician, which could potentially move radiology into a full-blown commodity."

Although it's possible that embedded images could reduce consultations between referring doctors and radiologists—who are already experiencing disintegration in face-to-face communication—that was not the intent of the study, Dr. Iyer said.

"We don't want that face-to-face interaction to actually break down too much," Dr. Iyer said. "It's already waning slightly, but we do not want it to go away. Consultations can be very useful interactions for radiologists as well as for the referring clinician."

(clockwise, from top left)
Veena R. Iyer, M.B.B.S.
Massachusetts General Hospital

Robert Bales, M.D., M.P.H.
University of Illinois College of Medicine

Kenneth Buckwalter, M.D.
Indiana University

Communication is Focus of RSNA 2010 Course

To foster communication between referring physicians and radiologists, RSNA 2010 will offer a refresher course, "What the Referring Physician Needs to Know" (see sidebar), featuring a panel of referring physicians discussing communication tools including radiology reports.

One panelist, Robert Bales, M.D., M.P.H., said the study on embedded images is also an important first step in helping primary care physicians. "I might get 20 to 30 reports to sign in a day, so if I read a report, I am scanning it quickly for something specific," said Dr. Bales, an assistant professor of clinical family medicine at the University of Illinois' College of Medicine at Rockford and a physician and instructor of clinical family medicine at the University Primary Care Clinic in Mt. Morris, Ill. "To be able to look at specific images would really help me focus on what is important."

> "In all cases, physicians found that embedded-image reports saved time, even for a consultation."
> **Veena R. Iyer, M.B.B.S.**

The embedded-image reports would also benefit the patient, because images can go a long way in aiding a physician's explanation, Dr. Bales said.

The next phase of the study will be to expand the focus groups in number and scope, hopefully beginning with primary care, Dr. Iyer said.

While he is enthusiastic about the idea of embedded images, Dr. Buckwalter stresses that radiologists need to be practical about the implementation and potential downstream effects.

"I believe that this is the right thing to do for patient care, but it needs to be integrated with the review and reporting process so the radiologist doesn't have more work to do," he said.

REFERRING PHYSICIANS TO HOST PANEL DISCUSSION

Mary C. Mahoney, M.D., chair of RSNA's Public Information Committee, will moderate a panel discussion on the importance of communication between radiologists and referring physicians for the refresher course, "What the Referring Physician Needs to Know," from 8:30 to 10 a.m. Monday, Nov. 29, at RSNA 2010.

RSNA 2010
PERSONALIZED MEDICINE: In Pursuit of Excellence
NOVEMBER 28 - DECEMBER 3 · McCORMICK PLACE, CHICAGO

The panel will address:

- What referring physicians need from radiologists at various stages of patient care
- Referring physicians' preferences in communication methods
- Referring physicians' needs regarding structured reporting and appropriateness criteria
- How radiologists can improve communications and work more effectively with referring physicians to enhance patient care
- Opportunities to improve/expand radiologists' interactions with referring physicians.

Other panelists will include Robert W. Bales, M.D., family physician; Mary Frances Mulcahy, M.D., oncologist; Kevin Bethke, M.D., surgeon; and Jeffrey Graff, M.D., emergency department physician.

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

Radiologists Join the Social Media Revolution

Continued from Page 6

Using Internet forums to discuss individual patients—as medical students were reported doing in a 2009 study published in the *Journal of the American Medical Association*—is discouraged, as is becoming friends with patients on Facebook. Furthermore, physicians should look closely at everything they say in a social medium, lest it be considered medical advice for a patient with whom they have no established relationship.

Although providing online advice of any kind opens the door to liability, the issue ultimately hinges on whether there is a patient-physician relationship, according to Leonard Berlin, M.D., a professor of radiology at Rush University's College of Medicine in Chicago and former chair of the RSNA Professionalism Committee.

"Generally, it's a question of how specific the advice is," Dr. Berlin said. "If you have a public website that offers information to the general public, there's no physician-patient relationship. But if you offer advice to a person who's asking about their specific condition, you're risking establishing a relationship."

Marketing Opportunities Open Up

Offering advice isn't always a bad thing, according to Paul Dorio, M.D., a diagnostic and interventional radiologist for Naples Radiologists, P.A., in Florida, who began exploring Twitter as a potential marketing tool for his practice and has used it more frequently as smartphone applications have become more plentiful.

"With the right caveats, you can still offer helpful advice," Dr. Dorio said. "I'll say, 'This is what I think, but I would still consult with your doctor.' It's a lot like a bedside manner—we have to deliver information so that the patient isn't scared to death or misled."

SpeakUp
Where do you stand on social media? Vote in this month's *RSNA News* reader poll at *rsnanews.org.*

Dr. Dorio said he began using Twitter to share information with patients after seeing the "Follow Me on Twitter" prompt used by marketers. "Patients should know that radiologists are just as much their doctors as primary care physicians," he said. "With competitive pressure and healthcare reform, it's important that patients understand that they have choices—and that includes where they go for imaging."

Social Media Could Become Essential

Social media is likely to evolve from a supplementary information-exchanging tool to an essential building block of the Internet, said Gary Choy, M.D., co-founder of "radRounds." Users will increase, technical features will become more robust, security will become tighter and social media will share other existing software platforms, he predicts.

"Currently, image sharing is cumbersome with many time-consuming steps," Dr. Choy said. "Social media can enable simpler and faster image sharing, which has the potential to improve patient care. Other radiology software platforms such as online reference tools, reporting systems, radiology information/hospital information systems and scheduling software can also integrate social media tools to improve communication between physicians for better patient care."

In the meantime, the social media revolution rolls on—one post at a time.

"While it is sometimes difficult to measure the effectiveness of social media, rest assured it is making an impact in and outside of healthcare," Dr. Choy said.

Solution to Isotope Shortage Lies in Domestic Production

The worldwide medical isotope shortage will improve as soon as expected, according to nuclear medicine experts who also predict that a long-term solution for the U.S.—engineering a domestic source of molybdenum-99 (Mo-99)—could be years away.

Problems began in May 2009 when a heavy water leak detected at Chalk River Laboratories in Canada forced the reactor offline. The restart—anticipated in May 2010—has now been pushed to mid or late summer, according to Robert Atcher, Ph.D., M.B.A., past-president nuclear medicine society SNM and chair of its Medical Isotope Taskforce.

"They've saved the most difficult repairs for last," Dr. Atcher said.

Chalk River produced approximately 40 percent of the world's supply of Mo-99, a byproduct of nuclear fission that is used to create technetium-99m (Tc-99m). Tc-99m is used in millions of nuclear imaging procedures each year, including bone scans to stage cancer patients and myocardial perfusion imaging to detect coronary heart disease.

Matters worsened when another major Mo-99 producer, the Petten reactor in the Netherlands, closed for repairs in February. It is also expected to remain offline through the summer.

These reactors—which together supplied about 65 percent of the world's supply of Mo-99—are two of the five aging nuclear reactors on which the world's supply of medical isotopes depends. The others are in Belgium, France and South Africa.

The latest addition to the global supply chain for medical isotopes, the Czech Nuclear Research Institute's research reactor located near Prague, recently entered into an agreement to supply Mo-99 to Lantheus Medical Imaging.

The potential of two other reactors in Australia and Poland remains unknown.

Recently approved by the U.S. Food and Drug Administration for American use, the 36-year-old Maria reactor in Poland began producing Mo-99 in April and could supply as much as 5 percent of the world market. "However, they would not make a specific commitment to North America, which means it's possible that the Maria reactor would only supply Europe," Dr. Atcher said.

Robert Atcher, Ph.D., M.B.A.
University of New Mexico

Daniel Appelbaum, M.D.
University of Chicago Medical Center

The Open Pool Australian Lightwater reactor (OPAL) has been developing an expanded Mo-99 production capability but has yet to export any material, Dr. Atcher said. "When it does go online, it could supply 10 percent of the material for the world and about 20 percent of what the U.S. needs," he said.

Shortage Forces Physician Adjustments

The situation prompted SNM in March to issue recommendations to physicians dealing with the isotope shortage (see sidebar), while continuing to lobby for legislation supporting a domestic source of production of molybdenum-99.

Although the isotope shortage has created a challenge in treating patients, physicians on the front lines say the situation has not been insurmountable thus far.

"Initial fears of a completely untenable situation held by many of us have gone largely unfounded, although we have been forced to be more discriminate in our use of tracers and revisit our approaches on a weekly, or even daily, basis," said Daniel Appelbaum, M.D., director of nuclear medicine and PET imaging and associate professor of radiology at the University of Chicago Medical Center (UCMC).

Dr. Appelbaum described UCMC's three-pronged approach: delaying studies where it can be clinically tolerated, changing to less optimal—but still acceptable—radiotracers and shifting to another modality, such as CT, when appropriate.

In cardiac imaging, for example, "shifting to thallium from a technetium-based agent causes some increase in patient radiation dose and a slight decrease in image quality," Dr. Appelbaum said. "However, the exam is still well within acceptable limits and we have done this on occasion during particularly acute periods of shortage."

Similar adjustments have been made at the University of New Mexico in Albuquerque, where Dr. Atcher is a professor in the College of Pharmacy.

"Physicians have become more efficient," Dr. Atcher said. "They are administering smaller dosages and imaging longer. What we are finding is that the situation varies depending on which vendor the sites use for their radiopharmaceuticals."

Added Dr. Appelbaum, "Overall, I am only aware of one or two cases where there has been a true measurable effect on patient care at our institution due to the isotope shortage."

> "Physicians have become more efficient. They are administering smaller dosages and imaging longer. What we are finding is that the situation varies depending on which vendor the sites use for their radiopharmaceuticals."
>
> **Robert Atcher, Ph.D., M.B.A.**

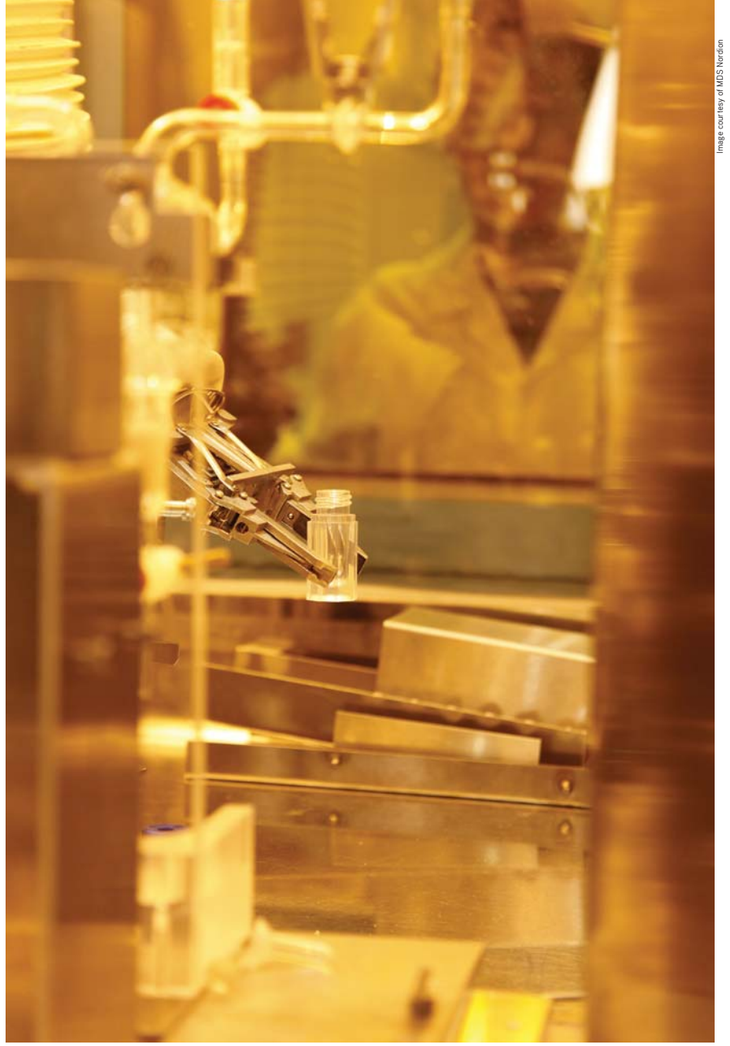


Image courtesy of MDS Nordion

The inside view of a medical isotope hot cell.

Legislative, Alternative Production Solutions Sought

Because at least 80 percent of the nearly 20 million nuclear medicine procedures each year in the U.S. use Tc-99m, the U.S. cannot continue to rely on aging reactors in other countries, according to SNM.

Chalk River in particular offers a lesson in the dangers of dependence. Not only has it been offline for more than a year, the Canadian government in March rejected the recommendation of its own panel of scientists that Canada build a new reactor to replace Chalk River, which will go offline permanently in 2016. Instead, Canada will invest in emerging technologies and refocus on its domestic needs.

In Washington, legislative solutions are slowly gaining ground. The American Medical Isotopes Production Act of 2010, now before Congress, was crafted to "promote the production of molybdenum-99 in the United States for medical isotope production, and to condition and phase out the export of highly enriched uranium for the production of medical isotopes."

The bill was passed by the House of Representatives but is stalled in the Senate.

The U.S. Department of Energy is also seeking to indemnify private-sector projects that would produce medical isotopes in the U.S. One of the most promising is the reactor at The University of Missouri at Columbia, which could be used to produce Mo-99.

"Once the University of Missouri gets the go-ahead from the government, they say they could be online in three years," Dr. Atcher said.

Another option is to create alternatives to reactors for Tc-99m production—reactors are a concern because they use the highly enriched uranium that a terrorist would need to make a nuclear bomb.

Cyclotrons are one reactor alternative. A study in the April 2010 issue of the *Journal of Nuclear Medicine* found that cyclotrons are capable of producing large quantities of Tc-99m that could effectively complement the supply of medical isotopes traditionally provided by nuclear reactors.

Solving the medical isotope shortage "will take several years at least and may or may not take the form of traditional reactors," Dr. Appelbaum said. "Until then, we need much better coordination than we've had in the last few years—between personnel both within and between existing international sites."

SNM ISSUES RECOMMENDATIONS FOR DEALING WITH ISOTOPE SHORTAGE

SNM recommends taking the following steps to maximize the available isotope supply.

- Coordinate with the generator provider or the central radiopharmacy to align scheduled patients with Tc-99m availability.
- Perform imaging studies throughout the week. Generators produce Tc-99m over weekends—take advantage of the availability of material on Saturdays and Sundays.
- Lower the administered dose and extend the time of imaging in order to continue to collect images with the same statistical robustness. This may also require some adjustment in patient scheduling.
- Where possible, use alternative radiopharmaceuticals for imaging studies, including:
  - Thyroid scintigraphy with Iodine-123
  - Myocardial perfusion imaging with:
    - Tc-99m single photon emission computed tomography (SPECT) stress-only imaging when appropriate
    - Thallium-201 SPECT
    - Rubidium-82 PET
    - Coronary CT angiography
    - Stress echocardiography

For more information, go to *SNM.org*.

ON THE COVER

A medical isotope production team with Toronto-based MDS Nordion prepares for the restart of the National Research Universal nuclear reactor in Chalk River, Ontario.

Image courtesy of MDS Nordion

Healthcare Reform Deals New Blow with Reimbursement Cuts

While long-term implications remain to be seen, the short-term impact of the sweeping new healthcare reform law on radiology will primarily be felt in the form of the Medicare reimbursement cuts that have long been a bane for the specialty.

"Radiology has been the piñata of Washington for the last five years," said James H. Thrall, M.D., president of the American College of Radiology (ACR), radiologist-in-chief at Massachusetts General Hospital and a professor of radiology at Harvard Medical School, both in Boston. "This began with the 2005 Deficit Reduction Act (DRA) when the Centers for Medicare & Medicaid Services (CMS) departed from well-established principles for setting reimbursement rates. The current legislation is not based on valid data of any kind."

The perception that imaging is overutilized and growing too fast has fueled the reimbursement cuts outlined under the 10-year, $940 billion Patient Protection & Affordable Health Care Act that will likely hit radiology harder than other specialties, Dr. Thrall said.

While acknowledging a number of positives, including insurance coverage of an additional 32 million people, improvement to quality reporting incentives and exclusion of the controversial U.S. Preventive Services Task Force (USPSTF) Mammography Screening Guidelines as a basis for coverage decisions, Dr. Thrall says the 2,000-plus page law also contains considerable drawbacks for radiology.

The legislation includes what Dr. Thrall calls "a toothless provision" for self-referral disclosure and offers no permanent fix for the Medicare Sustainable Growth Rate (SGR)—a method used by CMS to control spending by Medicare on physician services—despite widespread concurrence among medical organizations, including ACR, that the formula is flawed.

The legislation also contains grey areas that hinge on unknown future decisions by Congress and its rulemaking committees, including the newly created Independent Payment Advisory Committee that could dictate how Medicare reimbursement decisions are made—potentially helping or hurting radiology, according to Jonathan W. Berlin, M.D., M.B.A.

"We don't know to what extent this body will legislate Medicare changes," said Dr. Berlin, a clinical associate professor of radiology at the University of the Chicago Pritzker School of Medicine. "Around 70 percent of third-party payers base their fee schedule on Medicare, so the potential impact here is enormous."

James H. Thrall, M.D.,
Harvard Medical School

Jonathan W. Berlin, M.D., M.B.A.
University of the Chicago Pritzker School of Medicine

Gary J. Becker, M.D.
American Board of Radiology

Law Could Force Rural Providers Out of Business

Under the law, the utilization rate assumption for medical imaging equipment costing more than $1 million will increase from 62.5 to 75 percent in 2011. The higher the medical assumption rate—the amount of time scanners are presumed to be used during business hours—the lower per scan reimbursement, according to ACR.

In light of a 2009 Radiology Business Management Association (RBMA) study that found the national average utilization rate is 54 percent, Dr. Thrall said the new formula is "flawed" and could drastically affect rural outpatient facilities that averaged only a 48 percent usage rate in the RMBA survey.

The rate change could force many rural, nonhospital providers out of business, create longer commutes and wait times for patients, drive imaging to large, primarily urban hospitals, and delay diagnosis and treatment.

> "Radiology has been the piñata of Washington for the last five years."
>
> **James H. Thrall, M.D.**

Official White House Photo by Chuck Kennedy

While radiologists concede the sweeping new healthcare reform law signed by President Barack Obama (shown greeting doctors and nurses in the East Room of the White House in March) contains a number of positives, most believe the legislation will hit radiology harder than other specialties—primarily in the form of Medicare reimbursement cuts.

"It's disturbing that we've spent the last several decades trying to move medical care delivery to lower-cost outpatient settings for the convenience of the patient and this will drive everything back into hospitals," Dr. Thrall said.

SGR Keeps Fiscal Future in Flux

The law's failure to change the SGR formula—which determines the CMS physician payment rate and therefore, Medicare reimbursement—leaves physicians in a constant state of flux.

"All physicians are operating under the constant threat of a possible 21 percent reduction in the Medicare conversion factor, as has been threatened multiple times this year," Dr. Berlin said.

"It demoralizes providers to constantly be on edge about their fiscal future," Dr. Thrall added.

Although a fundamental restructuring of the formula has long been necessary, a permanent fix—valued at close to $300 billion by ACR—is not likely anytime soon, according to Drs. Berlin and Thrall.

"By not permanently fixing the SGR, Congress has guaranteed a flow of political action committee money into its coffers on a permanent basis from medical organizations trying to influence the SGR," Dr. Thrall said.

Although the law includes a patient disclosure provision that will require self-referring physicians to inform patients in writing that the physician/facility will benefit financially from the imaging procedure and to provide a list of imaging facilities from which the patient may receive their imaging services, Dr. Thrall dismisses the addition as "purely window dressing," saying it will have little or no impact on the longstanding practice.

"Congress blinked again, bowing to special interests," Dr. Thrall added.

"Landmark" MOC Addition Includes Incentive, Penalty

While acknowledging the negatives to the law, RSNA's immediate past-president and Executive Director of the American Board of Radiology (ABR), Gary J. Becker, M.D., points to what he calls a "landmark" addition that stands to benefit patients and physicians: the inclusion of a maintenance of certification (MOC) program incentive.

While incentive payments of 1 percent in 2011 and 0.5 percent from 2012 to 2014 will continue for voluntary participation in Medicare's Physician Quality Reporting Initiative (PQRI), an additional 0.5 percent incentive payment will be made to physicians who participate in a qualified MOC program, including that of the ABR (see sidebar). The law invokes a penalty for physicians who do not successfully participate in PQRI programs. Beginning in 2015 the penalty will be 1.5 percent, increasing to 2 percent in following years.

"Given that one major goal of the specialty board movement is to maintain for at least a portion of the self-regulation the profession has enjoyed for more that three-fourths of a century, the appearance of MOC in the new federal legislation is a landmark occurrence," Dr. Becker said.

"Increasing physician accountability and performance assessment and improvement are certainties in our evolving health system. With that perspective, the MOC PQRI provision is tangible evidence that specialty boards will be part of the federal accountability framework in healthcare. Thus, the provision is pivotal to the future of the board movement and the profession itself."

Patients long dissatisfied with the healthcare system overall will also benefit from the MOC provision for physicians. "Ultimately, we will know the public has benefitted when MOC participation translates into a 'Good Housekeeping seal of approval,' " Dr. Becker said.

Long-term Impact Unknown

Overall, Dr. Berlin believes radiology and other specialties were hit hardest by the bill that favored primary care overall, but long-term there is no way of knowing how the massive piece of legislation will impact any area of healthcare. "There are many, many unknowns that will be played out over a number of years," Dr. Berlin said.

Radiology—and all of healthcare—should brace for what Dr. Thrall calls "unintended consequences," somewhere down the road.

"You don't experience unintended consequences immediately … they develop over time, after it's too late," Dr. Thrall said. "Two examples are the SGR and Medicare Growth rate. Congress has still not found the will or the way to fix either of those."

RSNA MOC RESOURCES SUPPORT INCENTIVES OFFERED BY NEW LAW

For more information on the resources RSNA offers to assist with the American Board of Radiology maintenance of certification (MOC) program, go to *RSNA.org/Education.*

RSNA Education

Imaging Biomarkers Used to Screen Breast Cancer Drugs

A $26 million, multicenter clinical trial using molecular imaging biomarkers to help screen promising new drugs in treating breast cancer is now under way at approximately 20 research centers in the U.S.

Launched in March, the Investigation of Serial Studies to Predict Your Therapeutic Response with Imaging and Molecular Analysis 2 (I-SPY II), is a five-year clinical trial that will enroll approximately 800 women with newly diagnosed, locally advanced breast cancer. I-SPY II is led by the Biomarkers Consortium, a public-private partnership comprising the U.S. Food and Drug Administration (FDA), the National Institutes of Health (NIH), and major pharmaceutical companies led by the Foundation for the National Institutes of Health (FNIH).

The groundbreaking clinical trial model uses MR imaging biomarkers from individual patients' tumors to test whether adding investigational drugs to standard chemotherapy is better than standard chemotherapy alone before surgery. Researchers will be able to use early data from one set of patients to guide decisions about which treatment might be more useful for patients later in the trial, eliminating ineffective treatments more quickly.

The I-SPY II initiative grew out of common frustration felt by researchers, pharmaceutical companies and federal drug regulators seeking a process to rapidly screen promising phase-two agents, according to primary investigator Laura Esserman, M.D., a professor of surgery and director of the Carol Franc Buck Breast Care Center at the University of California at San Francisco (UCSF) Comprehensive Cancer Center.

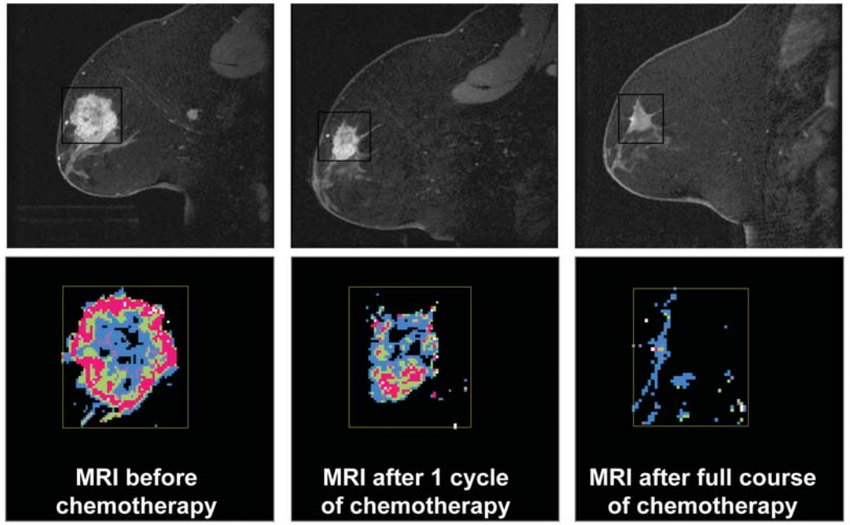
"We want to increase the likelihood that a drug will be effective in targeted phase-three trials," Dr. Esserman said. "Right now only about 30 percent of phase-three trials are successful and we'd like to get that number up to 85 or 90 percent. The idea is to identify agents with the potential to be really big winners."

The trial has the potential to significantly reduce the cost of drug development and speed the process of screening drugs with the goal of bringing safe and effective new drugs to the market more efficiently. Five new investigational agents in development by three major pharmaceutical companies have already been selected for testing in the first part of the trial.

Providing a path to personalized medicine, the I-SPY-II trial, led by primary investigator Laura Esserman, M.D., *(top left)* will test the idea of tailoring treatment by using molecular tests to help identify which patients should be treated with investigational drugs. New tools developed by Nola Hylton, Ph.D., *(top right)* and colleagues in I-SPY-I, will be an integral part of the groundbreaking trial that molecular imaging expert Daniel C. Sullivan, M.D., *(bottom right)* said could serve as a potential model for speedier trials.

"The trial will further propel the concept of personalized medicine in the area of breast cancer treatment," Dr. Esserman said. "You can't personalize medicine until you understand the biology of these tumors and how they respond to which drugs. We think we know, but we've learned time and again that isn't always the case. The point of the trial is to teach us so we can learn how to better personalize treatment."

> "You can't personalize medicine until you understand the biology of these tumors and how they respond to which drugs."
>
> **Laura Esserman, M.D.**



A depiction of the assessment of breast cancer treatment response with MR imaging.

Patients in the Investigation of Serial Studies to Predict Your Therapeutic Response with Imaging and Molecular Analysis 2 (I-SPY II) trial will undergo four pre-operative MR procedures to gather quantitative tumor data, from which researchers will identify treatments that are most effective in specific types of patients.

Trial to Test MR Imaging Efficacy

The imaging component of I-SPY II grew out of earlier research conducted by the American College of Radiology Imaging Network and led by Nola Hylton, Ph.D., a professor of radiology and director of the Biomedical Imaging Breast MRI Research Program at UCSF. During I-SPY I, Dr. Hylton and colleagues developed new tools that allow researchers to determine whether using MR imaging to measure tumor volume change can determine a patient's response to treatment.

In the trial, patients will undergo four pre-operative MR procedures to gather quantitative tumor data, from which researchers will identify treatments that are most effective in specific types of patients. The trial is likely to prove the efficacy of MR imaging as an increasingly essential tool in breast cancer treatment, Dr. Hylton said.

"One of the really important outcomes is that there is clearer evidence showing that MR imaging in this setting is more effective at measuring treatment response than clinical exam or mammography," Dr. Hylton said. "Not only is it better, but that information is useful in a way that could help to guide individualized treatment. We can feed back the data to improve the technology even further."

There is widespread interest in I-SPY as a potential model for speedier trials using fewer patients at ultimately less cost, according to Daniel C. Sullivan, M.D., a professor of radiology at Duke University's Comprehensive Cancer Center and RSNA's science advisor.

"This approach is interesting because researchers are using adaptive trial design, which means they will use imaging results to make changes in the trial along the way, while at the same time using outcome data to help evaluate the value of the biomarkers," Dr. Sullivan said.

"It sounds circular in a sense, which is actually what troubles some people about adaptive trial design," Dr. Sullivan continued. "However, the trial was designed by very experienced biostatisticians and methodologists. Nevertheless, it is very different from traditional clinical trial methodology, creating caution in some people's minds about what we can conclude from these types of trials and the firmness of the conclusions."

While agreeing that there is a certain amount of speculation involved at this stage of the trial, Dr. Hylton stressed that this groundbreaking clinical trial model is on target to strengthen the concept of personalized medicine in breast cancer treatment.

"I fully expect that imaging will represent one piece in a portfolio of tools we can use to individualize the assessment and treatment for breast cancer, as well as the follow-up for individual patients," Dr. Hylton said.

For more information on the study cited in this article, go to *rsnanews.org*.

RSNA 2010 FEATURES BREAST/MOLECULAR IMAGING COURSE

The Breast/Nuclear Medicine/Molecular Imaging Series at RSNA 2010 will feature the course, "Breast Imaging in the Era of Molecular Medicine," on Monday, Nov. 29. Registration for RSNA 2010 courses is under way at *RSNA.org/register*.

RSNA 2010
PERSONALIZED MEDICINE: In Pursuit of Excellence
NOVEMBER 28 – DECEMBER 3 · McCORMICK PLACE, CHICAGO

Journal Highlights

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

"Controversies" articles: The 2009 USPSTF Guidelines Ignore Important Scientific Evidence and Should Be Revised or Withdrawn; Breast Cancer Screening: From Science to Recommendation

Released in November 2009, the U.S. Preventive Services Task Force (USPSTF) breast cancer screening guidelines recommending against routine mammographic screening for women 40-49 years unleashed a firestorm of controversy that continues to generate heated debate on both sides of the issue.

In separate "Controversies" articles in the July 2010 issue of *Radiology (RSNA.org/Radiology),* Daniel B. Kopans, M.D., of Massachusetts General Hospital and Harvard Medical School in Boston, and Diana B. Petitti, M.D., M.P.H., of Arizona State University in Phoenix, and five fellow task force members offer opposing sides of the issue that is still evoking anger, confusion and division among the public, the radiologic community and medical organizations.

Arguing that the guidelines ignore fundamental scientific issues and evidence, Dr. Kopans outlines nine fundamental errors made by the USPTF in crafting the guidelines and calls for the revision or withdrawal of the guidelines.

Dr. Petitti and colleagues provide an overview of the USPSTF, explain the process through which the guidelines were issued, and review the evidence considered as well as the actual recommendations.

"The USPSTF guidelines ignore many of the scientific facts," Dr. Kopans concludes. "Their implementation will severely reduce the benefit that has been achieved over the past 20 years, will increase the death rate in the United States, and will set back women's breast health to the 1950s."

"…Categorization of guidelines represents a simplification device required to practically implement what inherently is a continuous function balancing benefits and harms," Dr. Petitti writes. "For mammographic screening, the net benefits of mammographic screening increase with age, with the greatest absolute benefits among women aged 50–74 years."

USPSTF Guidelines Subject of *Radiology* Podcast

A discussion of the U.S. Preventive Services Task Force (USPSTF) breast cancer screening guidelines by Radiology's "Controversies" authors and prominent academic and clinical radiologists will be the subject of a July podcast.

Along with *Radiology* Editor Herbert Y. Kressel, M.D., panelists are: Russell Harris, M.D., M.P.H., Daniel B. Kopans, M.D., James H. Thrall, M.D., Leonard Berlin, M.D., Ned Calonge, M.D., M.P.H., Ferris M. Hall, M.D., Steven Flier, M.D., and Deborah Levine, M.D.

Readers can access the podcast by clicking on the "Hear What We Think" link at *RSNA.org/Radiology.*

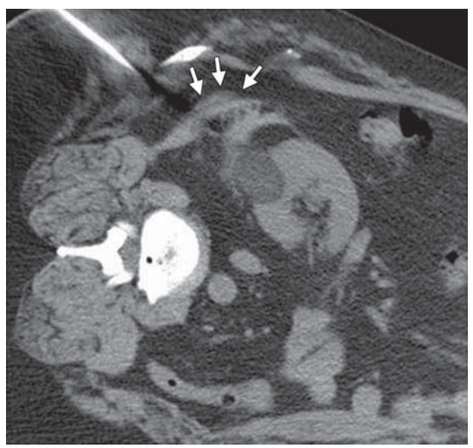
Percutaneous Cryoablation of Renal Tumors: Patient Selection, Technique, and Postprocedural Imaging

Percutaneous cryoablation is an effective choice for the minimally invasive nephron-sparing treatment of renal tumors, and knowledge of normal and abnormal postablation findings is essential for optimal follow-up imaging.

In the July-August issue of *RadioGraphics (RSNA.org/RadioGraphics)*, Brian C. Allen, M.D., and Erick M. Remer, M.D., of the Imaging Institute, Cleveland Clinic, discuss and illustrate percutaneous cryoablation in terms of patient selection and treatment planning, technical aspects (including guidance with ultrasound, CT, and MR imaging), results, postablation imaging findings and complications. Specifically, the authors address:

- Advantages of cryoablation over radiofrequency ablation in the treatment of renal tumors
- Expected postcryoablation imaging findings
- Postprocedural imaging features of incomplete cryoablation and disease progression

"Percutaneous treatment is less invasive than other nephron-sparing surgeries, is associated with fewer severe complications, and can be performed on an outpatient basis with conscious sedation," the authors write. "Current limitations include the inability to control hemorrhage without intraarterial access and a lack of long-term follow-up data."



CT-guided percutaneous cryoablation. The CT scan shows a hematoma *(arrows)*. The enlarging ice ball has uniformly low attenuation and is well marginated. Cryoablation is ideal for treatment of this lesion, which measures less than 3 cm, is partially exophytic and is located posteriorly. Note that the ablation margin extends 0.5–1.0 cm beyond the mass.

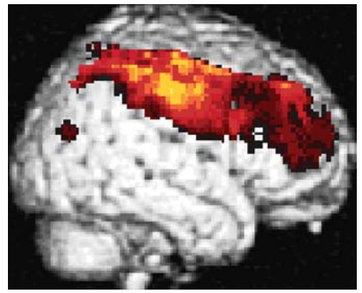
Radiology in Public Focus

Press releases have been sent to the medical news media for the "Controversies" articles (see previous page) and the following articles appearing in the latest issue of *Radiology*.

Resting-State Perfusion in Nonmedicated Schizophrenic Patients: A Continuous Arterial Spin-labeling 3.0-T MR Study

Despite the technical limitations and challenges of continuous arterial spin labeling (CASL), the replication of known perfusion patterns from PET and single photon emission computed tomographic (SPECT) studies involving schizophrenic patients offers evidence of the accuracy of CASL in this disease.

In a prospective study using CASL to compare cerebral perfusion between 11 nonmedicated patients with schizophrenia and 25 healthy subjects, Lukas Scheef, M.D., and colleagues from the departments of radiology and psychiatry at the University of Bonn in Germany, found that schizophrenic patients had extensive areas of hypoperfusion in the frontal lobes bilaterally, in the anterior and medial cingulated gyri and in the parietal lobes bilaterally. Increased perfusion was observed in the cerebellum, brainstem and thalamus of the schizophrenic patients as compared with the perfusion in these areas in the control subjects, the authors found.



Statistical parametric maps of differences in regional cerebral blood flow between patients and control subjects show relative hypoperfusion in schizophrenic patients. Perfusion is reduced in frontal and parietal cortices bilaterally and in cingulate gyrus of patients with schizophrenia as compared with healthy control subjects (P < .05, corrected for FDR). Color coding refers to t values of voxels exceeding statistical threshold (i.e., brighter colors indicate higher suprathreshold t value).

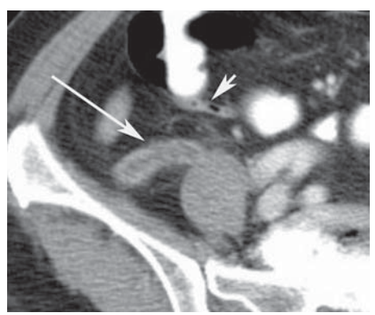
"The advantages of CASL, including independence from injected contrast agents, no irradiation, and fast acquisition time, may facilitate intensive perfusion studies of the early recognition of schizophrenia and other psychiatric disorders, as well as longitudinal disease-monitoring research of these conditions," the authors conclude.

Acute Appendicitis: Clinical Outcome in Patients with an Initial False-Positive CT Diagnosis

The decision to forego surgery in patients with CT findings compatible with appendicitis but reassuring surgical evaluation findings often results in missed appendicitis and increased risk of perforation.

In a retrospective study of 2,283 patients with suspected appendicitis who underwent CT between 2002 and 2007, Joseph W. Stengel, D.O., and colleagues from the Department of Radiology at the University of California in San Francisco, reviewed CT reports and scored the likelihood of appendicitis on a five-point scale. Results showed that five of 13 patients with CT findings of appendicitis and reassuring clinical evaluation results, for whom immediate treatment was deferred, ultimately returned with appendicitis.

"In patients with CT results positive for appendicitis and benign or atypical clinical findings, a diagnosis of chronic or recurrent appendicitis may be considered," the authors conclude.



CT images of 68-year-old woman with right lower quadrant pain. Intravenous contrast material–enhanced transverse CT image demonstrates findings of acute appendicitis, including an enlarged appendix with a fluid-filled lumen *(long arrow)* 1.2 cm in diameter. The tubular structure *(short arrow)* anterior to the appendix is a collapsed loop of small bowel.

RSNA Takes to the Skies

Starting this month, RSNA is promoting its annual meeting and the *RadiologyInfo.org* public information website to travelers on American Airlines flights.

A 4-minute interview with RSNA Board Chairman George S. Bisset III, M.D., focusing on RSNA 2010, will run on the "Business & Technology Report" channel on American Airlines flights in July and August. (Hear the interview by going to *RSNA2010.RSNA.org* and clicking the SkyRadio icon in the upper right hand corner.)

Also in July and August, television ads about RSNA will run on the CNN Airport Network screens in gate areas at U.S. airports and promotions will also appear in American's American Way in-flight magazine.

A radio interview with Christoph Wald, M.D., Ph.D., co-chair of the RSNA-ACR Public Information Website Committee, and television and magazine ads will promote *RadiologyInfo.org* in September and October.

"By reaching out to this public audience, which includes worldwide CEOs and decision makers in the medical industry, RSNA has the opportunity to present itself as an international, premier professional association, explain how we are unique and feature what we do for our industry and our membership," said Jennifer Divelbiss, RSNA Marketing Director. "We can increase the number of meeting attendees and exhibitors and promote *RadiologyInfo.org* as a comprehensive patient site."

Media Coverage of *Radiology*

In May 2010, media outlets carried 124 RSNA-related news stories. These stories reached an estimated 111 million people.

A news release promoting the redesign of the RSNA-ACR patient information website, *RadiologyInfo.org,* was also distributed to the media.

May coverage included the *Chicago Tribune, St. Louis Post-Dispatch, Hindustan Times, Public Spirit* (Philadelphia), *Springfield Sun* (Louisville, Ky.), *Times-Chronicle* (Philadelphia), *Times-Union* (Albany, N.Y.), *Weston Town Crier* (Boston), *LaCrosse Tribune* (LaCrosse, Wis.), *BtoB Magazine, Twin-City News* (Columbia, S.C.), *Lexington County Chronicle* (Columbia, S.C.), *Diagnostic Imaging, Harvard Women's Health Watch, Health*

Continued on Page 18

RESEARCH & EDUCATION FOUNDATION DONORS

The RSNA Research & Education Foundation thanks the following donors for gifts made April 17 – May 10, 2010.

Vanguard Program

Companies supporting endowments and term funding for named grants

Agfa HealthCare
$100,000
A Founding Vanguard company since 1989

Philips Healthcare
$100,000
A Founding Vanguard company since 1990

Exhibitors Circle Program

Companies who give annual unrestricted gifts at four levels from $1,500 to $10,000

GOLD CIRCLE ($5,000)

Vital Images

BRONZE CIRCLE ($1,500)

Ziosoft

Visionaries in Practice

A giving program for private practices and academic departments

BRONZE LEVEL ($10,000)

Johns Hopkins Medicine, *Baltimore*

Northwest Radiology Network, *Indianapolis*

Radiology Imaging Associates, P.C., *Denver*

University of Pennsylvania Health System, *Philadelphia*

West Reading Radiology Associates, *West Reading, Pa.*

Visionary Donor Program

Individuals recognized for cumulative lifetime donations

GOLD VISIONARY ($15,000)
T. Chen Fong, M.D., F.R.C.P.(C)
Scott S. White, M.D.

SILVER VISIONARY ($10,000)
Donna & Lee F. Rogers, M.D.
Rebecca R. & Wilbur L. Smith Jr., M.D.

BRONZE VISIONARY ($5,000)
Shobha P. Desai, M.D. & Paresh P. Desai, M.D.
Shirley B. & Robert A. Woolfitt, M.D.

Donors who give $1,500 or more per year qualify for the RSNA Presidents Circle. Their names are shown in bold face.

Annual Donors

$2,500 – $5,000
Alice & Ernest J. Ferris, M.D.
In memory of Steven K. Teplick, M.D.
T. Chen Fong, M.D., F.R.C.P.(C)
Beverly & Michael Huckman
Tiffany & Phan T. Huynh, M.D.
Scott S. White, M.D.

$1,500 – $2,499
Karen E. & Glendon G. Cox, M.D.
Shobha P. Desai, M.D. & Paresh P. Desai, M.D.
Betty & O. Wayne Houser, M.D.
In honor of John R. Hodgson, M.D.
Leon E. Kinasiewicz, M.D.
Stamatia V. Destounis, M.D. & Manuel Matos, M.D.
Drs. Kathe L. & Charles F. Mueller
Nargis S. Patel, M.D. & Suresh K. Patel, M.D.
Donna & Lee F. Rogers, M.D.
In memory of Frank L. Hussey Jr., M.D.
Marilyn J. Siegel, M.D. & Barry A. Siegel, M.D.
Rebecca R. & Wilbur L. Smith Jr., M.D.
Craig P. Thiessen, M.D.
Shirley B. & Robert A. Woolfitt, M.D.

$500 – $1,499
Richard S. Colvin, M.D.
In honor of Murray G. Baron, M.D.
In memory of Heinz S. Weens, M.D.
Penny & Edmund A. Franken Jr., M.D.
Dietrich A. Gerhardt, M.D.
Julia R. Fielding, M.D. & Keith P. Mankin, M.D.
Beth D. Kruse, M.D. & Thomas Moore
Patricia A. Randall, M.D.
In honor of E. Robert Heitzman, M.D.

$300 or less
Anne Herzberg & Stephen C. Adler, M.D.
German M. Arancibia, M.D.
Ronald C. Arildsen, M.D.
Filip Banovac, M.D.
Ryo E. Benson, M.D.
Roushdy S. Boulos, M.D.
Victoria & Michael N. Brant-Zawadzki, M.D.
Holly & James A. Brink, M.D.
Brian D. Briscoe, M.D.
In memory of Tulia Briscoe
David S. Buck, M.D.
Judith & Duncan C. Burdick, M.D.
Nancy J. & Robert E. Campbell, M.D.
In memory of Frank L. Hussey Jr., M.D.
Oscar F. Carbonell, M.D.
Katia P. Miranda & Jose F. Castro Santos, M.D.
Christopher J. Chicoskie, M.D.
Tilden L. Childs III, M.D.
Shi Ran Lu & Jinguo Cui, M.D.
Jean-Louis Cyr, M.D.
Drew H. Deutsch, M.D.
Iyabo & Anthony U. Eka, M.B.B.S.
Connie & Charles W. Emarine Jr., M.D.
Lorenzo M. Farolan, M.D.
Linda Fay
In memory of Charles W. Merton, M.D.
Linoa & Gary J. Felsberg, M.D.
Susan & John F. Fitter, M.D.
Anne L. & Scott D. Flamm, M.D.
Matthew A. Fox, M.D.
Arlene & David B. Freiman, M.D.
Therese & Irwin M. Freundlich, M.D.
Helmuth W. Gahbauer, M.D.
Angelica Ramirez & Victor M. Garcia-Gallegos, M.D., Ph.D.
Erika & Felix Garfunkel, M.D.
In memory of Marcus & Friede Garfunkel
Dewey D. Garner, M.D.
Ayca Gazelle, M.D. & G. Scott Gazelle, M.D., Ph.D.
Ronald B. Glass, M.D.
Jesus D. Guerra, M.D.
Vanessa & William A. Guyette, M.D.
Allan M. Haggar, M.D.
Michael H. Hamblin, M.D.
Mary & Peter R. Hulick, M.D., M.S.
In memory of Peter V. Hulick, M.D.
Barbara P. Huss, M.D. & Richard G. Huss, M.D.
Ellen Sigauke & Thompson T. Kamba, M.B.Ch.B.
Scott R. Kemmerer, M.D.
Richard A. Kiszonas, D.O.
Rosemary J. Klecker, M.D.
Mary & Edmond A. Knopp, M.D.
Jan H. Labuscagne, M.B.Ch.B.
Kent T. Lancaster, M.D.
Tal Laor, M.D.
Jonathan F. Lasich, M.D.
Lisa Diethelm, M.D. & John T. Lea
David K. Leung, M.D., Ph.D.
Jeannette & E. Mark Levinsohn, M.D.
Herbert R. Madry Jr., M.D.
Mary Ann & Ferdinand L. Manlio, D.O.
Michelle A. McMahon, F.R.C.R.
Janice R. & John M. McMurray, M.D.
Rekha Meesa, M.D. & Sudheer Meesa
Peter R. Miller, M.D.
Gopika Myneni, M.D.
Grace & James B. Naidich, M.D.
In memory of Roger A. Hyman, M.D.
Cheri L. Canon, M.D. & Malcolm R. Nelson
Obi O. Nobi, M.D.
Lois & Earl J. Nudelman, M.D.
Rita J. Pink, M.D.
Francisco Plancarte, M.D.
John K. Plemmons, M.D.
Molly & Jay H. Post, M.D.
Kristin H. & Kent W. Powley, M.D.
Gretchen A. & Kenneth F. Preimesberger, M.D.
Magdalena Ramirez Arellano, M.D.
Murray Rebner, M.D.
In honor of Susan Rebner
William D. Reed, M.D.
Lynn & Michael I. Rothman, M.D.

Continued on Page 20

Your Donations in Action

With an RSNA Research & Education Foundation grant, Qian Dong, M.D., will use MR imaging diffusion and perfusion biomarkers to predict early response to neoadjuvant chemotherapy.

Radiology in Public Focus

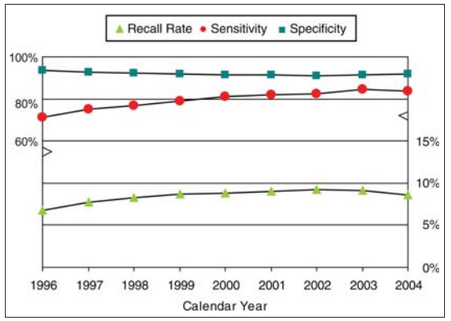
Continued from Page 16

Time Trends in Radiologists' Interpretive Performance at Screening Mammography from the Community-based Breast Cancer Surveillance Consortium, 1996–2004

Radiologists showed an overall improvement in interpretive performance at subsequent screening mammography from 1996 to 2004 in a large national sample of women, with increases in both sensitivity and recall rate and a decrease in specificity, researchers have found.

During that time period, Laura E. Ichikawa, M.S., of the Group Health Research Institute in Seattle, and colleagues collected data on subsequent screening mammograms in women aged 40-79 years who were followed up for one year for breast cancer. Recall rate, sensitivity, and specificity were examined annually.

"The net effect was an improvement in overall discrimination, a measure of the probability that a mammogram with cancer in the follow-up period has a higher Breast Imaging Reporting and Data System assessment category than does a mammogram without cancer in the follow-up period," the authors conclude.



Radiologists' interpretive performance values at subsequent screening mammography according to calendar year. Left y-axis: Sensitivity and specificity. Right y-axis: Recall rate. Values above the ‹ and › symbols are on the left y-axis and values below the symbols are on the right y-axis.
(*Radiology* 2010;256;1:74-82) ©RSNA, 2010. All rights reserved. Printed with permission.

Media Coverage of *Radiology*

Continued from Page 16

Management Technology, Health and Medicine Week, Cancer Weekly, KLAS-TV (Las Vegas), Yahoo! Health, MSN Health, Healthscout, *USNews.com, Businessweek.com, Reuters.com, Mednewscenter.com, eHow.com, Auntminnie.com, AZCentral.com* and *MedicineNet.com.*

July Public Information Activities Highlight Use of PET/CT

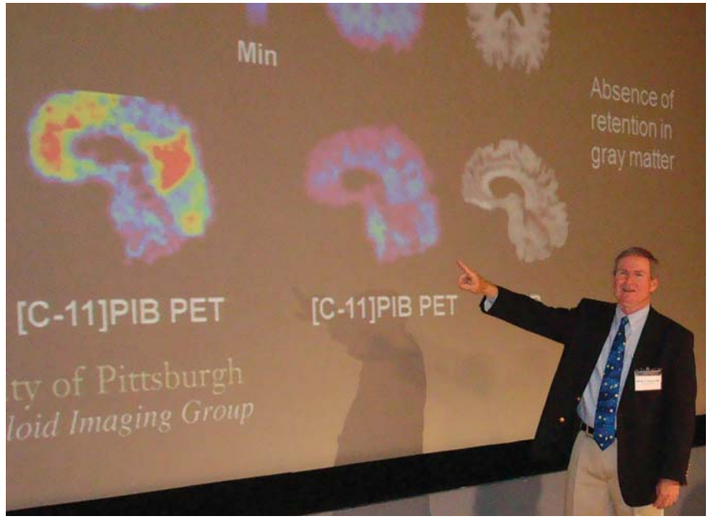
In July, RSNA's "60-Second Check-up" radio segments will focus on the benefits of using PET/CT to detect disease or other abnormalities and to map heart and brain function.

Other Radiology Headlines

Agents for PET Amyloid Imaging Explored

Imaging agents capable of assessing amyloid-beta content in vivo in the brains of people with Alzheimer disease (AD) and mild cognitive impairment (MCI) and elderly normal control subjects will prove valuable as surrogate endpoints to assess the efficacy of anti-amyloid therapeutics, Chester A. Mathis, Ph.D. *(right)*, told attendees of SNM's Molecular Neuroimaging Symposium earlier this year.

These same agents will also be valuable as diagnostic agents for AD, MCI, and control subjects who would likely benefit from anti-amyloid therapies and to test the amyloid cascade hypothesis of AD, said Dr. Mathis, a professor of radiology, pharmacology and pharmaceutical sciences at the University of Pittsburgh and director of the university's PET facility. Dr. Mathis also holds the inaugural PET Research Endowed Chair at the university medical center and received SNM's 2010 Paul C. Aebersold Award.



The symposium brought together multiple scientific disciplines to focus on advances in targeted multimodality imaging of the central nervous system, including imaging of the blood-brain barrier, tumors, neuroreceptors, stem cells and adoptive immunotherapies. Presented by SNM's Molecular Imaging Center of Excellence, the symposium was co-sponsored by RSNA, the Society for Molecular Imaging, the National Institute for Neurological Disorders and Stroke and the National Institute of Biomedical Imaging and Engineering.

For Your Benefit

Real Estate, Retirement are Focus of RSNA 2010 Financial Seminars

Navigating challenging economic times requires an evolving financial strategy and updated tools to stay ahead of the curve. Real estate and retirement planning goals are especially critical during the ongoing economic crisis, according to two experts scheduled to present financial seminars at RSNA 2010.

"Between now and 2012, it is estimated more than $1.3 trillion of investment real estate must be refinanced," according to J. Michael Moody, M.B.A., an investor and commercial real estate developer for more than 15 years, who will present "Effective Real Estate Investment Strategies" on Saturday, Nov. 27 at McCormick Place. "Driven by legions of motivated sellers, this may lead to unprecedented opportunities in real estate, and that does not include prospects for single-family residential markets."

The course is designed to provide a strong foundation and working knowledge of real estate, including finding, evaluating, financing, acquiring and selling investment real estate.

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

"The recent economic crisis has spawned new legislation, problems and opportunities which directly affect your planning process and financial security," Rubenstein said.

The seminar includes comprehensive illustrations and essential information to help physicians and their families decide how to plan their estates and distributions from retirement plans, and use asset protection techniques.

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

To register, go to *RSNA.org/register*. For more information, contact the RSNA Education Center at 1-800-381-6660 x7772 or e-mail *ed-ctr@rsna.org*.

Organizing is Easy with RSNA's Resident Learning Portfolio

When the University of North Carolina began utilizing RSNA's Resident Learning Portfolio last year, I immediately decided to participate.

The program helps organize academic, research and quality improvement projects, procedure logs and faculty evaluations, which is extremely valuable during residency.

The Value of Membership

Having access to the program 24 hours a day from any computer allows me to maintain my records with more accuracy. Because the program is online, I am easily able input data such as my procedure log or add academic or research projects as they happen, keeping me organized throughout my residency. The Resident Learning Portfolio also provides an organized format for sharing information with a program director or a future credentialing body.

Overall, the Resident Learning Portfolio is a great tool for keeping track of many of the components of residency in one convenient site.

Lauren Brubaker, M.D., is a radiology resident at the University of North Carolina at Chapel Hill. She is 10-year member of RSNA.

Learning Portfolio Benefits Residents, Administrators

Designed to assist residents and their program administrators with charting educational goals, progress and accomplishments, RSNA's Resident Learning Portfolio has welcomed more than 100 participating institutions around the world since its 2008 launch in conjunction with the Association of Program Directors in Radiology.

The Web-based resource provides the resident team with a means of refining training goals, communicating expectations, planning and mentoring. The site was also developed to help residents meet Accreditation Council for Graduate Medical Education requirements that all residents maintain an electronic learning portfolio.

To access the Resident Learning Portfolio, members must register with the RSNA Education Center by contacting *residents_portfolio@rsna.org*. For more information, go to *RSNA.org/Education/portfolio.cfm*

Education and Funding Opportunities

RSNA Advanced Course in Grant Writing

Application Deadline: July 31

Applications are now being accepted for this course designed to help participants, generally junior faculty members, prepare and submit a National Institutes of Health (NIH), National Sciences Foundation (NSF) or equivalent grant application by the October 2011 deadline. The course, to be held at RSNA Headquarters in Oak Brook, Ill., will consist of four multiday sessions: October 15-16; January 28-29, 2011; March 25-26, 2011; and May 20-21, 2011.

For more information and an application, go to *RSNA.org/Research/educational_courses.cfm* or contact Fiona Miller at 1-630-590-7741 or *fmiller@rsna.org*.

Medical Meetings

August – October 2010

AUGUST 11–14
American Society of Emergency Radiology (ASER), Annual Scientific Meeting, Grand Hyatt Seattle • *www.erad.org*

SEPTEMBER 8–11
Academy of Molecular Imaging (AMI), 2010 World Molecular Imaging Congress (WMIC), International Conference Center, Kyoto, Japan • *www.wmicmeeting.org*

SEPTEMBER 9–11
European Society of Head and Neck Radiology (ESHNR) 23rd Annual Meeting, Hoersaalzentrum AKH Wien, Vienna, Austria • *www.eshnr2010.org*

SEPTEMBER 9–12
17th European Symposium on Urogenital Radiology (ESUR), Oud Sint-Jan, Bruges, Belgium • *www.esur2010.be*

SEPTEMBER 23–26
Australasian Society for Ultrasound in Medicine (ASUM), Gold Coast Convention Centre, Queensland, Australia • *www.asum.com.au*

SEPTEMBER 26–29
Radiology Business Management Association (RMBA), Fall Educational Conference, Renaissance Austin Hotel, Austin, Texas • *www.rbma.org*

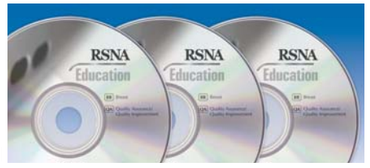
SEPTEMBER 26–OCTOBER 2
International Skeletal Society (ISS), 37th Annual Meeting, Athens, Greece • *www.iss2010.org*

OCTOBER 3–5
North American Society for Cardiac Imaging (NASCI), 38th Annual Meeting, The Westin Seattle Hotel • *www.nasci.org*

OCTOBER 22–26
Société Française de Radiologie (SFR), Les Journées Françaises de Radiologie (JFR) 2010, Palais des Congrès de Paris • *www.jfrexpo.com*

For Your Benefit

RSNA DISCOUNTS PRICES ON BUNDLED REFRESHER COURSES



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

The offer expires October 31. To order online go to *RSNA.org/education/catalog* and enter the appropriate BUN number into the Product Code area.

Member Question of the Month

What is your biggest challenge in incorporating new technology on the job?

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

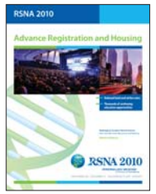
Research & Education Foundation Annual Donors

Continued from Page 17

Suzanne & Lincoln D. Russin, M.D.
David J. Ryder, M.D.
Frank S. Sabatelli, M.D.
Jose C. Sanchez, M.D.
Joan B. Shayne
In memory of Charles W. Merton, M.D.
Mark S. Shiroishi, M.D.
In honor of Sachio & Hiroko Shiroishi
Kelly M. & Anthony J. Skiptunas III, D.O.
Andrea & Gregory S. Stacy, M.D.
JoAnne & Gordon A. Stoney, M.D.
In memory of Frank L. Hussey Jr., M.D.
Chris C. Sung, M.D.
Sayoko & Mutsumasa Takahashi, M.D.
Masahiro Tanabe, M.D.
Gill M. Taylor-Tyree Sr., M.D.
Gregorio M. Tolentino, M.D.
Kathleen & James J. Urbanic, M.D.
Gert J. Van Der Westhuizen, M.B.Ch.B.
Julita O. Vazquez, M.D.
Marco H. Villanueva-Meyer, M.D.
Roberto L. Villavicencio, M.D.
William L. Walls, M.D.
Susan & William J. Weadock, M.D.
Faith A. Weidner, M.D.
Karen G. Ordovas, M.D. &
Antonio C. Westphalen, M.D.
David M. Yousem, M.D.
Samina & Naveed Yousuf, M.D.
Syed Shan S. Zamir, M.D.
Elias A. Zerhouni, M.D.

Annual Meeting Watch

Enroll Now for Courses



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

Guarantee Your Seat!

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

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

CME UPDATE: Earn up to 92.75 *AMA PRA Category 1 CME Credits* at RSNA 2010

Enter to Win Next Year's Airfare While Saving This Year

RSNA attendees who book air travel through Gant Travel by October 1 will be entered into a drawing to receive a $500 (USD) travel credit good toward their RSNA 2011 airfare on United Airlines. Benefits of using Gant Travel for RSNA 2010 include:

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

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

Set Your Sights with My Chicago Trip Planner

My Chicago Trip Planner, a new tool offered by the Chicago Convention and Tourism Bureau, helps RSNA 2010 attendees create sightseeing itineraries based on their unique needs and interests. Access My Chicago Trip Planner at *choose chicago.com/rsna.*

Based on demographic information you provide about yourself, your travel companions and your stay in Chicago, along with your indicated interests—such as art, sports or theater—My Chicago Trip Planner will search hundreds of activities to build a possible itinerary. Activities added to the itinerary include links to more information, including a map.

Eye on Chicago

After you've refined your itinerary, you can save it, download it or e-mail it to friends and family.

RSNA will once again offer a series of exciting tours and events during RSNA 2010. Tour registration is under way at *RSNA.org/register.*

City of Chicago Offers "Sweet Deals"

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

sweet deals CHICAGO
american express exclusive offers

RSNA 2010 Registration

How to Register

There are four ways to register for RSNA 2010:

Fastest way to register!

1 INTERNET
Go to *RSNA.org/register*

2 FAX (24 hours)
1-800-521-6017
1-847-996-5401

3 TELEPHONE
(Mon.–Fri. 8:00 a.m. – 5:00 p.m. CT)
1-800-650-7018
1-847-996-5876

4 MAIL
Experient/RSNA 2010
568 Atrium Drive
Vernon Hills, IL 60061 USA

Registration Fees

BY NOV. 5	ONSITE	
$ 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
150	250	Non-Member Resident/Trainee
150	250	Radiology Support Personnel
680	780	Non-Member Radiologist, Physicist or Physician
680	780	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

Important Dates

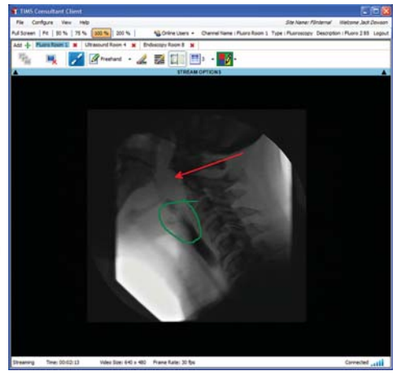
October 22	International deadline to have full-conference materials mailed in advance
November 5	Final discounted advance registration, housing and course enrollment deadline to have full-conference materials mailed in advance
Nov. 28 – Dec. 3	RSNA 96th Scientific Assembly & Annual Meeting

For more information about registering for RSNA 2010, visit *RSNA2010.RSNA.org,* e-mail *reginfo@rsna.org* or call 1-800-381-6660 x7862.

Product News

NEW PRODUCT

Telemedicine, Mobile Products Offer Real-time Capability



Foresight Imaging *(www.tims.com)* introduces the TIMS Consultant, a networked system that allows clinicians at various locations to view and participate in a live medical or diagnostic imaging procedure. Participants have full annotation and telestration capability to emphasize or highlight areas of the live video stream and can use multiple video sources and clients. In addition, the new TIMS Mobile Consultant allows physicians to view live diagnostic imaging procedures or surgical camera video on mobile smart phones.

FDA CLEARANCE

Imaging System Used for Radionuclides

Hybridyne Imaging Technologies *(www.hybridyne imagingtechnologies.com)* has received FDA clearance for ProxiScan™, a system used in imaging the distribution of radionuclides in the human body using planar imaging techniques. ProxiScan may also be used intraoperatively, on pathological specimens and for endocavity applications, if a protective sheath is used. ProxiScan is also capable of high-performance imaging of radiopharmaceuticals distributed within anatomical regions of interest located close to the camera head.

NEW PRODUCT

New Brand Suite Aids Understanding of Billing Process

Medical Management Professionals *(www.cbizmmp.com)* announces MMPactsm, a new brand suite that provides radiologists with a more in-depth understanding of complex billing processes. MMPact billing service describes and organizes front- and back-end billing steps that MMP defines as service marked products. Each product within the service is a step within the billing cycle that offers a unique blend of technology and people to impact revenue, and includes vendor-partnered and proprietary software combined with MMP's expert team of professionals.

NEW PRODUCT

Soft Tissue Probe Allows In Vivo Imaging

Michelson Diagnostics *(www.md-ltd.co.uk)* announces a probe suitable for imaging soft tissue, for use with its VivoSight Multi-Beam optical coherence tomography (OCT) imaging system. The probe allows in vivo imaging of oral and gynecological tissue.

The VivoSight Multi-Beam OCT system provides subsurface cross-sectional images at a higher resolution than is possible with ultrasound, CT or MR imaging, and much deeper and wider than is possible with confocal microscopy. The new soft tissue probe provides the same unprecedented imaging quality as the topical probe, with real time, in vivo images at better than 7.5 µm lateral resolution. The probe is 9 cm long and provides both 2D and 3D images over a 5 mm x 5 mm area. For sterile applications, the probe is used with a disposable transparent sheath which covers the probe, handle and upper connecting cable.

Information for *Product News* comes from the manufacturers. Inclusion in this publication should not be construed as a product endorsement by RSNA. To submit product news, send your information and a non-returnable color photo to *RSNA News*, 820 Jorie Blvd., Oak Brook, IL 60523 or by e-mail to *rsnanews@rsna.org*. Information may be edited for purposes of clarity and space.

RSNA.org

Education Resources a Click Away on myRSNA

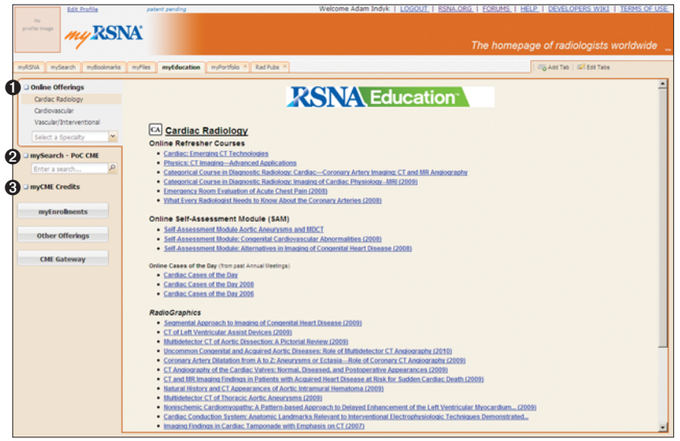
Accessing RSNA's extensive educational offerings is now as easy as logging onto myRSNA.

While the Education portal at *RSNA.org/Education* continues to offer the same roster of free online member resources, users can now customize, organize and track education resources and content from one easy-to-access location. By clicking the new myEducation tab on myRSNA, members can utilize:

❶ **Online Offerings:** Based on subspecialty, users can access Refresher Courses and Cases of the Day from RSNA annual meetings, online-self-assessment modules (SAMs), *RadioGraphics* articles and syllabi from past RSNA courses.

❷ **mySearch-PoC CME:** The new Point of Care (PoC) learning tool allows members to research procedures while earning CME credit at the same time.

❸ **myCME Credits:** Users can track current and completed courses for any year beginning in 2006, access RSNA education products in the Education Center store and utilize the CME Gateway, which allows users to view, print or generate reports of CME credits from multiple societies.



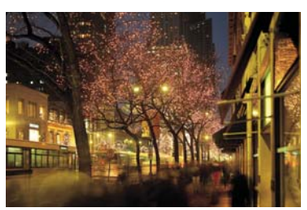
myRSNA Webinar Covers Education, Search Functions

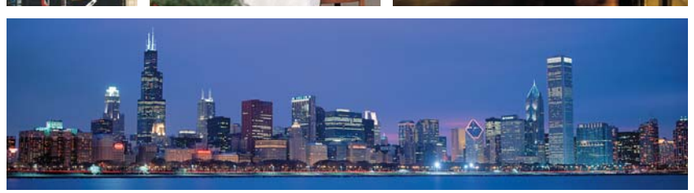
For a free tutorial on the new myEducation component of myRSNA, members are invited to participate in the myRSNA next online Webinar led by RSNA's own developers. The one-hour Webinar, set for 1 p.m. CDT on Tuesday, Aug. 17, will also cover the updated mySearch function.

Members can call the toll-free number (U.S./Canada) at 1-866-469-3239 or the toll number (U.S./Canada) at 1-650-429-3300. The meeting number is: 796 719 233. RSNA offers Web tutorials every three months. For more information, go to *myRSNA.org*.

COMING IN AUGUST

From its world-class museums and bustling theater scene to its delectable dining and sizzling nightlife, Chicago offers a stellar lineup of attractions sure to please everyone attending RSNA 2010. Next month, *RSNA News* will spotlight a full roster of Chicago events including our Insider's Guide to Chicago's Best Deals featuring the many free activities available in the Windy City.





20 Retrospective

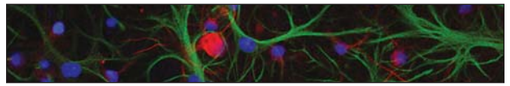
Celebrating 20 Years of *RSNA News*

Headlines

Remembering radiologic topics that made the news. This month's feature: a sampling of new applications for various modalities.

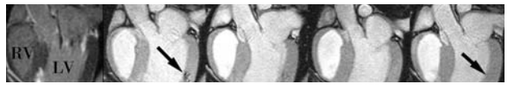
CT

February 1999: Virtual GI Endoscopy: Techniques, Applications, Yields Are All Expanding
June 2002: Spiral CT Monitors Spread of Ovarian Cancer
July 2004: CT Technology Eases Process of Living Donor Transplantation
August 2005: Multidetector CT Angiography Shows Promise in Detection of Coronary Artery Disease



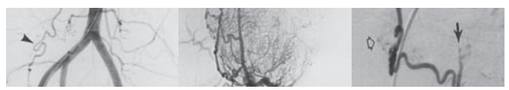
fMRI

April 2004: fMRI Tests Working Memory in Brain-Injured Children
May 2008: fMRI Measures Effect of Treatment on HIV-related Cognitive Impairment



MR IMAGING

April 2003: MR Imaging Advances MS Diagnosis, Treatment
April 2006: MR Imaging Used to Track Accuracy and Effectiveness of Stem Cell Injections
January 2009: MR Predicts Cardiac Ablation Success

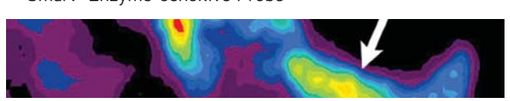


INTERVENTIONAL RADIOLOGY

June 2003: UFE Safely and Effectively Treats Fibroids
April 2010: RFA May Relieve Bone Metastases Pain

MAMMOGRAPHY

April 2002: Optical Mammography Teams NIRF Imaging with "Smart" Enzyme-sensitive Probe

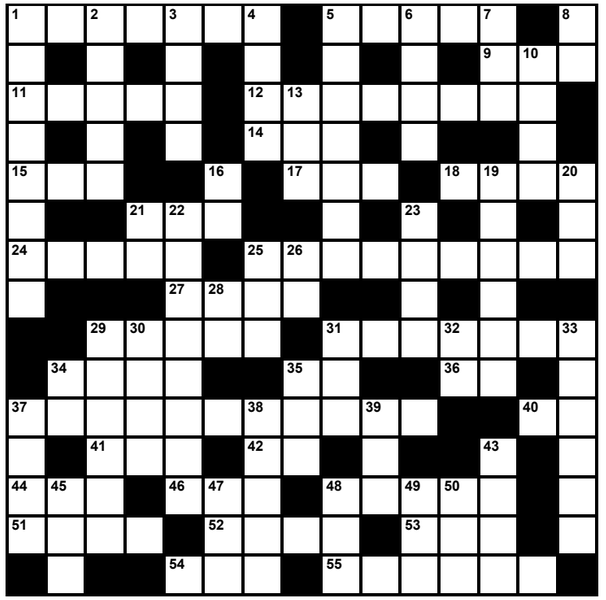


PET

September 2006: PET Shows Promise in Tracking Diabetes
September 2009: PET/CT Predicts Early Response to Chemotherapy

Crossword

Test your knowledge of radiology history and the press, politics and pop culture of the last 20 years. Answers will appear in the August issue of *RSNA News*.



Across

1 Attacks with this came on heels of Sept 11 attacks
5 Used to rate magnet in MR system
9 Hospital unit
11 Appointed British prime minister in 1997
12 Abnormal appearance on film results from improper storage
14 All right!
15 Hosts annual Connectathon, abbr.
17 Chain letters?
18 Prescription measurement, abbr.
21 Fluoroscopy technique visualizes blood vessels, abbr.
24 Destruction
25 Discovered radioactivity in 1896
27 Classic 1976 Horror film, The ___
29 Radiation researcher was first to win or share two Nobel prizes
31 Disorder
34 Giant supporters
35 Expression of surprise
36 Fargo state?
37 New Horizons Lecture named for him
40 Cal Ripken, __
41 Firms, for short
42 Palin state, abbr.
44 Credit available through RSNA annual meeting and education products, abbr.
46 Nightmare street, in film?
48 Quarterbacked the Vikings in 2009
51 Wife and song of Bob Dylan
52 In between
53 Princess woe
54 Agency regulates radiologic machines, abbr.
55 Doughnut-shaped frame supports X-ray tube and detector assembly during CT

Down

1 Appointed first female U.S. Secretary of State
2 Small amount
3 Priceless
4 Picture of health?
5 Film made itself king of the theaters, in 1997
6 Reliable
7 "20/20" network
8 In 1992, surpassed cassette tape as the preferred recorded music storage medium
10 Itinerary data, abbr.
13 One end of the spectrum
16 Land of the maple leaf
19 Took Best Actress Emmy in 1992
20 Friend
21 Carry out
22 Received first Oscar for The Departed, in 2007
23 Inventor of first photorecording radionuclide scanner
25 Akeelah and the ___ , film
26 Inside, prefix
28 Detroit locale, abbr.
29 In 2005, replaced heart disease as No. 1 cause for death for people ages 85 and under
30 Reverse
31 Scientist's "eureka moment" exclamation
32 Distance measure, for short
33 Pertaining to ankle bones
34 Santa __
35 Last word in the title of a famous Harrison Ford film
37 Early 1980s development allowing image storage and distribution
38 Have the smallest wavelengths in the electromagnetic spectrum
39 Place to relax
43 Back
45 She's a ___ eater, Hall and Oates
47 Young guy
48 Standard PET tracer, abbr.
49 Security measure for a network, for short
50 No longer working, abbr.

CHALLENGE YOURSELF An interactive version of this puzzle at *rsnanews.org* includes a timer and optional hints.

YOUR FOUNDATION | YOUR RESEARCH
YOUR FUTURE

William Copen, M.D.
Department of Radiology
Massachusetts General Hospital
R&E Grant Recipient

Tapping Into MR Imaging's Potential to Find Viable Brain Tissue After a Stroke

Thanks to an RSNA R&E Foundation research grant, Dr. Copen gained protected time to develop techniques and software tools for MR-based measurement of cerebral oxygen metabolism, which may substantially widen the window of opportunity to save patients' lives with intravenous thrombolytic therapy.

Since 1984, the RSNA Research & Education Foundation has enabled the brightest minds in radiology and related sciences to discover new methods to fight disease, devise sophisticated new technologies, improve the patient care process and cultivate the workforce of the future.

DONATE. VOLUNTEER. GET FUNDED. ***RSNA.ORG/FOUNDATION***

RSNA® R&E™ FOUNDATION