

Image courtesy of Siemens Medical Solutions

Hybrid Imaging with PET/MR Offers Power, Potential

ALSO INSIDE:

Radiologists Extend Imaging Outreach
to Developing Countries

Error Disclosure is Radiology's
Next Step in Patient Care

Residents Narrow Their Focus
in Fourth-year Programs

Advances Improve Treatment, Detection
of Head and Neck Cancer

RSNA 2012 Course Enrollment Begins July 11
See Page 21

NOW IN AN EASY-TO-SWALLOW TABLET.

- ▶ More images
- ▶ Interactive media
- ▶ Videos



Access the RSNA News tablet edition on the App Store and Android Market.



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

RSNA News™

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

UP FRONT

- 1 First Impression
- 3 RSNA Board of Directors Report
- 4 My Turn

FEATURES

- 5 Radiologists Extend Imaging Outreach to Developing Countries
- 7 Error Disclosure is Radiology's Next Step in Patient Care.
- 9 RESIDENTS & FELLOW CORNER: Residents Narrow Their Focus in Fourth-year Programs
- 13 Advances Improve Treatment, Detection of Head and Neck Cancer

RADIOLOGY'S FUTURE

- 11 Hybrid Imaging with PET/MR Offers Power, Potential
- 15 R&E Foundation Donors

NEWS YOU CAN USE

- 16 MOC News
- 17 Journal Highlights
- 18 Radiology in Public Focus
- 19 Education and Funding Opportunities
- 21 Annual Meeting Watch
- 23 The Value of Membership
- 24 *RSNA.org*

EDITOR

David M. Hovsepian, M.D.

R&E FOUNDATION CONTRIBUTING EDITOR

C. Leon Partain, M.D., Ph.D.

EXECUTIVE EDITOR

Lynn Tefft Hoff

MANAGING EDITOR

Beth Burmahl

EDITORIAL ADVISORS

Mark G. Watson

Executive Director

Roberta E. Arnold, M.A., M.H.P.E.

Assistant Executive Director

Publications and Communications

Marijo Millette

Director: Public Information and Communications

Communications

EDITORIAL BOARD

David M. Hovsepian, M.D.

Chair

Colin P. Derdeyn, M.D.

Kavita Garg, M.D.

Bruce G. Haffty, M.D.

Nazia Jafri, M.D.

Bonnie N. Joe, M.D., Ph.D.

Edward Y. Lee, M.D., M.P.H.

Kerry M. Link, M.D.

Barry A. Siegel, M.D.

Gary J. Whitman, M.D.

William T. Thorwarth Jr., M.D.

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison

Board Liaison



Search "RSNA News" on the Android or App store.

DISTINGUISHED HONOREES AND LECTURERS

The RSNA Board of Directors has announced the distinguished award recipients to whom the Society will pay tribute at the 98th Scientific Assembly and Annual Meeting. They are:



GOLD MEDALISTS

R. Gilbert Jost, M.D.
St. Louis

William W. Olmsted, M.D.
Potomac, Md.

Stephen R. Thomas, Ph.D.
Cincinnati



Jost



Olmsted



Thomas

HONORARY MEMBERS

Giovanni G. Cerri, M.D., Ph.D.
Sao Paulo, Brazil

Mukund S. Joshi, M.D.
Mumbai, India

Andras Palko, M.D., Ph.D.
Szeged, Austria



Cerri



Joshi



Palko



PROGRAM DEDICATION

RSNA will dedicate its 2012 annual meeting program to the memory of **Gary M. Glazer, M.D.**

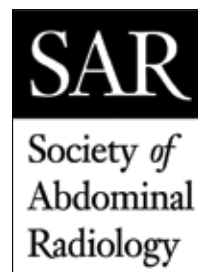
Society of Abdominal Radiology Formed from SUR, SGR Merger

AFTER more than 35 years of existence, the Society of Gastrointestinal Radiologists (SGR) and the Society of Uroradiology (SUR) merged and formed the Society of Abdominal Radiology (SAR) in March. Stuart G. Silverman, M.D., a professor of radiology at Harvard Medical School and director of abdominal imaging and intervention at Brigham & Women's Hospital, was named

SAR's inaugural president. The two founding societies had held combined meetings since 2000. The revolutionary impact that cross-sectional imaging has had on imaging the GI and GU tracts, as well as the benefits of a larger, and potentially more influential body, were among the reasons for the merger, Dr. Silverman said. For more information, go to www.abdominalradiology.org.



Silverman



Numbers in the News

7

Approximate cost, in millions of dollars, of an MR/PET machine. While the price tag has limited widespread implementation of the technology, researchers are bullish on the potential of this new hybrid imaging. See Page 11 to learn more.

12

Number of months after which the public currently has access to published results of research funded by the National Institutes of Health (NIH). A reintroduction into Congress of the Federal Research Public Access Act, which would shorten the embargo period to six months and extend the policy to other federal science agencies, has drawn opposition from many journal publishers including RSNA. Read more on Page 18.

15

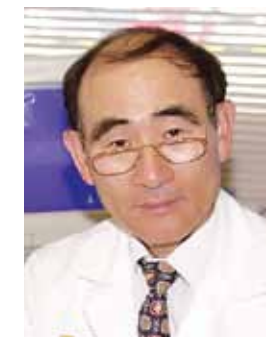
Percent of radiologists surveyed for a 2009 *Radiology* study who would disclose an error to a patient with full transparency. Experts say that as the movement toward more patient-centered care continues in radiology, reporting of medical errors is becoming increasingly necessary to help patients achieve autonomy in their health-care decisions. Read more on Page 7.

53

True positive rate of PET/CT in detecting malignancies in patients with head and neck cancer after treatment with radiation, according to a recent study. Turn to Page 13 to see what experts have to say about the potential of PET/CT to detect local recurrences before they become clinically apparent and improve the outcome of salvage therapy.

CORRECTION

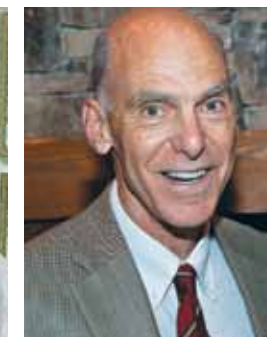
A biography accompanying the My Turn column by *Radiology* Editor Herbert Y. Kressel, M.D., in the May 2012 issue of *RSNA News* contained an error. Dr. Kressel is the current Miriam H. Stone-Professor of Radiology at Harvard Medical School.



Cho



Kelekis



Martin

SIR Bestows 2012 Gold Medals

The Society of Interventional Radiology (SIR) recently presented gold medals at its annual meeting in San Francisco:

Kyung J. Cho, M.D., is a professor of vascular/interventional radiology at the University of Michigan (UM) Health Systems, course director for "Practical Training in Vascular Interventions" at UM, a staff physician at UM Hospital and a consulting physician at the VA Medical Center, all in Ann Arbor.

Dimitris Kelekis, M.D., Ph.D., is a professor and chair of the Research Center of Radiology and Imaging at Eugenidion University Hospital in Athens, Greece, and a leader in developing Greek diagnostic and interventional radiology.

Louis G. Martin, M.D., is a professor of interventional radiology and image-guided medicine at Emory University Hospitals in Atlanta.

GOLD MEDALS AWARDED AT AUR

The Association of University Radiologists (AUR) awarded gold medals at its recent annual meeting in San Antonio:

N. Reed Dunnick, M.D., is the Fred Jenner Hodges Professor and chair of the Department of Radiology at the University of Michigan Health System in Ann Arbor, where he has been since 1992. Dr. Dunnick has served on numerous RSNA committees over the years and is currently chairman of the RSNA Board of Directors.

Beverly P. Wood, M.D., Ph.D., M.S.Ed., is a professor emerita of radiology and pediatrics, Keck School of Medicine, University of Southern California, Los Angeles.



Dunnick



Wood

Be a Part of RSNA History—Submit Your Photos Now

RSNA is preparing to observe its centennial with a year-long celebration that will kick off at RSNA 2014 and culminate at RSNA 2015.

While RSNA 2015 centennial events will look to the future and what might lie ahead in RSNA's next 100 years, RSNA 2014 activities will focus on the Society's achievements so far—and that's where RSNA needs your help.

Do you have photos of past RSNA annual meetings, committee meetings or other gatherings? Other RSNA memorabilia? Please consider sharing these pieces of RSNA history for use in a commemorative book and other centennial celebrations. For more information on how you can contribute, e-mail centennial@rsna.org or call Marian Strasner at 630-571-7829.

RSNA Board of Directors Report

At its March meeting, the RSNA Board of Directors updated the Society's 2012-17 Strategic Plan, confirmed collaborations with two societies and approved plans for RSNA 2012.

Strategic Plan

The updated RSNA Strategic Plan reinforces RSNA's goals of advancing the radiological sciences, fostering the development of new technologies, offering education in a variety of media, facilitating informatics strategies to improve the efficiency and effectiveness of healthcare and serving as a world-wide leader in radiology.

Collaborations

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

RSNA is working with the American Association of Physicists in Medicine (AAPM) to create two online education modules focusing on 1) estimating radiation risk from imaging procedures and 2) the regulatory/accountability environment of medical practice and its potential impact on radiologic practice and professionalism.

RSNA 2012

After a successful pilot at RSNA 2011, campus programming returns to RSNA 2012 with refresher and series courses, scientific presentations and education exhibits housed together to facilitate focused study during the meeting week. Subspecialties to be offered within campuses this year are pediatric radiology and nuclear medicine/molecular imaging.

Expanded for RSNA 2012 is the Virtual Meeting, which allows attendees to access content beyond the meeting day at



N. Reed Dunnick, M.D.
Chairman, 2012 RSNA
Board of Directors

McCormick Place. Live presentations will be offered Sunday through Friday. RSNA members may access the Virtual Meeting for free; non-members not attending the meeting and accessing education content will be charged a fee to participate.

New for RSNA 2012 will be additional scientific poster sessions presented in the Lakeside Learning Center on Monday, Tuesday and Wednesday, 5–6 p.m.

During this year's "CIR@RSNA," organized by the Interamerican College of Radiology

(CIR) and presented in Spanish on Saturday, November 24, immediately before the annual meeting, RSNA will provide simul-

taneous translation into English. Topics for the 2012 session will be announced soon.

RSNA 2012 will see the debut of the RSNA 5K Fun Run, with all proceeds benefiting the Research & Education Foundation. Watch the annual meeting website and *RSNA News* for more details.

Annual meeting registration is under way for members and opens June 6 for non-members, and course enrollment begins July 11. This year's theme is Patients First. I am already looking forward—and hope you are as well—to experiencing all the breakthrough science, education and networking that RSNA 2012 will offer.

N. REED DUNNICK, M.D.
CHAIRMAN, 2012 RSNA BOARD OF
DIRECTORS



Registration for RSNA 2012 is under way for members and opens June 6 for non-members. Stay informed about RSNA 2012 programming at RSNA.org/Annual_Meeting.aspx.

My Turn

Future Directions for *RadioGraphics*

RadioGraphics has enjoyed tremendous success for 32 years under the leadership of Drs. William Tudenham and William Olmsted. It continues to be highly regarded by RSNA members and our readership at large. As with all evolving processes, there are areas where journal functions can improve and opportunities to expand our offerings beyond traditional subspecialty topics.

To help ensure continuation of high-quality peer review, the *RadioGraphics* editorial board has been restructured to add assistant editorial board members in each of 16 subspecialty sections. This addition, along with establishment of 5-year term limits for editorial board members, will increase the breadth of expertise on the board and allow for orderly succession of board members.

Our peer-review process, which begins with review of education exhibits at RSNA annual meetings, will use an electronic scoring system accessible via mobile devices for RSNA 2012. The system originated from a pilot project developed by Adam Flanders, M.D., and the Informatics panel at RSNA 2011. In addition, our manuscript review process

is undergoing some exciting changes. To better identify appropriate reviewers for incoming material, the RSNA's RadLex® lexicon will be integrated into our manuscript submission system (RGXPress) to allow indexing of manuscripts and enable better matching of them to our reviewers' expertise and interest. We hope this capability will optimize the peer-review experience for reviewers and authors and ultimately improve the timeliness and quality of reviews.

With regard to journal content, we are currently considering development of a section on the business and economics of radiology. We are also considering a series focused on residents and fellows, with material that specifically supports residency curricula and the radiology

certification processes implemented by the American Board of Radiology.

I am excited about the changes we are making with journal processes and expect that, along with our expanding content areas, *RadioGraphics* will continue to be well received.

Jeffrey S. Klein, M.D., is the editor of *RadioGraphics*. He is the A. Bradley Soule and John P. Tampas Green and Gold Professor of Radiology and Associate Dean for Continuing Medical Education in the University of Vermont College of Medicine and chief of thoracic radiology at Fletcher Allen Health Care in Burlington, Vt.



“Greening” of Radiology Yields Increasing Savings

I was pleased to see your coverage of “The Greening of Radiology” in the April issue of *RSNA News*. As the lead author and presenter of the RSNA 2011 “Greening Radiology” paper referenced in the article, I have been

working to help educate my colleagues about the growing impact of our health-care technology on the environment.

For example, we estimated that in our radiology department at the University of Maryland, computer workstations including monitors consumed about 33,000 kilowatt hours (kwh) annually during an eight-hour, five-day workweek costing about \$3,600. Keeping the workstations on for 24 hours, seven days per week would require about 116,000 kwh repre-

senting a savings of about 83,000 kwh or about \$9,225 per year.

Although workstations in the remainder of the hospital may use less energy than those dedicated for primary image interpretation by radiologists, this serves as a representative model for potential energy consumption and cost throughout an enterprise which could easily add up to hundreds of thousands of dollars.

Based on our research we identified other opportunities to save money, including: turning lights off in bathrooms and break rooms, changing to more energy-efficient compact fluorescent or LED bulbs and optimizing the power setting

on computers and monitors. Thank you again for your great story and for making the diagnostic imaging community aware of the potential to help the environment while achieving substantial cost savings.

**PRASANTH M. PRASANNA, M.D.,
FRCPC**
DIAGNOSTIC IMAGING OF SALEM

EDITOR'S NOTE: We thank Dr. Prasanna for his thoughtful letter to the editor and apologize for overlooking his position as lead author in the original article. We are grateful for his suggestions for taking achievable steps toward “greening radiology” and applaud his efforts in this important area.



RSNA News

June 2012 • Volume 22, Number 6
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*.

Contents of *RSNA News* copyrighted ©2012, RSNA. RSNA is a registered trademark of the Radiological Society of North America, Inc.

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

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



Radiologists Extend Imaging Outreach to Developing Countries

Rapid, accurate and portable, ultrasound is fast becoming a vital diagnostic tool in developing countries that often rely heavily on it in busy emergency rooms. When Butaro Hospital opened its doors in Rwanda in 2011, the facility was equipped with much-needed state-of-the-art technology, including an ultrasound machine.

UNFORTUNATELY, many facilities like Butaro are short-staffed and the equipment either goes unused or is operated by nonradiologists, including many who have not been adequately trained.

At Butaro, the remedy is a training curriculum for teaching ultrasound that was developed by Supriya Gupta, M.B.B.S., M.D., a radiology fellow at Massachusetts General Hospital (MGH) in Boston, whose project was funded through a 2011 RSNA/AUR/APDR/SCARD Radiology Education Research Development Grant.

“Especially in remote areas, much of the work is done by a single person who reads the X-ray and performs the ultrasound,” Dr. Gupta said. “As radiologists, we want to help these staff members by educating them and improving their skills.”

In the Republic of South Sudan, which leads the world in maternal mortality, access to medical imaging—particularly ultrasound—can mean the difference between life and death, said MGH radiologist H. Benjamin Harvey, M.D., J.D., who taught obstetrical ultrasound in Africa.

“It was inspiring to see how excited the South Sudanese providers were about learning to harness the power of hand-carried ultrasound,” Dr. Harvey said. “They clearly understood the value of the technology and what it meant for their communities—fewer unnecessary maternal and fetal deaths.”

Both initiatives are part of one ambitious project: MGH Imaging’s Global Health Program, which addresses unmet medical imaging needs and health-care disparities for vulnerable and crisis-affected populations, whose numbers are significant. An estimated two-thirds of the global population lacks access to diagnostic imaging care, according to the World Health Organization.

Officially founded in 2010 by MGH Radiology Department Chair James H. Thrall, M.D., who has long been active in international outreach, the program unites MGH staff members and partners of the program in a mission to help reduce those numbers. “This initiative within our department speaks to a heartfelt value at MGH of wanting to help our neighbors in medical need, whether in our own community or on the other side of the globe,” Dr. Thrall said.



Choy



Thrall

Education, Teleradiology Focus of Outreach

The program includes more than 70 MGH members, primarily from radiology, who have taken on projects in Haiti, Cambodia, Rwanda, Uganda, Kenya and Liberia. The team works with non-profit organizations including the U.S.-based Partners in Health (PIH) and other academic-based global health efforts to help guide educational, clinical and technology transfer efforts for international outreach.

While much of their work focuses on education and training, the MGH team is also taking full advantage of the remote capabilities offered by teleradiology. “With the increasing availability of SMS and the Internet in many developing nations, we knew it was time for radiologists to connect and make a difference beyond their own reading room,” said the program’s co-founder and leader, MGH radiologist Garry Choy, M.D., M.S.

“It was inspiring to see how excited the South Sudanese providers were about learning to harness the power of hand-carried ultrasound.”

H. Benjamin Harvey, M.D., J.D.



Medical imaging can often mean the difference between life and death in countries like the Republic of South Sudan, where Massachusetts General Hospital (MGH) radiologist H. Benjamin Harvey, M.D., J.D., (pictured above with patients), taught obstetrical ultrasound as part of the hospital’s Imaging’s Global Health Program.

In 2011, the MGH team collaborated with the PIH Mirebalais Hospital Project in Haiti to begin providing teleradiology support, radiology education and technology planning. Also in 2011, Sanjay Saini, M.D., a professor of radiology, vice-chair for Health Systems Affairs and co-founder of the MGH Imaging’s Global Health Program, began leadership training and CME development in countries including Haiti, Sri Lanka and India. This year, MGH Radiology Department Vice-chair Giles Boland, M.D., established a teleradiology link and an international radiology exchange program between the MGH radiology department and Kenyatta National Hospital in Nairobi, Kenya.

Since 2008, the MGH team, in partnership with the International Radiology Exchange (See sidebar), has worked with PIH to provide teleradiology services to Butaro Hospital, where caregivers send images to MGH radiologists who provide at least one teleradiology consultation a day. “We have provided teleradiology support and consultation in more than 400 cases including ultrasound, X-rays and CT scans,” Dr. Choy said.

In addition, Drs. Gupta, Choy and Sung Han Kim, M.D., served as contributing authors to the “Partners in Health Manual of Ultrasound in Resource Poor Settings” which has been used for training at several PIH sites in Haiti, as well as for training by other organizations in Uganda, Kenya and Ghana.

MGH radiology resident **Supriya Gupta, M.B.B.S., M.D.**, received a 2011 RSNA/AUR/APDR/SCARD Radiology Education Research Development Grant for her project, “Education in International Radiology Outreach: Development of Multi-language Web-based Modules and Providing Training for Diagnosing Acute Clinical Conditions Using Ultrasound,” currently being implemented at Butaro Hospital in Rwanda. RSNA’s Research & Education (R&E) Foundation offers research and education grants to members across the world.



Initiatives Serve as Model for Future Projects

Developing resources that continue to aid caregivers for years to come is a major goal of the MGH program, Dr. Gupta said. The ultrasound curriculum she is creating for Butaro, which includes Web-based multilingual lectures, video demonstrations, hands-on training workshops and online questionnaires for assessments, is a model for future projects, she said.

“This program will serve as a benchmark for similar and more effective programs in other developing countries,” Dr. Gupta said.

Such efforts help the team “sustain our impact,” said Dr. Choy, who is doing his part to educate medical professionals in developing countries on an issue that never fails to grab U.S. headlines: radiation dose.

After travelling to Slovenia with MGH colleague Mannudeep Kalra, M.D., to help train technologists and physicians on low-dose radiation protocols in CT, the doctors will visit Uganda to provide a similar service. The training is funded by the International Atomic Energy Agency of the United Nations.

Although their international plates are full, Drs. Choy and Gupta say the team is hungry for more fulfilling experiences.

“This is just the beginning,” Dr. Gupta said. “The way I see it, if we educate one generation of caregivers, it will start a chain reaction so these people can pass on their skills and the momentum will keep going. This is work I want to continue to do.” □

IMAGING INITIATIVES EXPAND ACROSS THE GLOBE

For more information on the Massachusetts General Hospital (MGH) Imaging’s Global Health Program, go to www.massgeneral.org.

A sampling of other global radiology initiatives includes:

- **RSNA International Visiting Professor Program, RSNA.** www.rsna.org/International_Visiting_Professor_Program.aspx, annually sends teams of North American professors to lecture at national radiology society meetings and meet with radiology residency training programs at selected host institutions in developing nations. RSNA—which also provides educational materials to host institutions—has supported the IVP program since 1986. The IVP program is made possible by the support of Agfa HealthCare and Fujifilm Medical Systems.
- **RAD-AID, www.rad-aid.org,** dedicated to the mission of increasing international radiology services in developing countries and optimizing radiology for public health initiatives.
- **GO-RAD, www.isradiology.org/gorad,** the International Society of Radiology program advances radiology education throughout a global radiology community by aggregating current, practical, radiology literature with content targeted and dedicated to developing nations and underserved populations. *Radiology* and *RadioGraphics* are among the participating publications.
- **International Radiology Exchange (IRADX), www.iRadX.org,** provides teleradiology/telemedicine outreach and radiology expertise to resource-poor settings throughout the world. The program was co-founded by MGH radiologists and imaging team members Garry Choy, M.D., M.S., and Sung Han Kim, M.D.

Error Disclosure is Radiology's Next Step in Patient Care

As the movement toward more patient-centered care continues in radiology, reporting of medical errors is becoming an increasingly necessary measure to help patients achieve autonomy in their healthcare decisions.

"PATIENTS KNOW that errors occur and they want to be told when errors occur," said Stephen D. Brown, M.D., a radiologist at Children's Hospital Boston and co-author of "Stepping Out Further From the Shadows: Disclosure of Harmful Radiologic Errors to Patients," published in the February 2012 issue of *Radiology*. "Not disclosing errors works against that patient's autonomy. If done properly, a well-constructed disclosure process can potentially enhance the bond between a patient and healthcare provider."

A strong patient-provider bond is especially important as radiologists continue to emerge from their behind-the-scenes role and engage in more one-on-one communication with patients. "Error disclosure is the next step," Dr. Brown said. "If radiology leadership is going to promote the idea that radiologists need to engage with patients in a more personal way, this is a natural extension of that."

And while fear of malpractice remains a top reason for reluctance to disclose errors, experts point out that failure to communicate results of a radiologic examination is the second most common cause of malpractice litigation. Errors can stem from lack of communication between the radiologist and ordering physician or the primary physician and the patient.

"Research shows that communication problems are at least a causative factor in up to 80 percent of medical malpractice cases," said Leonard Berlin, M.D., a radiologist at Skokie Hospital, Illinois, and a professor of radiology at Rush University and the University of Illinois, Chicago, who will present an Annual Oration in Diagnostic Radiology, "To Disclose or Not to Disclose Radiologic Errors: Should 'Patient First' Supersede Radiologist Self-Interest?" at RSNA 2012. "Communicating directly with the patient could eliminate that risk."

Chance of Radiologic Errors Increasing

Over the years, changing technology has heightened the chance for errors in radiology. Today's radiologists may be looking at 200 different images from a single CT scan, which increases the likelihood of errors—especially compared to 30 or 40 years ago.

Nevertheless, the day-to-day error rate is closer to 3 percent, Dr. Berlin said. "And while the majority of physicians believe those errors should be reported, many don't follow through with that conviction," he said. He pointed to a study showing



Brown



Berlin

that 90 percent of physicians said errors should be reported, but, when asked if they had reported their own errors, only 30 percent said they had.

In a 2009 *Radiology* study led by researcher Thomas H. Gallagher, M.D., 243 radiologists who interpret mammograms were given a vignette describing how a delay in breast cancer diagnosis was caused by placing comparison screening mammograms on a view box in the wrong order, leading a hypothetical radiologist to conclude that calcifications were decreasing in number when, in fact, they were increasing.

Study participants were asked about the likelihood of disclosing this error to the patient and what, if any, information they would offer. Results showed that only 15 percent would disclose an error with full transparency, while the remaining 85 percent would remain silent, would not tell the whole truth or would simply tell a falsehood.

"If done properly, a well-constructed disclosure process can potentially enhance the bond between a patient and healthcare provider."

Stephen D. Brown, M.D.



Although many physicians are reluctant to report medical errors, doing so yields a number of benefits, including reinforcing the patient-provider relationship, showing respect for the patient's autonomy and maintaining the patient's confidence in the honesty and integrity of the physician and the healthcare system. Disclosure is also central to upholding professional standards. "Radiologists and other physicians are ethically and morally obligated to place the needs of their patients first—before their own self-interest and personal needs," said Leonard Berlin, M.D.

Benefits Stem From Error Disclosure

In addition to malpractice fears, radiologists worry that by disclosing errors to patients, they will lose their credibility and their ranking within their specialty or workplace. In addition, risk managers have traditionally advised against disclosure. "All of these factors—both personal and institutional—play into not disclosing errors," Dr. Brown said.

However, researchers cite a number of benefits associated with disclosing errors to patients. Along with showing respect for the patient's autonomy, disclosure reinforces the patient-provider relationship and maintains the patient's confidence in the honesty and integrity of the physician and the healthcare system. In addition, error disclosure can prevent misconceptions patients might have about what caused the adverse event, facilitating informed consent about future care.

Full disclosure is also central to upholding professional standards. Dr. Berlin noted that the Code of Ethics of the American Medical Association states that physicians are "required to inform the patient" of any complication or mistake and should offer "professional and compassionate" concern toward patients who have been harmed, regardless of whether the harm was caused by a physician's error.

"Radiologists and all other physicians are ethically and morally obligated to place the needs of their patients first—before their own self-interest and personal needs," Dr. Berlin said.

Guidelines, Education, Key to Error Disclosure

Establishing radiology-specific professional guidelines in reporting errors is key to facilitating error disclosure. "Policy guidelines developed by the major radiologic professional organizations ideally would define what constitutes radiologic error and when errors should be disclosed to patients," Dr. Brown said.

Individual institutions are developing their own programs. After issuing a 2006 consensus statement, "When Things Go Wrong," Harvard University commissioned the risk management provider CRICO to develop a program of active encouragement of disclosure of errors. "They are actively seeking to educate physicians and promote the idea of error disclosure as a best practice," Dr. Brown said.

Other institutions that have adopted successful guidelines include the Lexington, Ky., Veteran Administration (VA) system and the University of Michigan (UM). The VA discovered that its malpractice payments dropped after the guidelines were implemented in the 1980s. UM, which reported its findings in 2010, also experienced a favorable impact on malpractice outcomes.

"You can't necessarily extrapolate these experiences to all the practice settings that radiologists find themselves in," Dr. Brown said. "But it is encouraging information and folks are taking it to heart."

Although education is also critical to implementing effective error disclosure, traditional methods may not adequately address the multifaceted nature of the issue, Dr. Brown said. Newer programs utilizing educational videos and improvised role playing between participants and professional actors are among the new techniques beginning to emerge, he said. In addition, Web-based "e-learning" programs, featuring interactive online reviews of essential disclosure principles, can provide timely support to physicians in the immediate aftermath of errors, he said.

"These innovative approaches to teaching disclosure skills and strategies have been applied across a number of disciplines and could be adapted for radiology-specific purposes," Dr. Brown said. □

MEDICAL ERRORS, COMMUNICATION, FOCUS OF RSNA 2012 COURSES

Stephen Brown, M.D., will present the workshop, "Program to Enhance Relational and Communication Skills for Radiologists," at RSNA 2012. The workshop is made possible through a GE Healthcare/RSNA Research & Education (R&E) Foundation Education Scholar Grant. Dr. Brown will also moderate the refresher course, "Vignette-based Disclosure of Medical Error in Radiology," at RSNA 2012. Stay updated on RSNA 2012 programming at RSNA.org/Annual_Meeting.aspx.

RSNA 2012

WEB EXTRAS

To access the full *Radiology* studies, "Disclosing Harmful Mammography Errors to Patients" and "Stepping Out Further From the Shadows: Disclosure of Harmful Radiologic Errors to Patients," go to Radiology.RSNA.org.

Residents Narrow Their Focus in Fourth-year Programs

In his third year of residency at Massachusetts General Hospital (MGH), Sharjeel Sabir, M.D., was seeking to deepen his knowledge of abdominal imaging and skills in interventional radiology beyond the required rotations offered in the core residency.

FORTUNATELY, such an option was available at MGH, the largest teaching hospital of Harvard Medical School in Boston. Dr. Sabir enrolled in the “focused-year program” that allows fourth-year residents to focus on one or two disciplines for up to six months each. The program was more helpful than he ever imagined it would be, Dr. Sabir said.

“In some respects, I learned more during that one year of focused training than during the three previous years of residency,” said Dr. Sabir, now a fourth-year radiology resident at MGH. “I grew as a physician because I was given even more responsibility for my patients.”

Focused-year programs, often called “mini-fellowships,” have been extremely popular since they were developed at MGH 25 years ago, said Theresa C. McLoud, M.D., director of Massachusetts General’s radiology residency program. The program was created after residency training expanded from three to four years in the mid-1980s and some educators were concerned residents would not pursue subspecialty training, she said.

“Frankly the program has provided Massachusetts General with a recruitment advantage for resident applicants,” said Dr. McLoud, a professor of radiology, associate vice-chair of education at MGH and an RSNA past-president. “Most applicants recognize the need for early subspecialty training, although more than 90 percent of our residents complete a formal fellowship after residency.”

While only a handful of institutions now offer focused-year programming, the time is ripe for others to tap into the considerable benefits offered by the focused-year concept, Dr. McLoud said.

“I expect that these programs will become much more widespread with the advent of the new ABR examination structure in 2013,” she said.

ABR Exam Could be Catalyst for Focused-year Programs

Under forthcoming ABR changes, residents will take a Core Examination in Diagnostic Radiology after 36 months of training to test knowledge and comprehension in all areas of radiology. “As a result, many programs are now considering devoting the fourth year of residency to subspecialty training,” Dr. McLoud said.



McLoud



Sabir

One institution, Beth Israel Deaconess Medical Center (BIDMC) in Boston, is expanding its focused-year radiology programming specifically to accommodate ABR exam changes. In addition to offering concentrations in radiology subspecialties, the medical center is expanding its curriculum to offer focused-year programs in medical education, global health, quality improvement, research and health policy/economics.

“In some respects, I learned more during that one year of focused programming than during three previous years of residency.”

Sharjeel Sabir, M.D.



Growing in popularity, focused-year programs that allow fourth-year residents to focus on one or two disciplines for up to six months each offer a number of advantages, including allowing early subspecialty training and a concentrated period of time to pursue research activities.

“Our rationale is that although there are many superb clinical radiologists, there are relatively few with expertise in these other fields, and there is a growing need for radiologists to possess and impart these skills to others,” said Priscilla J. Slanetz, M.D., M.P.H., program director of the medical center’s Radiology Residency Program. “Therefore, each of these non-clinical mini-fellowships will enable residents to develop a unique skill set. They will graduate from our program with strong clinical skills and expertise in one or two unique areas.”

Although the specific curriculum is still in development, the basic framework will consist of formal didactic courses followed by focused programming in which students undertake a specific project to apply their new skills, said Dr. Slanetz, who received a Research Fellow Grant from the RSNA Research & Education (R&E) Foundation in 1995 for her study of spiral CTA and MRA in preoperative assessment of abdominal aortic aneurysms. “This new approach will provide residents with protected time to develop critical skills for successful careers in academic radiology,” she said.

Residents Tout Benefits of Focused Subspecialty Training

Residents and faculty say the focused-year concept offers several advantages.

“First of all, it allows early subspecialty training,” Dr. McLoud said. “It may give a resident the opportunity to condense training time.” For fellowships with a two-year requirement, such as neuroradiology, the focused year allows one year of subspecialty training before the post-residency year, she added. “We have other two-year programs, such as an abdominal interventional fellowship in our residency, that offer the same advantage,” she said.

The focused year also allows a concentrated period of time to pursue research activities. Residents enrolled in the program say the focus provides the chance to create a unique, personal curriculum that provides a solid foundation for future success.

“This is the best way to acquire this level of knowledge during residency,” said Florian Fintelmann, M.D., a radiology resident at MGH.

“It is a wonderful opportunity as it allows us to self-design a curriculum that is best tailored for our individual strengths and interests,” added Tamuna Chadashvili, M.D., a second-year resident at BIDMC. “It is quite exciting to be offered a wide range of possible projects and learning opportunities.” □

WEB EXTRAS

ABR Prepares to Launch New Exams

The American Board of Radiology (ABR) Core Exam, which debuts in October 2013, will test knowledge and comprehension of anatomy, pathophysiology, all aspects of diagnostic radiology, and physics concepts important for diagnostic radiology. The Certifying Exam, to debut in fall 2015, will “emphasize synthesis of information, differential diagnosis, and patient management,” according to ABR, with all aspects of physics and basic sciences that are important in imaging to be included.

See www.theabr.org for more information on both exams.

To read the *RSNA News* article, “Move to Digital Spurs New ABR Exam Security Campaign,” go to rsnanews.RSNA.org.

To see a video of ABR Executive Director Gary J. Becker, M.D., discussing the new Core Examination in Diagnostic Radiology and the “major culture change” taking place in ABR examinations, go to rsnanews.RSNA.org.

Hybrid Imaging with PET/MR Offers Power, Potential

By producing more detailed images without added radiation exposure, hybrid PET and MR could redefine the course of medicine by aiding the development of personalized medicine and treatments for oncology, cardiology and neurology.

WHILE PET has been used with CT for more than a decade, PET/MR technology only arrived when engineers overcame the challenge of combining the two modalities. In 2011, the European Union and the U.S. Food and Drug Administration (FDA) granted approval to the first two commercially available PET/MR systems: the Siemens Biograph mMR and the Philips Ingenuity TF.

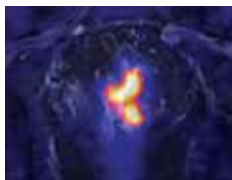
Although the technology, with a price tag of about \$7 million, is in use only at a handful of U.S. medical institutions, including Mallinckrodt Institute of Radiology at Washington University in St. Louis, and its clinical role is still evolving, researchers are not wasting time heralding the potential of hybrid imaging with PET/MR.

"MR is more functional than CT," said Homer A. Macapinlac, M.D., chair of the Department of Nuclear Medicine at the University of Texas, MD Anderson Cancer Center in Houston. Dr. Macapinlac chairs the nuclear medicine subcommittee of the RSNA Scientific Program Committee. "MR spectroscopy (MRS) allows you to examine metabolic changes and tell if tissue is malignant or benign. MR provides very exquisite anatomical detail, particularly in the brain," Dr. Macapinlac said. PET/MR offers the ability to use different types of radiotracers—not just for oncology, but for dementia as well."

MR is also better than CT at differentiating tissue of very similar density, said Satoshi Minoshima, M.D., Ph.D., professor and vice-chair in the Department of Radiology at the University of Washington in Seattle. Dr. Minoshima chairs RSNA's Molecular Imaging Abstract Review Committee and serves on the Quantitative Imaging and Imaging Biomarkers Task Force. He and Dr. Macapinlac presented "Hybrid Imaging with PET/MR" at RSNA 2011.

ON THE COVER

An image of the pelvis in a cancer case as captured by the Siemens Biograph mMR.

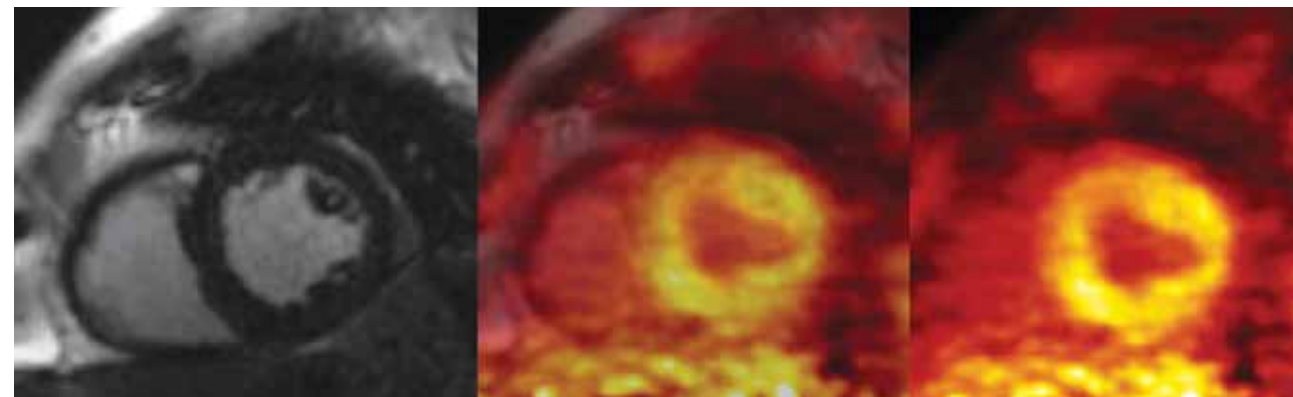


Satoshi Minoshima, M.D., Ph.D., (left) and Homer A. Macapinlac, M.D., discussed the considerable potential of hybrid PET/MR at RSNA 2011.

"Combining high soft tissue contrast obtained from MR and functional information from PET is potentially ideal for certain clinical applications, such as neurology, head and neck, musculoskeletal and body imaging," Dr. Minoshima said. "With the combination of MR, functional MR, MRS and PET, high-resolution anatomy and multimodal functional information can be obtained simultaneously with emerging applications for unique research studies."

“Combining high soft tissue contrast obtained from MR and functional information from PET is ideal for certain clinical applications such as neurology, head and neck, musculoskeletal and body imaging.”

Satoshi Minoshima, M.D., Ph.D.



At Mallinckrodt's Center for Clinical Imaging Research, radiologists have been conducting PET/MR research on patients with cancer who have already undergone PET/CT. Above, from left: Simultaneous acquisition of EKG-gated PET and delayed contrast-enhanced (DCE) cardiac MR images. Simultaneous acquisition of MR 2-point Dixon also acquired for AC. PET data acquired in list mode and binned. DCE-MR acquired in diastole are fused with diastolic PET data to create the center image. The patient has a normal heart.

Images courtesy of Kathryn Fowler, M.D.

Combined Anatomic, Metabolic Mapping is Potential of PET/MR in Oncology

The application of PET/MR in medicine is manifold, according to Eric M. Rohren, M.D., Ph.D., section chief of PET and an associate professor of nuclear medicine at MD Anderson Cancer Center in Houston. As an oncology tool, PET/MR can help physicians more accurately stage disease and plan treatments for some cancers.

"A PET/MR scan of a brain tumor could simultaneously provide metabolic mapping showing areas of highest tumor grade alongside and overlaid on the anatomic mapping showing areas of enhancement and critical brain structure," Dr. Rohren said. "This would allow the neurosurgeon to plan surgery with greater precision than is currently possible."

PET/MR would also better delineate the tumor and its regional extent in cancers of the bone and soft tissue. For example, Dr. Rohren said, a newly diagnosed soft tissue sarcoma could be visible on PET, while borders might be difficult to perceive on CT. "In these cases, we might do a PET/CT scan to look at the primary tumor and identify potential lung metastases, bone metastases and other distant sites of disease, and do a high-quality MR scan to examine the tumor itself for the aforementioned details," he said. "By combining PET and MR, we obtain dual datasets that provide a wealth of information to perform our clinical interpretation."



Rohren

In October 2011, Mallinckrodt became one of the first U.S. centers to install a hybrid PET/MR scanner, purchasing the Siemens Biograph mMR. At the institute's Center for Clinical Imaging Research (CCIR), radiologists have been conducting research evaluation of the new technology on patients with cancer who have already undergone PET/CT.

"We've been putting together a workflow for body applications," said Kathryn Fowler, M.D., a radiology instructor at Mallinckrodt and Washington University School of Medicine. "We've scanned about 40 patients so far using the same FDG dose we used for the PET/CT."

Researchers are still in the process of learning about PET/MR hybrid imaging, said Vamsi R. Narra, M.D., chief of the abdominal imaging section at Mallinckrodt. "With MR, you have the challenges of respiratory motion and the beating heart when imaging the chest and abdomen," Dr. Narra said. "We don't have clear-cut answers yet about when PET/MR is best in these instances. We are just beginning to understand this new tool and the clinical role for it."

PET/MR Could Extend to Pediatrics, Tracer Development

In the near term, PET/MR is likely to become part of a standard evaluation for coronary artery disease and heart failure, gynecologic and brain tumors and neurologic disorders such as Alzheimer's disease. The lower radiation dose of PET/MR will make it useful for pediatric patients who are more susceptible to the effects of radiation. "Pediatric hospitals are very interested in this technology and the benefit could extend to other patients in whom PET plays an integral role in ongoing evaluation, such as those with melanoma and lymphoma," Dr. Rohren said.

PET/MR also is expected to have a role in the development of new radiopharmaceuticals. Thousands of PET tracers have been used in the research setting to noninvasively evaluate cell membrane turnover, DNA proliferation, receptor expression and other processes. Some of these agents are getting very close to FDA approval and could be in clinical use in the near future, Dr. Rohren said. "The true power of PET/MR may ultimately be achieved when new PET tracers combine with advanced MR techniques and vastly expand the field of molecular imaging," he said. □

WEB EXTRAS

To view videos of Satoshi Minoshima, M.D., Ph.D., and Homer A. Macapinlac, M.D., discussing their RSNA 2011 presentation, "Hybrid Imaging with PET/MR," go to rsnanews.org.

To view a video of Robert McKinstry, M.D., Ph.D., director of the Center for Clinical Imaging Research and a professor of radiology and pediatrics at Washington University School of Medicine, discussing the university's PET/MR technology, go to rsnanews.org.

Advances Improve Detection, Treatment of Head and Neck Cancer

Although head and neck cancer remains a major therapeutic challenge, research shows that new treatment options and imaging modalities are enabling earlier detection of cancer and improving the quality of life among long-term survivors.

IN TWO STUDIES presented at the Multidisciplinary Head and Neck Cancer Symposium in January, researchers demonstrated that using PET/CT scans in head and neck cancer patient follow-up can enable detection of local recurrences before they become clinically apparent and that intensity-modulated radiotherapy (IMRT) can improve the quality of life for long-term head and neck cancer survivors.

PET/CT Detects Head and Neck Cancer Sooner

In the first study, Yasir Rudha, M.D., M.B.Ch.B., and colleagues evaluated the use of PET/CT in the routine follow-up of patients treated for squamous cell carcinoma of the head and neck. Researchers reviewed the cases of 234 patients who were treated with radiation between 2006 and 2010 and received post-therapy PET/CT scans.

Researchers retrospectively reviewed the charts of 45 patients who had no clinical evidence of disease at the time of imaging. Thirty of the patients exhibited negative PET/CT scans, which remained negative for the entire follow-up period. “The negative predictive value is extremely high, meaning that patients are free of disease and there is no need for more biopsies or surgeries,” said Dr. Rudha, lead author of the study and a researcher at St. John Hospital/Van Elslander Cancer Center in Grosse Pointe Woods, Mich.

The PET/CT scans identified abnormalities in 15 patients that required further evaluation. Of those, eight (53 percent) were proven malignant based on biopsy findings, while the remainder were shown to be false positives. The true positive rate of 53 percent suggests that PET/CT can be useful in detecting local recurrences before they become clinically apparent, which could improve the outcome of salvage therapy.

Considering that his review of the literature before conducting the study suggested that the false positive rate would be quite high—perhaps approaching 90 percent—Dr. Rudha found the considerably lower rate “surprising.”

“Positive results in PET scans, particularly in the first few months after treatment, could be caused by inflammatory changes due to radiotherapy or physiological uptake of radiopharmaceuticals,” Dr. Rudha said.



Chen



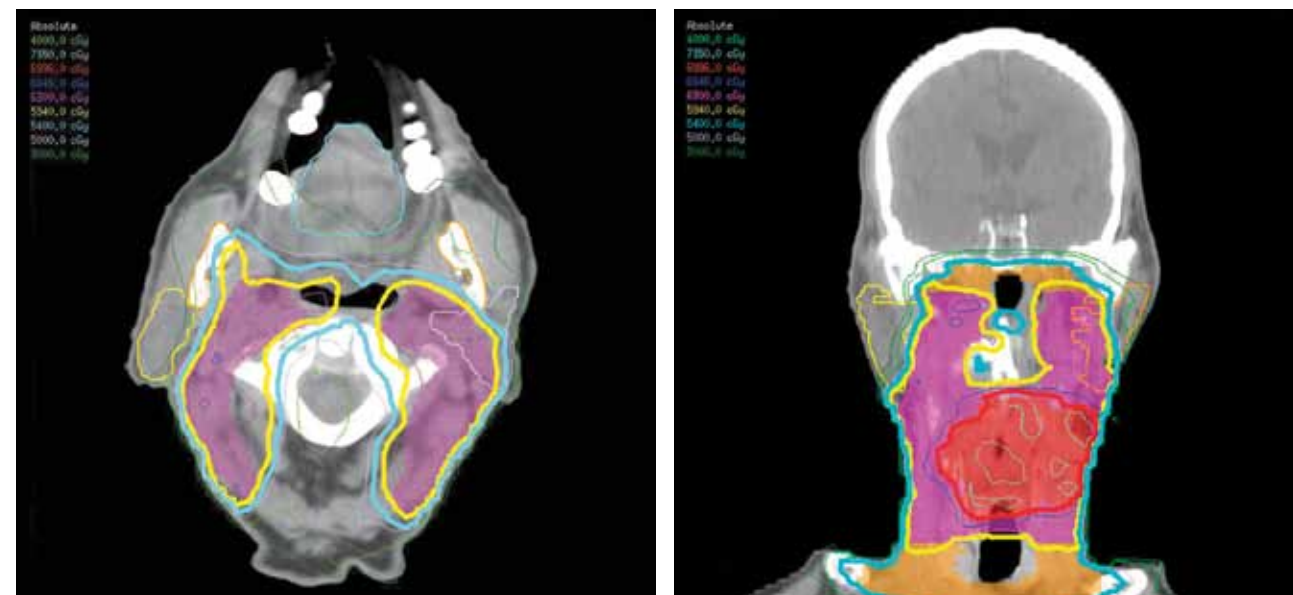
Rudha

While the false positive rate was lower than researchers expected, a positive finding should be treated cautiously to avoid unnecessary biopsies, Dr. Rudha said. “We can do another PET scan after three months or we can refer the patient to another imaging modality like MR imaging,” he said.

Essentially the findings support the continued use of PET scans for routine follow-up of patients with head and neck cancer, Dr. Rudha concluded.

“The results of this study provide further evidence that IMRT should be the standard treatment for head and neck cancer.”

Allen M. Chen, M.D.



Use of intensity-modulated radiotherapy (IMRT) in patients with head and neck cancer revealed substantial quality of life gains in the period following treatment, new research shows. *Left:* Axial section of a sample IMRT plan used to treat a patient with locally advanced larynx cancer demonstrating the ability of IMRT to spare the contralateral parotid gland (in yellow) and the oral cavity (in aqua); *right:* coronal section of a sample IMRT plan used to treat a patient with locally advanced larynx cancer demonstrates the ability of IMRT to spare the salivary glands (outlined in orange and yellow). The red, purple and orange colorwashes depict regions treated to high (70 Gy), intermediate (59.4 Gy) and low (54 Gy) risk for disease involvement.

Images courtesy of Allen M. Chen, M.D.

Use of IMRT Improves Outcomes

While IMRT has become widely adopted in managing head and neck cancer, limited clinical data exist on its potential impact on long-term quality of life, said lead researcher Allen M. Chen, M.D., an assistant professor and director of the radiation oncology residency training program at the University of California, Davis, School of Medicine.

“Radiation therapy for head and neck cancer has historically been very difficult for patients,” Dr. Chen said. “Many patients come into it expecting the worst case scenario. They envision a debilitating course of treatment that can result in pronounced side effects such as dry mouth, oral ulcers, taste distortion and difficulty swallowing—and often believe that radiation therapy can permanently diminish quality of life.”

In their research, Dr. Chen and colleagues compared long-term quality of life among patients treated with and without IMRT for head and neck cancer. The team retrospectively reviewed scores gathered from quality of life questionnaires completed by patients returning for follow up after completion of radiotherapy treatment. Of the 155 patients evaluated, 84 were treated with IMRT and 71 with 3D conformal radiotherapy (3DCRT).

Dr. Chen said that while many investigators had long speculated that IMRT has the potential to preserve function by more precisely delivering radiation compared to older techniques, he wasn't sure that this advantage would necessarily translate into a higher quality of life, as the subjective concept is affected by many compounding factors.

However, the research demonstrated significant quality of life gains associated with IMRT in the period immediately following treatment, which apparently increased over time. One year after completing radiation therapy, the number of patients who rated their quality of life as “very good” or “outstanding” was 51 percent and 41 percent among patients treated by IMRT and 3DCRT, respectively. At two years those percentages increased to 73 and 49 percent, respectively.

Consistent with previously published data, IMRT makes its most substantial quality of life impact when it comes to producing saliva. In this sub-category, 71 percent of IMRT patients (compared to 51 percent of 3DCRT patients) rated their quality of life as either “very good” or “outstanding” one year after treatment, with the percentage increasing to 77 percent (53 percent of 3DCRT patients) at two years.

Dr. Chen suggested the improved ability of patients to produce saliva after treatment with IMRT has a profound effect on a patient's overall attitude towards quality of life, pointing out that chronic dry mouth can impair a patient's ability to eat, swallow and speak.

The new research should reassure patients that IMRT has the ability to preserve quality of life, Dr. Chen said. “The results of this study provide further evidence that IMRT should be the standard treatment for head and neck cancer,” he added. □

WEB EXTRAS

☑ To access the abstracts, “Intensity-Modulated Radiotherapy is Associated with Improved Global Quality of Life Among Long-Term Survivors of Head and Neck Cancer,” by Allen M. Chen, M.D., and “The Value of PET Scan in the Routine Follow up of Patients With Squamous Cell Carcinoma of the Head and Neck,” by Yasir Rudha, M.D., M.B.Ch.B., go to rsnanews.RSNA.org.

☑ ASTRO poster presentations by these researchers are also available at rsnanews.RSNA.org.

RESEARCH & EDUCATION FOUNDATION DONORS

The R&E Foundation thanks the following donors for gifts made February 25, 2012 – March 23, 2012.



John O. Martin Jr., M.D.
Erik J. Maurer, M.D.
Gordon McLennan, M.D.
Matthias W. Meissnitzer, M.D.
Sarah S. Milla, M.D.
Bardia Moosavi
Andres Morgado, B.S.
Jennifer & Jonathan A. Morgan, M.D.
Nivine & James W. Moseley, M.D.
Kristine M. Mosier, D.M.D., Ph.D. & Andrew J. Kalnin, M.D.
Jeffrey H. Newhouse, M.D.
Susan M. Nichols-Hostetter, M.D.
Malak & Abdumounhem K. Obaideen Sr., M.D., D.I.S.

Dana O. Olson, M.D.
Hernando G. Ortiz, M.D.
Jeffrey W. Peeke, M.D.
Elmarie & Wynand J. Pretorius, M.B.Ch.B.
Mark S. Radowich, M.D.
Roberto Rivera, M.D.
Mark R. Robbin, M.D.
Roxie & Joseph J. Roco, D.O.
Justo Rodriguez, M.D.
Lisa & Donald F. Romanelli, M.D.
George I. Rosenberg, M.D.
Brenda M. Roy-Clark, M.D.
Shahzad Sadiq, M.D.
Sadayuki Sakuma, M.D., Ph.D.

James F. Schmutz, M.D.
Ingrid K. Schneider, M.D.
Shahzad & Ali Shirkhoda, M.D.
Richard J. Silberstein, M.D.
Ralph L. Smathers, M.D.
Haeja Jeong & Ho-Young Song, M.D.
Jenna & Mark R. Southard, M.D.
Elizabeth L. Tan, M.D.
Bill Thompson, M.D.
Thomas N. Thompson, M.D.
Eva Tlusty, M.D.
Salina D. Tsai, M.D.
Julie & Gary M. Turkel, M.D.
Bonita C. & David A. Turner, M.D.
In memory of Alexander Gottschalk, M.D.

Richard A. Vanbergen, M.D.
Janet & Ronald I. Veatch, M.D.
Dorota Wach, M.D.
Hong C. Wang, M.D.
Jerold B. Weinberg, M.D.
David L. Wells, M.D.
Rodrick A. Williams, M.D.
Michael Wise, D.V.M.
John R. Wohlwend, M.D.
Gary L. Wood, M.D.
Alain Zilkha, M.D.

Vanguard Program

Companies supporting endowments and term funding for named grants

HITACHI Inspire the Next

Hitachi Medical Systems
\$30,000
A founding Vanguard company since 1990

Visionary Donor Program

Individuals recognized for cumulative lifetime donations

SILVER VISIONARY (\$10,000)
Horacio R. D'Agostino, M.D., F.I.C.S.

BRONZE VISIONARY (\$5,000)
Betty & James W. Barber, M.D.
Beth M. Deutch, M.D.

Individual Donors

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

\$2,500 - \$4,999

Stamatia V. Destounis, M.D. & Manuel Matos, M.D.

\$1,500 - \$2,499

Amy & Shawn D. Teague, M.D.

\$500 - \$1,499

Luther W. Brady Jr., M.D.

In honor of Robert E. Campbell, M.D.

Sheila & Philip Costello, M.D., F.I.C.S.

Gary W. Swenson, M.D.

\$251 - \$499

Dolores Perez &

Jose C. Arduan, M.D., Ph.D.

Betty & James W. Barber, M.D.

Horacio R. D'Agostino, M.D., F.I.C.S.

Niamh & Gerard Hurley, M.D.

Angeline & Wilfred C. Peh, M.D.

Sally & Joseph M. Yee, M.D.

In honor of Michael Macari, M.D.

\$250 or less

\$250 - or less

Yukio Akita, M.D., Ph.D.

Donita & John E. Aruny, M.D.

Susan M. Ascher, M.D. & Paul E. Kalb

Nami R. Azar, M.D.

Locke W. Barber, D.O.

Stephen A. Barrant, M.D.

Sue A. Beier-Hanratty, M.D. &

Patrick M. Hanratty, Ph.D.

Gayle & Harold F. Bennett, M.D., Ph.D.

Martin Bledsoe, M.S.

Carol A. Boles, M.D. &

Mark A. Boles, M.D.

John P. Booker Jr., M.D.

Kelly & Robert M. Branstetter III, M.D.

Victoria &

Michael N. Brant-Zawadzki, M.D.

Inez & Michael C. Brunner, M.D.

In honor of Sandra K. Fernbach, M.D. &

Eric J. Russell, M.D.

Lauren M. Burke, M.D. &

Charles T. Burke, M.D.

Neil I. Chafetz, M.D.

Taylor Chung, M.D.

Yariv Cohen, M.D.

Emily F. Conant, M.D. & Jonathan

Conant

Daniel L. Corey, M.D.

Samuel F. Cort Jr., M.D.

Albert R. Cowie, M.D.

Angeles Cruz Diaz, M.D. &

Roberto Martinez

Eric A. Dame, M.D.

Michelle & Stephen D. DeFriez, D.O.

Beth M. Deutch, M.D.

Philip M. Ditmanson, M.D.

Bao H. Do, M.D.

Richard Kinh Gian Do, M.D., Ph.D.

John H. Doumanian, M.D.

Anne P. Dunne, M.D.

Stacie & Nathan D. Elfrink, M.D.

Zoraida Estela Jove, M.D. &

Jesus Manuel Salgueiro

David P. Fessell, M.D.

Linda Bertolotti, M.D. &

Francesco Fraioli, M.D.

Michelle & Nicholas C. Fraley, M.D.

Steve H. Fung, M.D.

Thomas E. Gallant, M.D.

Ayca Gazelle, M.D. &

G. Scott Gazelle, M.D., M.P.H., Ph.D.

Ross H. Golding, M.D.

Charles S. Gordon, M.D.

Amy B. Guest, M.D. & Jeffrey Guest

Kathleen & Bruce G. Haffty, M.D.

Mary R. & Donald P. Harrington, M.D.

William B. Harvey II, M.D.

Jose D. Herrera, M.D.

Helen M. Higgins-Minetti, M.D.

Nicole M. Hindman, M.D.

Ayanna & Hasan A. Hobbs, M.D.

Leo Hochhauser, M.D.

Adrian W. Holtzman, M.D.

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

Marvin W. Johnson, M.D.

April & Tom Joseph, M.D.

Otto J. Karlo, M.D.

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

Kate T. Doyle, M.D. &

Charles Knight, M.D.

John P. Knoedler Jr., M.D.

Robert A. Koenigsberg, D.O.

In memory of Mr. Eun Taek Yoo

The RSNA R&E Foundation provides the research and development that keeps radiology in the forefront of medicine. Support your future—donate today at RSNA.org/donate.

Kent T. Lancaster, M.D.

Timothy L. Larson, M.D.

Meredith & Steve M. Lemons, M.D.

Margaret R. Linn, M.D.

In honor of Robert J. Linn, M.D. and

Joanne L. Linn, M.D.

Willy J. Loretan, M.D.

Mary & Charles R. Luttenon, M.D.

Helga & Borut Marincek, M.D.

MOC News

ABR Focused Practice Pilot Programs Now Available

The American Board of Radiology (ABR) has announced new pilot programs in Focused Practice Recognition, offering unique opportunities previously unavailable through conventional American Board of Medical Specialties (ABMS) primary and subspecialty certification. The programs are designed for diagnostic radiologists who maintain a significant practice emphasis in cardiac CT or radiation oncologists whose practices focus on brachytherapy. In addition to other requirements, candidates must be ABR diplomates and active participants in Maintenance of Certification (MOC).



Focused Practice Recognition is suitable for elements of clinical practice that are an integral part of general training,

but for which there are no Accreditation Council for Graduate Medical Education (ACGME)-accredited fellowships. ABR diplomates with a practice concentrating on either cardiac CT or brachytherapy should strongly consider participating in these programs. Participants will receive recognition of their additional expertise in one of these areas, including online acknowledgement on the ABMS and ABR websites.

“Organized medicine has blessed these pilot programs, and as a result, ABR diplomates who participate are the only physicians who can receive such recognition,” said ABR Executive Director Gary J. Becker, M.D. “This credential is an enormous opportunity and will be

very valuable to patients, credentialers, referring physicians, peers, and Focused Practice participants themselves.”

Applications are made through the diplomate’s ABR Personal Database (PDB), which may be accessed at www.abronline.org. Diplomates with lifetime certification may participate by first enrolling in MOC. For more information and specific requirements, please visit the ABR website pages for Focused Practice Recognition in Cardiac CT (www.theabr.org/FP-cardiac) or Brachytherapy (www.theabr.org/content/fp-brachy).

New Login Process Launched for *Radiology*, *RadioGraphics* Mobile Apps

Before the extended free-trial period for *Radiology* and *RadioGraphics* mobile apps ends on June 1, members and subscribers to the online journals who already have the app installed on their devices will need to authenticate their subscriptions.

The apps were accessible free to all users as part of the initial launch of the RSNA journals apps, which include full-text content of current and recent issues. Members and subscribers can continue to access free app content by following a step-by-step tutorial for creating login credentials (See below). Your RSNA username and password is required for this one-time registration process.

The mobile apps are compatible with iPad and iPhone devices and are available for download at the iTunes app store.



Tap on the gear icon to get to the settings tab.

RSNA also offers mobile device-agnostic *Radiology* and *RadioGraphics* journal sites that allow anyone with a mobile device of any brand or operating system equipped with a Web browser to access, browse and read RSNA journal content in a more simplified way. Access these sites at *Radiology: m.radiology.rsna.org* and *RadioGraphics: m.radiographics.rsna.org*.

To access the step-by-step tutorial, go to RSNA.org/Journal_apps.aspx. RSNA members can access *Radiology* and *RadioGraphics* mobile apps for free at RSNA.org/publications/mobilead.html.

YOUR DONATIONS IN ACTION

With an RSNA R&E Foundation Research Resident Grant, **Brendan McCullough M.D., Ph.D.**, is examining the effects of vertebroplasty and kyphoplasty on long-term mortality and rates of major medical complications in Medicare patients with osteoporotic vertebral compression fractures.



Percutaneous vertebroplasty for an acute vertebral compression fracture.

Journal Highlights

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

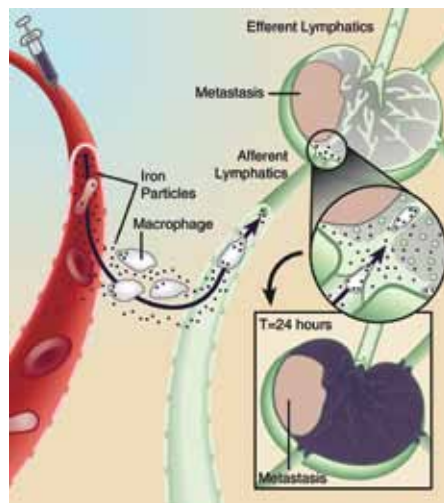
Molecular Body Imaging: MR Imaging, CT, and US. Part I. Principles

Techniques that allow imaging of molecular and cellular events facilitate and go hand in hand with the development of molecular therapies, offering promise for successfully combining imaging with therapy. While PET represents the mainstay of molecular imaging in current clinical practice, several nonnuclear imaging approaches hold promise for translation in the near future.

In the first part of a review series in the June issue of *Radiology* (RSNA.org/*Radiology*), Moritz F. Kircher, M.D., of Memorial Sloan Kettering Cancer Center, New York City, and Jürgen K. Willmann, M.D., of Stanford University, highlight recent nonnuclear molecular imaging approaches that use technologies applied in routine clinical radiologic practice and have potential for clinical translation in the future. Specifically, the authors discuss the principles of:

- MR-, CT- and ultrasound-based molecular imaging strategies
- Molecular MR, CT and ultrasound contrast agents
- Quantification of molecular ultrasound imaging signal by using ultrasound contrast microbubbles

"The coalescence of major advances in engineering, molecular biology, chemistry, immunology, and genetics has fueled multi- and interdisciplinary innovations with the goal of driving clinical noninvasive imaging strategies that will ultimately allow disease identification, risk stratification, and monitoring of therapy effects with unparalleled sensitivity and specificity," the authors write.



Mechanism of action for lymphotropic superparamagnetic nanoparticles, one of first clinically used cellular MR contrast agents. Systemically injected particles gain access to the interstitium and are drained through lymphatic vessels. In normal lymph node, iron oxide nanoparticles are taken up by phagocytic cells, which cause the lymph node to become dark on T2-weighted images due to susceptibility artifacts from iron. If a lymph node is partially or fully replaced by metastatic cells, fewer nanoparticles are retained in the lymph node, which therefore remains bright on T2-weighted images. (Adapted, with permission, from reference 35.)

(*Radiology* 2012;263;3:633-643)
©RSNA, 2012. All rights reserved.
Printed with permission.

MR Imaging of Hypervascular Lesions in the Cirrhotic Liver: A Diagnostic Dilemma

Depicting and characterizing hypervascular lesions in patients with cirrhosis with any imaging method is challenging, especially when lesions are small. Nevertheless, differentiating hepatocellular carcinoma (HCC) from other hypervascular lesions is a key step in treating patients and is the radiologist's responsibility.

In an article in the May-June issue of *RadioGraphics* (RSNA.org/*RadioGraphics*), Daniella B. Parente, M.D., of the Federal University of Rio de Janeiro, Brazil, and colleagues discuss the spectrum of hypervascular lesions that occur in the cirrhotic liver, their MR imaging characteristics and, the difficulty in characterizing small lesions.

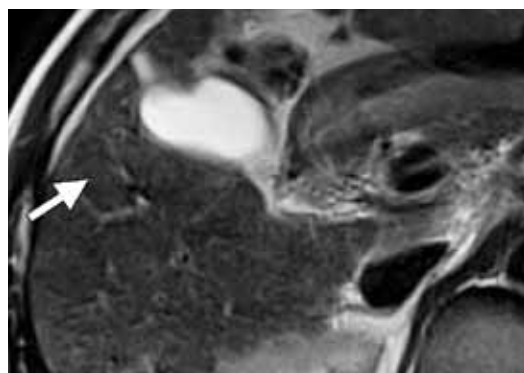
The authors also provide case scenarios.

Specifically, the authors:

- Describe the pathophysiologic mechanisms that occur in the cirrhotic nodules through the multistep process of carcinogenesis
- Discuss the treatment of hypervascular lesions on the basis of the Barcelona Clinic Liver Cancer system

"Accurate diagnosis relies on radiologists' familiarity with the multistep process of HCC development and the imaging findings associated with each stage," the authors write. "The major changes that characterize the progression from regenerative nodules through the steps of HCC development are progressive loss of portal vascularity and increased arterial blood flow."

RadioGraphics



High-grade dysplastic nodule or small HCC in a 52-year-old man with cirrhosis resulting from hepatitis C infection. Axial unenhanced T1-weighted three-dimensional (3D) spoiled gradient-echo and contrast-enhanced T2-weighted MR images show a small isointense nodule in segment V.

(*RadioGraphics* 2012;32;767-787) ©RSNA, 2012. All rights reserved.
Printed with permission.

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

Scholarly Journal Publishers Oppose Federal Research Public Access Act

The third introduction of legislation calling for free access to federally funded research is drawing opposition from more than 80 members of the U.S. journal publishing community, including RSNA.

Re-introduced in Congress in February, the Federal Research Public Access Act would require federal agencies with an extramural research budget of \$100 million or more to make federally funded research available for free online access by the general public, no later than six months after publication in a peer-reviewed journal.

The act would extend the National Institutes of Health (NIH) Public Access Policy—which ensures that the public has access to the published results of NIH-funded research—to other federal science agencies and shorten the embargo period from 12 to six months. In March, the Association of American Publishers (AAP) and the DC Principles Coalition sent letters to the House and Senate signed by 81 journal publishers

explaining their strong opposition to the legislation.

Publishers stressed their devotion to ensuring wide dissemination of the results of all peer-reviewed research, including that supported by federal funding, but criticized the bill for seeking to apply a "one-size-fits-all" deadline of six months before publishers must compete with a free version in a government database, thereby undercutting the subscription revenue stream that supports their publishing mission.

"The proposed legislation simply ignores new publisher business models that can provide immediate access to articles for patients, journalists or through public libraries, at little or no cost, and embodies a 'one-size-fits-all' mandate for public access that would discourage future publisher collaboration with federal agencies," they wrote.

Journal publishers support reasonable efforts by the federal government to make the results of publicly-funded research widely available, "and are ready

to continue collaboration with federal agencies to achieve that objective," according to the letter.

RSNA publishes *Radiology*, the leading monthly peer-reviewed science journal, and *RadioGraphics*, a bimonthly journal devoted to continuing medical education in radiology. Articles in both journals are free one year after publication. Articles may also be accessed without a subscription through Pay-per-View, which provides 24-hour article access for \$15. Articles are also available through DeepDyve for a modest 99-cent fee. Finally, RSNA deposits the final, published version of all articles stemming from NIH-funded research in the NIH Depository, PubMed Central.

To access the Federal Research Public Access Act, H.R.400 and S.2096 and track the status, go to www.thomas.loc.gov. To access the letter and view the full roster of signatures, go to www.publishers.org.

Radiology in Public Focus

Media Coverage of RSNA

From mid-February through March, media outlets carried 1,051 RSNA-related news stories. These stories reached an estimated 731 million people.

A study published online in *Radiology* received widespread attention in the press in March. "Orbital and Intracranial Effects of Microgravity: Findings at 3-T MR Imaging" was covered by more than 437,430 print, broadcast and online outlets, including newspaper articles in *The New York Times*, *Pittsburgh Tribune-Review*, *Charlotte Observer* and *San Antonio Express-News*, and broadcast news stories on KFI-AM (Los Angeles), WPVI-TV (Philadelphia), KPRC-TV (Houston), WKCF-TV (Orlando) and KGO-TV (San Francisco).

Print and broadcast coverage of other studies included *Plain Dealer, News & Observer, Sarasota Herald-Tribune, Idaho Statesman*, KHOU-TV (Houston), KHON-TV (Honolulu), WTVF-TV (Nashville), WFAA-TV (Dallas), WISN-TV (Milwaukee) and WOFL-TV (Orlando).

Online coverage included *The New York Times*, Yahoo! News, *U.S. News & World Report*, *Chicago Tribune*, *The Huffington Post*, *MSNBC*, *Boston Globe*, *The Miami Herald*, *San Francisco Chronicle*, BBC, Fox News and Medical News Today.



JUNE OUTREACH ACTIVITIES FOCUS ON IMAGING CHILDREN

In June, RSNA's 60-Second Checkup radio program focuses on how radiologists play a role in diagnosing children with ADHD.

Feedback Sought on Magazine Delivery

RSNA is assessing the quality of its mailing services for the print version of *RSNA News*. Does your copy regularly arrive torn, crumpled or otherwise damaged? Let us know by emailing tellus@rsna.org; please include your mailing address in your message.

Continued on Page 20

Education and Funding Opportunities



Final Call to Apply for RSNA Clinical Trials Methodology Workshop

January 12-18, 2013
Scottsdale, Ariz.
Applications due
June 4

OVER THE COURSE of this 6½-day workshop, each trainee will be expected to develop a protocol for a clinical study, ready to include in an application for external funding. Participants will learn how to develop protocols for the clinical evaluation of imaging modalities. A dynamic and experienced faculty will cover topics including:

- Principles of clinical study design
- Statistical methods for imaging studies
- Design and conduct of multi-institutional studies
- Sponsorship and economics of imaging trials
- Regulatory processes

Applicants will undergo a competitive selection process for course entrance. Once admitted, trainees will participate in advance preparation, didactic sessions, one-on-one mentoring, small group discussions, self-study and individual protocol development. Familiarity with basic concepts and techniques of statistics and study design is required. See RSNA.org/Clinical_Trials_Methodology_Workshop.aspx for more information. Questions can be directed to Fiona Miller at 1-630-590-7741 or fmiller@rsna.org.

RSNA Derek Harwood-Nash International Fellowship

Applications due
July 1

INTERNATIONAL radiologists three to 10 years beyond training are invited to apply for this six- to 12-week fellowship at a North American institution. Up to three fellows will be selected.

The application for this program is available at RSNA.org/Derek_Harwood-Nash_International_Fellowship.aspx. For more information, contact Fiona Miller at fmiller@rsna.org or 1-630-590-7741.



Medical Meetings June-August 2012

JUNE 14-17
World Congress on Interventional Oncology (WCIO), Sheraton Chicago Hotel & Towers
• www.wcio2012.org

JUNE 16-19
International Diagnostic Course Davos (IDKD), 2nd IDKD Intensive Course in Hong Kong, Diseases of the Abdomen and Pelvis, Hong Kong Convention and Exhibition Centre
• www.idkd.org

JUNE 22-24
European Society of Thoracic Imaging (ESTI), 20th Annual Meeting, Church House, London
• esti2012.org

JUNE 25-27
U.K. Radiological Congress (UKRC), Manchester Central Convention Centre, England
• www.ukrc.org.uk

JUNE 28-30
European Society of Musculoskeletal Radiology (ESSR), 19th Annual Scientific Meeting, Congress Innsbruck, Austria
• www.essr.org

JULY 11-14
Canadian College of Physicists in Medicine (CCPM), Annual Symposium, Westin Nova Scotian, Halifax, Nova Scotia, Canada
• www.ccpm.ca

JULY 12-13
Association of Educators in Imaging and Radiologic Sciences (AEIRS), Annual Meeting, Chateau Bourbon, New Orleans
• www.aeirs.org

JULY 19-22
Society of Cardiovascular Computed Tomography (SCCT), SCCT 2012 - 7th Annual Scientific Meeting, Baltimore Marriott Waterfront
• www.scct.org

JULY 29-AUGUST 2
The American Association of Physicists in Medicine (AAPM), 54th Annual Meeting, Charlotte Convention Center, North Carolina
• www.aapm.org/meetings/2012AM

Incorrect application deadlines for the RSNA Clinical Trials Methodology Workshop and Introduction to Academic Radiology Program appeared in the May 2012 issue of *RSNA News*. Please refer to this page or RSNA.org/Science_and_Education.aspx for the correct information.

RSNA Advanced Course in Grant Writing

Applications due
July 31

APPLICATIONS are now being accepted for this course designed to assist participants—generally junior faculty members in radiology, radiation oncology or nuclear medicine programs—prepare and submit a National Institutes of Health (NIH), National Sciences Foundation (NSF) or equivalent grant application by the October 2013 deadline. The course, to be held at RSNA Headquarters in Oak Brook, Ill., will consist of four two-day sessions: October 12-13, 2012; January 25-26, 2013; March 15-16, 2013; and May 3-4, 2013.

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



RSNA/AUR/ARRS Introduction to Academic Radiology Program

Application deadline
July 15

SPONSORED by RSNA, the American Roentgen Ray Society (ARRS) and Association of University Radiologists (AUR), the Introduction to Academic Radiology program:

- Exposes second-year residents to academic radiology
- Demonstrates the importance of research in diagnostic radiology
- Illustrates the excitement of research careers
- Introduces residents to successful clinical radiology researchers
- Successful applicants will be assigned to either a seminar held during the RSNA Scientific Assembly in Chicago,

November 25-29, 2012 or the ARRS Scientific Meeting in Washington, DC, April 14-19, 2013.

More information is available at RSNA.org/Introduction_to_Academic_Radiology_

asp. Questions can be directed to Fiona Miller at 1-630-590-7741 or fmiller@rsna.org.

Radiology in Public Focus

Continued from page 18

Other Radiology Headlines

Cryoablation Therapy Spot-Freezes Breast Cancer Tumors

Patients fighting metastatic breast cancer may finally have another weapon in their arsenal: percutaneous cryoablation. The cancer treatment could potentially be used as a last line of defense to halt individual spots of remaining metastatic disease by freezing and destroying tumors, according to new research presented at the recent Society of Interventional Radiology's (SIR) recent annual meeting in San Francisco.

"Cryoablation as a targeted therapy is beneficial because it can significantly reduce discomfort and incidence of disease," Peter J. Littrup, M.D., director of imaging core and radiology research at the Karmanos Cancer Institute in Detroit, said in a press release. "It's a much better option, we think, than surgery,

especially since many metastatic patients are not candidates for surgery, and it may potentially lead to longer survival if it coincides with more data concerning primary metastases in other regions of the body."

In the study, eight patients with nine tumors received percutaneous cryoablation procedures guided with CT, ultrasound or a combination of both methods. Six of the eight subjects had formerly undergone at least a single mastectomy prior to treatment with percutaneous cryoablation. Secondary tumors in the patients were found in the liver, lung and kidney.

No serious complications resulted and all procedures were considered successful. All individual tumors remaining

in the body were found and the local cancer did not recur. The median overall survival for those in the study was 46 months and 25 percent survived past the five-year anniversary of treatment. Researchers conclude that percutaneous cryoablation could potentially be used as an effective alternative treatment for metastatic breast cancer.

"This is a preliminary study, and at this point we're hoping that the evidence could be a stepping stone for a bigger study to look at more patients," Dr. Littrup said. "If we can get more data that supports percutaneous cryoablation for metastatic breast cancer, it could be a huge finding."

Annual Meeting Watch

Course Enrollment Begins July 11

The RSNA 2012 Advance Registration, Housing and Course Enrollment brochure will be mailed in late June to all RSNA members and 2012 non-member meeting registrants and will be available starting July 11 online at RSNA2012.RSNA.org. Those registering for RSNA 2012 prior to June 15 who wish to view course enrollment information online only can “opt out” of receiving the copy by mail during online registration. Use this brochure to make the most of your RSNA 2012 experience. With information organized 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, informatics workshops and RSNA tours and events.

All ticketed courses must be confirmed prior to November 21 to guarantee a seat. RSNA ticketed courses fill up fast, so ensure you get the courses you need by enrolling at RSNA.org/register. There is no onsite course ticketing. Registrants without tickets will be allowed entrance into a course after all ticketed registrants have been seated.

**CME Update: This live activity has been approved for *AMA PRA Category 1 CME Credits*™



Save on This Year's Airfare, Enter to Win Future Travel Credit

RSNA attendees who book air travel through Gant Travel by September 28 will be entered into a drawing to receive a \$500 (USD) travel credit good toward future airfare on United Airlines. Benefits of using Gant Travel for RSNA 2012 include:

- Fare-checker technology (checking for lower fares until your return flight home)
- Seat-checker technology (checking for the best available seats per your preference)
- Emergency assistance available by phone
- Flight monitoring alerts

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

RSNA 2012 Registration

How to Register

There are four ways to register for RSNA 2012:

1 INTERNET—Fastest way to register!

Go to RSNA.org/register

2 FAX (24 hours)

1-888-772-1888

1-301-694-5124

3 TELEPHONE

(Mon.-Fri. 8 a.m. – 5 p.m. CT)

1-800-650-7018

1-847-996-5876

4 MAIL

Expert/RSNA 2012

P.O. Box 4088

Frederick, MD 21705 USA

Registration Fees

BY NOV. 2 AFTER NOV. 2

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

Important Dates for RSNA 2012

June 6	Non-member registration and housing open
July 11	Course enrollment opens
Oct 19	Deadline for international badge mailing
Nov 2	Deadline for housing and discounted registration
Nov 21	Deadline for guaranteed seating to all ticketed courses
Nov. 25 – 30	RSNA 98th Scientific Assembly & Annual Meeting

Buy Bistro RSNA Tickets Now

Avoid long lines and save money by purchasing Bistro RSNA tickets early this year.

Advance tickets for Bistro RSNA—which provides a comfortable setting for attendees to eat, meet and network during the annual meeting—are only \$21.

Bistro RSNA is located in all three Technical Exhibit Halls and the Lakeside Learning Center. The daily lunch menu includes salads, soup, entrée choices, vegetables, pasta and more. Menu price includes full meal, beverage choices and dessert.

Purchase tickets in advance during online registration at RSNA.org/register.



Bisset Featured in Online Meeting Video

Visitors to the newly redesigned annual meeting page at RSNA2012.RSNA.org can view a message from 2012 RSNA President George S. Bisset III, M.D., discussing highlights of the RSNA 2012 Annual Meeting.

Also featured:

- “Learn Why Exhibiting Works” video spotlighting the RSNA Technical Exhibition
- “RSNA 2012” video capturing various facets of the RSNA annual meeting experience

Be sure to visit RSNA2012.RSNA.org regularly to access new information updated throughout the year.



International Visitors

International Invitation Letters Available—Act Now for Visa

Personalized letters of invitation to RSNA 2012 are available by request during online registration. In addition, the International Visitors section of RSNA2012.RSNA.org includes important information about the visa application process. Visa applicants are advised to apply as soon as they decide to travel to the U.S. and at least three to four months in advance of their travel date. International visitors are advised to begin the visa process now.



The Value of Membership

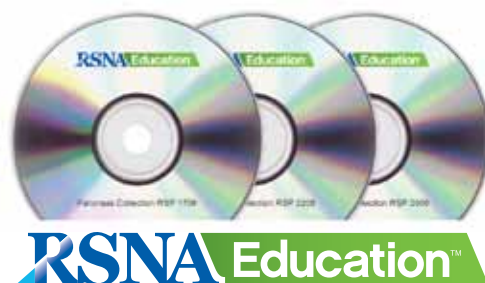
RSNA 2011 Refresher Courses Now Online

A great addition to your education library, 20 refresher courses recorded at RSNA 2011 are now available online and for purchase on CD-ROM. New this year, an additional 10 refresher courses have been added to the online self-assessment modules (SAMs) library.

Each year, RSNA records a limited number of annual meeting refresher courses for future interactive, online sessions. Each course is presented in an audiovisual format, including slides and audio from each presentation. A course transcript and a detailed outline are available throughout the presentation. Using an integrated search feature, users can search a presentation for specific terms that redirect them to a relevant portion of the course for enhanced learning.

Although refresher courses can be viewed free online, only RSNA members have the added benefit of earning *AMA PRA Category 1 Credit™* for each course. Online SAMs refresher courses are available free to all members; nonmembers pay \$50 to access the course and earn CME/SAM credit.

To view the newest courses, visit RSNA.org/education and click on "Online Education" or call 1-800-272-2920 for more information.



Job Seekers, Employers Benefit from Career Connect

Whether you're looking for that ideal radiology job or the perfect candidate to fill such a position, RSNA's Career Connect is your one-stop resource for the radiology profession.

Job seekers can post resumes for free, create a Search Agent to filter out unwanted positions and receive e-mails when the perfect job becomes available. Job ads are updated daily with the latest job listings in the field.

Employers can post job positions, receive e-mail notification when someone applies to an ad and access a large resume database. Employers can also

enhance their candidate search for a minimum fee by placing an ad in the Employer Spotlight that runs along the top of all job search results pages.

For more information on Career Connect, go to RSNA's newly redesigned Web page at careers.rsna.org, featuring news and updates, a list of FAQs, feedback/contact button and more.



Transitioning Members Offered Graduated Dues

RSNA members-in-training have an opportunity to take advantage of the RSNA Graduated Dues Program as they transition into a paid membership.

Beginning with the first year in practice, dues for transitioning resident and fellow members are \$100, and \$200 in the second year, allowing them time to settle into the profession through the Graduated Dues Program. Full dues are not required until their third year.

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

For more information, go to RSNA.org/Transitioning_Members.aspx or contact the Membership Department at 1-877-RSNA-MEM (1-877-776-2636) or membership@rsna.org.

THE NEW RSNA.org

Member Portal is Your Hub for RSNA Resources

It's well known that RSNA membership has its benefits. Now access them even more readily with the member portal on the redesigned *RSNA.org*.

The all-new RSNA member portal—accessible on the top menu bar above the search field—consolidates the resources members use most in one convenient location, including:

► **Member Highlights:** Access links to resources including the RSNA Annual Meeting, myRSNA® and journals pages.

► **Member Resources:** Your connection to a host of popular RSNA resources, including:

Quality Improvement: Discover programs and tools designed to support practice assessment and improve the delivery of healthcare in radiology.

Educational Opportunities: Earn instant CME credit online in many subspecialty areas with hundreds of CME and self-assessment module (SAM) opportunities.

R&E Foundation: Launch your research and education career with grant opportunities or make a gift to support radiologic research.

Grant Writing and Research Development Programs: Apply for workshops, programs and courses to help you develop grant writing skills and further your career in radiologic research.



In addition, colorful icons at the bottom of the page direct users to the RSNA annual meeting, myRSNA and educational offerings. Social media links are your resource for starting and joining conversations.

COMING NEXT MONTH

Adding further data to the debate over self-referral, new research shows that radiologists' recommendations for follow-up exams account for less than 6 percent of high-cost outpatient imaging exams. Read our report in next month's *RSNA News*.

The finest breakthroughs

in medical imaging

emerge here.



RSNAFANS



#RSNA12

- ▶ **FREE advance registration for RSNA/AAPM members.**
- ▶ **Unparalleled continuing education opportunities.**
- ▶ **Technical exhibition showcasing nearly 700 exhibitors.**
- ▶ **Networking with professionals from more than 125 countries.**
- ▶ **Magnificent Chicago entertainment, dining and shopping experiences.**

This live activity has been approved for AMA PRA Category 1 Credit™

Member
Registration
Now Open

General
Registration
Opens June 6

Register online at

RSNA.org/register

RSNA2012.RSNA.org

Radiological Society of North America
98th Scientific Assembly and Annual Meeting

November 25-30
McCormick Place, Chicago

RSNA® 2012

