RSNA News™

October-November 2013  Volume 23, Numbers 10 & 11

DOUBLE ISSUE

Annual Meeting Preview
and Restaurant Guide

RSNA® 2013
The Power of Partnership
December 1–4 | McCormick Place | Chicago

ALSO INSIDE:
RSNA Journals Offer Open-Access Option
RSNA Gears up for Green Meeting
RSNA’s Online Education Goes Mobile
Study Shows Benefits of DR Mammography

Final Advance Registration
Ends November 8
HAVE A SEAT.
TAKE A BREATH.

With the vast offerings RSNA 2013 provides, it’s impossible to see it all at McCormick Place. Add the Virtual Meeting to your registration and tune in to live and on-demand sessions during RSNA 2013 and on-demand through December 13.

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

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2014 RSNA Membership Renewal Under Way

RSNA membership renewal for 2014 is underway. Renew online at RSNA.org/renew or by mail with the invoice sent to you early in October. When renewing, take a moment to update your profile with current contact information.

All RSNA members have access to RSNA journals online. Because online access to Radiology and Radiographics is tied to membership status, if your payment has not been received by December 31, 2013, your online subscriptions will be automatically inactivated. Practices can take advantage of RSNA’s group billing option. For more information on the option and/or to renew membership by phone, contact the RSNA Membership Department toll-free at 1-877-RSNA-SEM or at 1-630-571-7873, or send an e-mail to membership@rsna.org.

2014 R&E GRANT APPLICATION PROCESS OPENS THIS MONTH

Individuals interested in obtaining RSNA Research & Education (R&E) Foundation grants for 2014 can begin submitting their applications starting in October. For more information, go to RSNA.org/Foundation or contact Scott A. Walter, M.S., Assistant Director, Grant Administration at 1-630-571-7818 or swalter@rsna.org. Grants available include:

EDUCATION GRANTS
- Deadline – Jan 15
  - Education Scholar Grant
  - RSNA/AUR/APDIR/SCARD Radiology Education Research Development Grant

RESEARCH GRANTS
- Deadline – Jan 15
  - Research Scholar Grant
  - Research Seed Grant
  - Research Resident/Fellow Grant

RSNA NEWS ONLINE

Jadvar
Treves
Wong
Herscovitch
Dillehay
Mukherji
Piwnica-Worms
Fraass

SNMMI Names Officers, Bestows Awards

Gary L. Dillehay, M.D., a professor of radiology at Northwestern Memorial Hospital in Chicago, was named president of the Society of Nuclear Medicine and Molecular Imaging (SNMMI) during its recent annual meeting in Vancouver, Canada. Other SNMMI officers elected for 2013-14 are Peter Herscovitch, M.D., director of the PET department at the National Institutes of Health (NIH)-Clinical Center in Bethesda, Md., president-elect; and Hossein Jadvar, M.D., Ph.D., M.P.H., M.B.A., tenured associate professor of radiology and biomedical engineering and vice-chair of radiology research at the University of Southern California Keck School of Medicine in Los Angeles, vice president-elect.

Dean F. Wong, M.D., Ph.D., professor and vice-chair of radiology and professor of psychiatry, neuroscience, environmental health sciences at Carey School of Business, Johns Hopkins University in Baltimore, received the prestigious Paul C. Asberg Award recognizing outstanding achievement in basic science applied to nuclear medicine.

S. Ted Treves, M.D., professor of radiology and director of the Joint Program in Nuclear Medicine at Harvard Medical School, received the Georg Charles de Hevesy Nuclear Pioneer Award for his contributions to nuclear medicine. Dr. Treves also serves in several capacities at Brigham & Women’s Hospital, the Dana-Farber Cancer Institute, and Children’s Hospital, where he founded the first Division of Nuclear Medicine and served as its chief for more than 40 years.

Piwnica-Worms Named Chair at MD Anderson

MD Anderson Cancer Center at the University of Texas has named David Piwnica-Worms, M.D., Ph.D., as chair of the Department of Cancer Systems Imaging and deputy division head of research affairs for the Division of Diagnostic Imaging. Dr. Piwnica-Worms previously served as director of the Washington University Medical School Molecular Imaging Center and its BRIGHT (Bridging Research with Imaging, Genomics and High-Throughput Technologies) Institute.

Dr. Piwnica-Worms received a two-year Squibb Diagnostics (now Bracco Diagnostics Inc./RSNA Research Scholar Grant in 1993 and a RSNA Research Seed Grant in 1989. He has served on numerous RSNA committees and is a current member of the RSNA Public Information Advisors Network (PIAN).

Fraass Receives AAPM William D. Coolidge Award

The American Association of Physicists in Medicine (AAPM) awarded renowned medical physicist Benedict Fraass, Ph.D., the William D. Coolidge Award for his distinguished career, including his pioneering work in radiation oncology, at the Society’s recent annual meeting in Indianapolis.

Dr. Fraass is vice-chair of research and a professor and director of medical physics in the Department of Radiation Oncology at Cedars-Sinai’s Samuel Oschin Comprehensive Cancer Institute, Los Angeles. Dr. Fraass was named professor emeritus of the University of Michigan in 2011, where he served as director of the Radiation Oncology Physics Division from 1984 to 2011.

Mukherji Named Michigan State University Chair

Suresh K. Mukherji, M.D., was named chair of the Department of Radiology at Michigan State University in East Lansing. Dr. Mukherji formerly served as division director of neuroradiology at the University of Michigan.

Dr. Mukherji received a Nycomed Inc./ RSNA Research Seed Grant in 1993 and a Fuji Photo Film/RNSA Research Scholar Grant in 1996. He currently serves on the R&E Foundation Public Relations Committee and the Neuroimaging/Head and Neck Scientific Program Subcommittee.
ESGAR HONORS CLAUSEN AND SOMERS

Claus Clausen, M.D., and Sat Somers, M.D., were awarded honorary fellowships by the European Society of Gastrointestinal and Abdominal Radiologists (ESGAR) at the recent Annual Meeting and Postgraduate Course held in Barcelona, Spain. Dr. Clausen is a professor of radiology and chair of the Department of Diagnostic and Interventional Radiology at Eberhard-Karls University in Tübingen, Germany. Dr. Somers is a professor and chair emeritus of the Department of Radiology at McMaster University, Ontario, Canada.

In Memoriam

Sidney Wallace, M.D.

Sidney Wallace, M.D., a pioneer in intervention- al radiology, died May 25, 2013. He was 84.

Dr. Wallace was professor emeritus of the University of Texas MD Anderson Cancer Center in Houston, where he served as a professor of radiology, chair of the Department of Diagnostic Radiology and head of the Division of Diagnostic Imaging. Dr. Wallace was instrumental in advancing the knowledge and techniques used in interventional radiology. He was one of the first to recognize intervention radiology’s unique role and advocated for supervising patient care and taking an active role in the decision-making process.

Dr. Wallace served on the editorial board of the American Journal of Roentgenology, Radiology and teaching committee of Seminars in Interventional Radiology, and was associate editor of AJR. He was a member of the editorial board of the American Journal of Roentgenology and the American Journal of Neuroradiology.

Host Societies Sought for International Visiting Professors

National radiology societies in, or that primarily serve, developing countries are invited to apply to host an RSNA International Visiting Professor (IVP) team. The IVP team will lecture at the host’s national radiology society meeting. In addition, the host will be responsible for organizing visits to educational institutions that have active radiology training programs with the need and potential for educational enrichment from a visiting professor team.

Host societies are also expected to provide hotel accommodations and meals for the IVP team for the duration of their visit and communicate program, schedule and hospitality arrangements to IVP team members and RSNA staff. The deadline to apply for 2015 IVP visits is December 31, 2013. For more information and an application at RSNA.org/InternationalVisitingProfessor_Program.aspx.

My Turn

Residents and Fellows Help RSNA Shape Radiology’s Future

As my tenure as Chair of the RSNA Resident and Fellow Committee (RFC) comes to an end, it is a good time to look back at what we have accomplished and look forward to what is yet to come. The RFC started as a group of 23 members-in-training, all with the common goal of improving the educational experience through the RSNA. At the risk of sounding like pioneers, our accomplishments have far exceeded what we thought was possible.

Fellowship Connect was developed to help residents find fellowships that suited their needs based on their own search criteria. The goal was to ease the process of fellowship searches. Our database of fellowships has grown to include fellowships accredited by the ACGME and many which are not, which are sometimes difficult to track down. More than 40,000 hits from inside and outside the U.S. attest to the success of our efforts.

We then posed the question, “What are our needs as graduating residents and fellows that our training programs don’t always incorporate into the curriculum?” The result was the Resident and Fellow Symposium. Our inaugural 2011 program was dedicated to helping prepare trainees to negotiate job offers and to recognize potentially costly errors. Last year, we sponsored a legal seminar to help trainees understand contracts and avoid pitfalls. In 2013, we are focusing on career survival skills and how to stay essential to your job. We have had more than 500 attendees so far and are looking forward to more exciting offerings in the future.

With the changing board certification systems, residents need guidance to prepare for the new exam. I can remember my oral board preparation and how many of my co-residents would share Radiographics articles and links to useful web sites that served as valuable study tools. We distilled large amounts of information from journals and the Web into what we felt were essential learning points.

In the near future, the RFC will unveil the RSNA Education Portal, a feature within myRSNA that residents can use to upload their favorite links so that every- one can benefit from sharing resources through a central site. The editorial teams from Radiology and Radiographics are also participating by tagging articles that are appropriate for trainees.

RSNA has been incredibly supportive of the RFC by providing us with a wealth of resources and helping to bring our ideas to fruition. In the future I would like to see the RFC develop additional RSNA programming and scholarships for international outreach work. Everyone can benefit from studying the challenges in healthcare from a global perspective. It has been an honor and a privilege to chair this committee. I am certain the committee will continue to exceed all expectations.

Aparna Annam, D.O., is an assistant professor at the Children’s Hospital of Colorado in Aurora, specializing in diagnostic pediatric radiology and pediatric interventional radiology. Dr. Annam chairs the RSNA Resident and Fellow Committee.

Read more about RSNA 2013 Residents and Fellows programming and activities on Page 41.

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Get more of this month’s news with the RSNA News Tablet edition, available for download through the App Store and Google Play.

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International Day of Radiology

RSNA, the European Society of Radiology (ESR) and the American College of Radiology (ACR), along with other participating societies around the world, will celebrate the second International Day of Radiology (IDoR) on November 8, the anniversary of the discovery of X-rays by Wilhelm Conrad Roentgen, Ph.D. IDoR is meant to build greater awareness of radiology’s value and contributions to patient care and the vital role of the radiologist in the healthcare continuum.

Last year, national societies recognized the day through various activities, including lectures, symposia, social media promotions and press events. The main focus of IDoR 2013 will be lung imaging, highlighting the important role that radiology plays in the detection, diagnosis and management of a wide variety of lung diseases.

Two new booklets, The Story of Radiology, Vol. II and Thoracic Imaging, will be available, along with additional promotional materials, for download on RSNA, ACR and IDoR websites. For more information on how you can join the celebration, visit IDoR2013.com or RSNA.org/IdoR2013.

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Meeting Organizers “Plan It” with the “Planet” in Mind

Disposable cups?

That was the reaction of Elizabeth Holland, M.D., an RSNA member and self-described environmental advocate from River Forest, Ill., during a coffee break at a large group meeting she attended in a Chicago hotel. Curious, she approached the concierge. “I explained that we were a captive audience—no one was taking their coffee out of the building,” she said. “I asked if it would be possible to use china mugs instead, and the hotel agreed, I’ve found that if you ask politely, people don’t turn you down.”

Changing to china from paper cups is one among myriad examples small and large of how planners, venue operators, vendors and even attendees are working to reduce the environmental impact of large gatherings like the RSNA annual meeting. According to the Beaverton, Ore.-based Green Meetings Industry Council, the “green meeting” reduces waste, increases efficiency and supports the local community while still achieving goals like education, advocacy and social networking.

The RSNA annual meeting is particularly green, thanks to the efforts of its vendors, volunteers, attendees and staff. Green meeting efforts during RSNA 2012 resulted in 250 tons of materials diverted from the landfill. The environmental impact of the 2012 activities can also be described as saving 3,800 trees, 86,000 gallons of oil, 929,000 kilowatts of electricity and 1.6 million gallons of water.

“With a green meeting, from the very moment you begin planning you are cognizant of the least environmental impact you can have,” said Dr. Holland, who volunteers on environmentally focused projects in her local community and has helped RSNA achieve “green” standing, taking on larger projects such as replacing plastic products and using biodegradable flatware, straws, serving dishes and cups.

Attendees are Partners Too

In addition to the efforts of vendors, vendors and hosts, successful green meetings urge attendee participation as well, Cooper said. RSNA makes it convenient for attendees to recycle paper, plastic and aluminum in receptacles throughout McCormick Place, and drop off unwanted bags, programs, lanyards and badges for recycling as well. Attendees are also encouraged to be environmentally smart in transportation by riding the Metra Electric trains, using the complimentary shuttle or sharing a cab, to consider turning off their hotel room lights, electronics and heat when the room is unoccupied and to use refillable bottles at water stations located throughout McCormick Place.

Dr. Holland urged RSNA attendees to think about their roles as physicians when it comes to helping RSNA achieve the very greenest meeting possible. “Go back to your core principles and it becomes easier,” she said, noting that many physicians find a natural fit as they try to protect their patients from pollution and other environmental harms. “We need to be models of how to do things right,” she said.

GREEN EXAMPLES

Here are some ways that venues such as McCormick Place, and the organizations and vendors who use them, have made meetings more environmentally friendly:

- Using Green Seal-certified cleaning products and restroom products that are 100 percent post-consumer recycled content paper
- Reserving a portion of parking for low-emitting and fuel efficient vehicles
- Eliminating the use of Styrofoam and polystyrene plastic products and using biodegradable flatware, straws, serving dishes and cups
- Donating excess food to a local food bank
- Ensuring that potential pest abatement is handled with the least environmental impact possible
- Asking that landscaping proposals incorporate a green plan which includes use of environmentally friendly products and practices such as composting and water conservation

With a green meeting, from the very moment you begin planning you are cognizant of the least environmental impact you can have.”

Elizabeth Holland, M.D.
Ontario Switches to DR Mammography Based on Radiology Study

A study recently published in Radiology showing that mammography using digital direct radiography (DR) is more effective at detecting breast cancer than mammography using computed radiography (CR) had an immediate impact on healthcare in the province of Ontario, where the research was conducted.

On Mar 14, the day after the Radiology study was published online, Deb Matthews, minister of health and long-term care for Ontario, announced that based on the results of the study, the province would be phasing out CR mammography devices and replacing them with DR mammography devices over the coming months. The Radiology study was based on data from the Ontario Breast Screening Program (OBSP).

Researchers are understandably excited about the outcome of their study. “In the OBSP we strive for excellence and we want to provide women coming to this program with the best technology possible,” said the study’s lead author, Anna M. Chiarelli, Ph.D., senior scientist in Prevention and Cancer Control at Cancer Care Ontario in Toronto. “Until this study was conducted, there was really no clinical evidence suggesting there was this difference. We’re very confident in our data, so the government decided to take these measures in Ontario.”

In the study, Dr. Chiarelli and colleagues identified three groups of women 50 to 74 years of age who were screened in the OBSP between January 1, 2008 and December 31, 2009. Slightly more than 400,000 women were screened with screen-film mammography, 220,520 were screened with CR and about 64,210 with CR mammography. All were followed for 12 months after screening.

The difference lies with the technical process that covers: digital direct radiology, (shown above), is more effective at detecting breast cancer than computed radiography, according to recent Radiology research.

“With CR mammography, information is lost in processing. The images tend to lower resolution compared to DR mammography.”

Derek Muradali, M.D.

“With CR mammography, information is lost in processing. The images tend to lower resolution compared to DR mammography.”
RSNA Journals Offer Open-Access Option

A new RSNA policy for open access (OA) publishing will provide options for authors whose research requires adherence to OA rules, yet still enable its journals’ business model to remain sustainable. Originally applicable only to publicly funded research in the United Kingdom, wider adoption of OA publishing has already begun and is a potential threat to subscription-based journals like Radiology, RSNA’s Publications Council cautioned.

Open access publishing—free, unrestricted access to publications and data via the Internet—has expanded considerably over the past decade. The OA model typically offers authors two pathways. In the “gold” model, authors or funders pay article processing charges (APCs) that make articles available to the public immediately upon publication. The “green” model allows for public access after a short embargo period.

A model developed by RSNA’s Publications Council and approved by the RSNA Board of Directors in June 2013 is essentially a hybrid version that will offer authors whose research funders mandate open access a choice of gold or green access. The policy applies to the RSNA journals Radiology, a peer-reviewed scientific journal, and Radiographics, a peer-reviewed journal devoted to continuing medical education in radiology. Articles in Radiology and Radiographics have been freely accessible after one year since 2004.

Under RSNA’s new OA policy, authors who opt to make their articles immediately available to the public will pay a $5,000 fee to help recoup the journal’s peer review, editorial, production, and distribution costs.

“We don’t want anyone with an OA mandate to be dissuaded from choosing Radiology,” said William T. Thorwarth Jr., M.D., RSNA Board Liaison for RSNA Publications and Communications and Chair of the RSNA Publications Council. “Those authors submitting under gold open access must submit the article processing charge at the time of acceptance that will cover some, but not by any means all, of the cost of processing the article through our system.”

Will Open Access Impact Editorial Quality?

The new policy reflects the changing realities faced by publishers of subscription-based journals in the OA era. The number of OA articles published in the biomedical field grew from 7,400 in 2001 to 128,000 in 2011, according to a 2012 study in the online journal BMC Medicine, co-authored by Bo-Christer Björk, a professor at the Swedish School of Economics and Business Administration in Helsinki.

Current National Institutes of Health (NIH) mandates require that peer-reviewed journal manuscripts arising from research supported by NIH funds be made accessible to the public through PubMed Central, the agency’s free online repository, no later than 12 months after publication. While OA advocates applauded these developments, some editors are concerned that the changes could end up compromising editorial quality.

“Clearly, there has been a push on the part of the government toward open access,” said Jeffrey S. Klein, M.D., editor of Radiology. “What gets lost in that is the value that publishers add to material.”

“There is a lot of costly effort that goes into the high-quality journals we publish, not just in editing and production but in the peer-review process,” said Dr. Thorwarth, a radiologist at Catawba Radiological Associates in Hickory, N.C. “To take work like that and make it available for free is a challenging business model.”

Another potential sticking point is that authors who choose the OA route must pay some or all of the APCs. Although funding for APCs has not been written into research grants, that policy is changing, according to Dr. Klein. The United Kingdom’s Research Councils (RCUK), a group of publicly funded agencies responsible for coordinating and funding certain areas of research, including science, recently adopted a policy that allows money to higher education institutions for APCs. Nevertheless, there is no guarantee that that money ends up going to the authors.

“If the costs shift to the authors and the funding agency pays, it’s not a problem,” Dr. Kressel said. “But if the funding agencies don’t pay, or the universities to which the RCUK has given the money don’t use it for APCs, then it becomes very burdensome for authors and could depress publishing activity.”

Open Access Model Continues to Evolve

According to the online Directory of Open Access Journals (www.doaj.org), founded in 2003, there are currently 9,993 open access journals covering all fields—science as well as other areas of scholarship. While open access mandates from government and private research funders are growing, as are problems attendant on open access.

Money that could be spent on research is being diverted to pay APCs, said Robert Arnold, assistant executive director of publications and communications for RSNA. “Taxpayer money is being spent on government repositories of articles, such as PubMed Central, that duplicate what publishers and professional societies such as RSNA have already done. The author-pay model encourages journal publishers to accept more papers in order to raise revenue, thereby possibly decreasing the quality of work published in journals.”

“Finally, the CC-BY license jeopardizes the accuracy and integrity of journal articles by allowing anyone to change and redistribute an article for any purpose,” Arnold said. “That’s why the journal editors and the Publications Council will closely monitor the impact of the hybrid OA model on the RSNA journals even as we strive to help authors comply with their funders’ mandates.”

“Our journals will be applying a hybrid model for some time,” predicted Dr. Klein. “The question is, will there be true publishers like RSNA in the future?”

“I personally don’t think that journals are on their last breath,” Dr. Kressel said. “My sense is that all journals are adapting to open access by creating pathways for people who want to publish, in the way that they want to publish.”
RSNA’s Online Education Goes Mobile

Keeping pace with the digital age and the busy lifestyle of its users, RSNA’s redesigned online education portal offers greater accessibility, flexibility and interactivity—and it’s all now accessible from your mobile device too.

DESIGNED to accommodate on-the-go schedules, RSNA’s vast library of online CME content is now accessible from any mobile platform. Tablet and Blackberry users who access the RSNA website from their devices will be automatically redirected to the mobile version of the site.

Along with mobile accessibility, users will experience streamlined access to RSNA education content including Refresher Courses, RadioGraphics and Radiology content, Cases of the Day and SAMs. The sleek new interface, interactive touch-screen learning and instantaneous user feedback will instantly appeal to mobile and PC users alike.

Long-time users will quickly see—and feel—the difference as they explore the exciting new features designed to maximize the learning experience from any computer platform. Users can start at the easy-access menu on the top of the page to access enrollments, transcripts and the newly reorganized RSNA online catalog that optimizes the search for courses.

New online testing features provide novel, thought-provoking user interaction including instant, answer-specific feedback. After choosing an answer, the new system immediately provides a “Correct” or “Incorrect” response including a brief explanation for either. With one click, users can review the related journal article as each CME test question appears, giving the user flexibility to refer back to key elements of the article to assist in learning retention. After the user chooses an answer on the CME test, the new system provides a “Correct” or “Incorrect” response including a brief explanation for either.

Along with mobile accessibility, RSNA’s redesigned online education portal features streamlined access to RSNA’s vast library of online CME content. The easy-access menu on the top of the page links users to enrollments, transcripts and the newly reorganized RSNA online catalog.

Recommended to the Board of Directors that RSNA embrace a mobile learning format to address the ever-changing needs of our members and to provide ease-of-use when accessing online education content,” said David E. Avrin, M.D., Ph.D., Chairman of RSNA’s Education Committee.

User-driven activity and immediate feedback during CME testing offers our members a new way of learning through RSNA.

Valerie P. Jackson, M.D.
RSNA Board Liaison for Education

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“User-driven activity and immediate feedback during CME testing offers our members a new way of learning through RSNA.”

Valerie P. Jackson, M.D.
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The RSNA Research & Education Foundation Announces 2013 Grant Recipients

The RSNA Research & Education Foundation funded 83 grant projects totaling over $3 million, setting new records for the second consecutive year and the highest in the Foundation’s history. The Foundation’s Board of Trustees thanks the Vanguard companies, individuals and private practices whose generous contributions have made the following grants possible.

Charles V. Kim, M.D., Duke University Medical Center, Trans-arterial Emobilization of Hypervascular Liver Tumors with Electically-Conditioned Particles for Modulation of Pericellular Radiofrequency Ablation Area Zone Size and Configuration.

Joseph Edward Ippolito, M.D., Ph.D., Washington University in St. Louis, Metastatic Characterization of the Neuroendocrine Cancer (SARAS Shunt) Development of a Prognostic Imaging Model for Improved Prediction of Disease-free Survival in Patients with Renal Cell Carcinoma. Ralph Schlaeger, Charlotte Foundation Research Fellow Grant.

Josefine Xu, Ph.D., Icahn School of Medicine at Mount Sinai, Development of Whole Brain Card Functional Assesment with Multiband Magnetic Resonance Imaging.


Michael M. Zeilin, M.D., Ph.D., Stanford University, Multimodality MRI to Detect Brain Injury in Athletes. ASNR/RSAH Research Scholar Grant.

Jeff L. Zhang, Ph.D., University of Utah, Real-time Monitoring of Renal Hypoxia and Hyperperfusion with Quantitative MRI.

Sarah Beth White, M.D., Northwestern University, Nano Photothermal Ablation for Colorectal Liver Metastases.

Chadwick Lewis Wright, M.D., Ph.D., Ohio State University, PET/CT-derived Hepatobiliary Shunt Fraction following Yttrium-90 Radioembolization.

Elizabeth M. Hecht, M.D., Columbia University College of Physicians and Surgeons, Utility of Multimodular DCE MRI and Diffusion-Weighted Imaging as Biomarkers for Vascular Permeability and Angiogenesis in Pancreatic Adenocarcinoma.

Joseph Alexander Karis, M.D., Memorial Sloan-Kettering Cancer Center, Development of a Prognostic, imaging-inclusive Model for Improved Prediction of Disease-free Survival in Patients with Renal Cell Carcinoma.

Ralph Schlaeger, Charlotte Foundation Research Fellow Grant.

James Ernest Hansen, M.D., Yale School of Medicine, Targeting Glioklastasins with a Luspa Antitumor Therapy.


Wolf E. Heberlein, M.D., University of Arkansas for Medical Science, IRE-based Multi-modality Therapy for Regional Cancer.

Hendrik L. Lutter, M.D., University of California, San Francisco, Cerebrovascular Alterations Biomarker for Hypertension-induced Cerebrovascular Alterations.

Sarah Lee, M.D., University of Wisconsin, Quantitative Imaging of the Tendon: Use of Ultrasound Snow Wave Elastography as a Biomarker to Predict Tendon Rupture.

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

Sean Songhun Park, M.D., Ph.D., Mayo Clinic, Rochester, H2C-Choline PET/CT Imaging-Guided Stereotactic Ablative Radiotherapy (SABB) in Oligometastatic Prostate Cancer.

Mallinckrodt.

Jerry Jablons, M.D., Ph.D., Washington University Medical School, Conditionally Radiolabile VenaCathetery for Recurrent and Aggressive Meningioma Tumors.

Toshihiko Fujii, M.D., National Institutes of Health, Integrated Imaging Strategy to Phenotype Renal Carcinoma with Chemoembolization.

Robert M. Striegel, M.D., M.S., University of Wisconsin, Hepsin and Hep-E2000 as a Biomarker for Correlation with US-RI as a Prognostic Tool for the Progression of Non-alcoholic Steatohepatitis.

Sarah Zawedski, M.D., University of Pittsburgh, Assessing the Progression of Knee OA by Morphologic Analysis of OA MR.

Takeda Akhavan Malayeri, M.D., Johns Hopkins University, Application of a Novel High Resolution 3D MRI Sequence (SPACE) for Evaluation of Left Atrial Echocardiography and Morphology in Pulmonary Vein Isolation.

John Nicholas Morell, M.D., Johns Hopkins University, MRI-guided Ventricular Cryoablation in a Porcine Model with Structural and Thermographic Monitoring.

John L. Zhang, Ph.D., Brigham and Women’s Hospital, Development of Whole Spinal Cord Functional Image Interpretation and Decision Making.

Jerry Jablons, M.D., Ph.D., Washington University Medical School, Conditionally Radiolabile VenaCathetery for Recurrent and Aggressive Meningioma Tumors.

Nancy E. Lutke, M.D., Dana-Farber/Brigham and Women’s Hospital, Development of Whole Spinal Cord Functional Image Interpretation and Decision Making.

Toshihiko Fujii, M.D., National Institutes of Health, Integrated Imaging Strategy to Phenotype Renal Carcinoma with Chemoembolization. ASNR/RSAH Research Scholar Grant.

Robert M. Striegel, M.D., M.S., University of Wisconsin, Hepsin and Hep-E2000 as a Biomarker for Correlation with US-RI as a Prognostic Tool for the Progression of Non-alcoholic Steatohepatitis. RESEARCH RESIDENT GRANT.

Christopher Matthew Bredbury, M.D., Ph.D., Washington University in St. Louis, Characterization of Novel Radiomarkers Identified in a Bioluminescent Globalomics-based Interaction Screen.


Ralph Schlaeger, Charlotte Foundation Research Fellow Grant.

David T. Feinberg, M.D., University of Pittsburgh, Pittsburgh Medical Center, Advanced MR Imaging of Liver Fibrosis - Triple Quadrupole 18F-NaF PET/CT 

TOSHIBA Leading Innovation.
RESEARCH MEDICAL STUDENT GRANT

Medha Ahmad, B.A., B.S.
The University of Texas MD Anderson Cancer Center Do Bordetella Pertussis Infection Affect Patients Treated with Neoadjuvant Chemotherapy Treatment? Benefit from Radiation Dose Escalation to High Risk Margins?
Nabeel U.Ali, B.S.
Massachusetts General Hospital An Automated Computational Algorithm for Detection of the Nation-Oncology A Sign A Correlation High-risk Focal Markers in CT Anaglyph Imaging
Samuel F. Bahnik, B.S.
Geisel School of Medicine at Dartmouth Examining the Consequences of Radiation-induced Errors in Chromosome Segregation in Dividing Cells
Lauren Colbert, B.A.
Emory University DNA Damage Response Genes as Biomarkers for Genetically Sensitivity in Pancreatic Cancer
Dania Daya, B.S.
Penn State School of Medicine at the University of Pennsylvania Investigating the Role of L-(S)-Glutamine as a Novel PET Tracer for Breast Cancer Prognostication
Matthew DeSario, B.S.
Massachusetts General Hospital Altered Structural Connectivity and Network Organization in Unilateral Mesial Temporal Lobe Epilepsy
Jeffrey Dinh, B.B.
The University of Texas MD Anderson Cancer Center Syntactic and Epigenetic Mechanisms of Radiation Induced Cognitive Impairment
Alex El-Ali, B.S.
Columbia University College of Physicians and Surgeons Development of Quantitative in Vivo Neuroimaging Biomarkers as Clinical Outcome Measures in Childhood Acute Lymphocytic Leukemia
Preeya Goyal, B.A.
Northwestern University Feinberg School of Medicine Assessment of Chronic Liver Disease and Liver Fibrosis: Comparison of MRI Elastography and Acoustic Radiation Force Impulse Imaging
Alexeth Himmeth, B.S.
University of Maryland School of Medicine Patient Perceptions of Participation in RSNA Image Sharing Project: A Preliminary Survey
Julian C. Hong, M.S.
Stanford University 3D is an Attraction To The University of Wisconsin School of Medicine and Public Health Optimal Operating Parameters for Fluorouracil High-energy Agile Scanning Radiation Therapy (FARST)
RSNA R&E Foundation Announces Recipients of the 2013 Roentgen Resident/Fellow Research Award

The RSNA Research & Education (R&E) Foundation presented the 2013 Roentgen Resident/Fellow Research Award to 165 residents and fellows throughout North America. This prestigious and competitive award recognizes trainees who have made significant contributions to their departments’ research efforts as evidenced by:

- Presentations of scientific papers at regional or national meetings
- Publication of scientific papers in peer-reviewed journals
- Receipt of a research grant or contributions to the success of a research program within the department
- Other research activities

Harold Aaghus, M.D.
Johns Hopkins School of Medicine

Mohammed M. Ali, M.D.
Christiana Care Health System

Marcos C. Alvarez, M.D.
Santa Barbara Cottage Hospital

Fozal I. Ali, M.D.
George Washington University

Curlis L. Anderson, M.D., Ph.D.
University of Virginia

Moshfegh Mobayen Awar, M.D., Ph.D.
University of California, San Francisco

Michael Ryan Aquino, M.D., M.S.
Beaumont Health System

Sara K. Babiak, M.D.
Trigler Army Medical Center

Kevin S. Baker, M.D.
SUNY-Stony Brook Medicine

Ramon Barajas, M.D.
University of Maryland Medical System

Claire Beaumont, M.D.
Montefiore Medical Center

Rori Bitman, M.D.
Winston-Hopewell Hospital

Kevin R. Blackmon, M.D.
Medical University of South Carolina

F. Raymond Boss, M.D., Ph.D.
Stanford University

Michael Buckstein, M.D., Ph.D.
Icahn School of Medicine at Mount Sinai

Brooks Cairns, M.D.
Queen’s University

Juan Camacho, M.D.
Ehry University

Qi Cai, M.D., Ph.D.
University of Maryland Medical Center

Tracy Maryam Chandler, M.D.
University of British Columbia

Michael Chang, M.D., Ph.D.
University of Massachusetts Medical School

Patricia Chang, M.D.
Weinstein Medical Center

Ted Chang, M.D.
University of Tennessee Medical Center

Johnathan Chen, M.D.
Harbor-UCLA Medical Center

Daniel Chow, M.D.
New York Presbyterian Hospital-Columbia University Medical Center

Grant M. Clark, M.D.
University of Alabama at Birmingham

David A. Clump, M.D., Ph.D.
University of Pittsburgh Medical Center

John Cox, M.D.
The University of Texas Medical Branch

Anjali B. Curry, M.D.
Hannemann University Hospital

Corin Daignault, M.D.
University of Minnesota

Ivan Davis, M.D.
Wake Forest School of Medicine

Sabeen Dhan, M.D.
Northwestern University, Feinberg School of Medicine

Kavita Dharmanian, M.D.
Memorial Sloan-Kettering Cancer Center

Kardelina Diaz, M.D.
SUNY Downstate Medical Center

Katherine Diaz, M.D.
University of California, Irvine

Simon Fung-Kee-Fung, M.D.
Dana-Farber Cancer Institute

Susan H. Huang, M.D.
Massachusetts General Hospital

Srinivas Kumar, M.D.
Harvard Medical School

Deb Kumar Sarkar, D.O.
University of South Carolina

J. Kyle Russo, M.D.
Walter Reed National Military Medical Center

James Morrison, M.D.
Henry Ford Hospital

Benjamin Mau, M.D.
CancerCare Manitoba

Ahmad S. Mehr, M.D.
Wayne State University

Fujimoto

Dinneen

Ishikawa

Barajas

Peoria Javed, M.D.
University Hospitals Case Medical Center

Ramin Javan, M.D.
Duke University

Paul Lewis, M.D.
Rush University Medical Center

Dale T. Ling, M.D., M.S.
Loma Linda University

Koh, M.D.
New York Methodist Hospital

James Petterson, M.D.
SUNY-Albany Medical Center

Raja Prasad, M.D.
Jackson Memorial Hospital

Erik Lappin, M.D.
Allergy General Hospital

Nicole N. Lee, M.D.
Dartmouth-Hitchcock Medical Center

Stephanie Elaine Leung, M.D.
Schulich School of Dentistry & Dentistry, Western University

Paul Lewis, M.D.
Rush University Medical Center

Cherri Nguyen, M.D.
Baystate Medical Center

James Petterson, M.D.
SUNY-Albany Medical Center

Carl J. Nelson, M.D.
Rutgers-Robert Wood Johnson Medical School

Rashan S. Prabhu, M.D.
Emory University

Andrei S. Porytko, M.D.
Cleveland Clinic

Rupak Radhakrishnan, M.D.
University of Cincinnati Medical Center

Drisa Raisi, M.D.
SUNY Downstate Medical Center

Mark Ranck, M.D.
University of Chicago

Adam Rees, M.D.
University of Maryland Medical Center

Carola A. Ridge, M.B.Ch., B.A.O.
Memorial Sloan-Kettering Cancer Center

Daniel M. River, M.D.
The University of Oklahoma Health Sciences Center

Bretil T. Roberts, M.D.
University of Alabama at Birmingham

Sarah M. Rogers, M.D., M.S.
Oregon Health & Science University

Irvie R. Rohena-Quinigila, M.D.
Walter Reed National Military Medical Center

Andrew Ross, M.D.
University of Vermont Fletcher Allen Health Care

J. Kyle Russo, M.D.
Walter Reed National Military Medical Center

Debkumar Sarkar, D.O.
University Hospital of South Carolina

Deblickumar Sarcar, D.O.
Cooper University Hospital

Jessica Schuster, M.D.
Virginia Commonwealth University Health System

Ashoksha Sharma, D.O.
SUJ School of Medicine

Continued on Page 20
RSNA R&E Foundation Announces Recipients of the 2013 Roentgen Resident/Fellow Research Award

Nathan C. Shanks, M.D., University of North Carolina at Chapel Hill
Arash Shayeghi, M.D., University of Iowa Hospitals & Clinics
Grace Li Smith, M.D., Ph.D., M.P.H., The University of Texas M.D. Anderson Cancer Center
Benjamin C. Smith, M.D., Mayo Clinic
Ramya Srinivasan, M.D., Jacobo Medical Center
Abigail L. Stockham, M.D., Cleveland Clinic Foundation
David W. Swenson, M.D., Rhode Island Hospital
Cullen Mitsuo Taniguchi, M.D., Ph.D., Stanford University
Kerry L. Thomas, M.D., University of South Florida Morsani College of Medicine
Bryan D. Thomson, D.O., Allegheny General Hospital
Peter C. Thrall, M.D., University Hospitals Case Medical Center
Michael Uty, M.D., University of Rochester Medical Center
Lauren M. Sanchez, M.D., Boston Children’s Hospital

With a 2013 ASNR/RSNA Research Scholar Grant, Michael M. Zeineh, M.D., will use advanced MRI techniques to longitudinally study football players, a population at high risk of sub-concussive and concussive head trauma, over a period of two years, to quantify changes in the brain. In particular, he will examine if cortical thickness decreases over time; this would be indicative of potentially irreversible atrophy and possibly an early sign of the neurodegenerative disorder termed Chronic Traumatic Encephalopathy (CTE). In addition, Dr. Zeineh will quantify corneal and subcorneal iron deposition and use a novel diffuser tensor imaging to characterize subclinical axonal injury, all findings present in CTE.

“Our novel longitudinal study will use the most advanced MRI techniques available to quantify how head impacts and secondary neurochemical cascades result in brain injury,” said Dr. Zeineh. “This knowledge should facilitate the prevention of irreversible neurodegenerative secondary to head trauma.”

This grant project is made possible through a collaborative effort between The Foundation of the ASNR and the RSNA R&E Foundation.

Borgstede to Address State of the R&E Foundation

RSNA R&E Foundation Board of Trustees Chair James P. Borgstede, M.D., will deliver a report on the Foundation during RSNA 2013, Sunday at 4 p.m. in the Arie Crown Theater.

Dr. Borgstede will discuss the number of grants funded this year—a record 83 grants totaling more than $3 million—as well as how the support of the Foundation’s individual, private practice and corporate donors make it possible.

“A partnership with the R&E Foundation means that critical funding is being directed to young and seasoned investigators during all stages of their careers, thus ensuring that our specialty stays at the forefront by investing in the researchers and scholars who are driving the advances in radiological sciences,” Dr. Borgstede said. “The recipients in the R&E class of 2013 are performing research in a different number of subspecialty areas using many modalities and techniques. Their promising projects have clinical and translational implications that will most certainly move our specialty forward.”

Learn more about activities offered by the R&E Foundation at RSNA 2013 on Page 39.

Continued from Page 17
Iron Administration Before Stem Cell Harvest Enables MR Imaging Tracking after Transplantation

To monitor successful engraftment and recognize complications such as graft failure or tumor formation, marrow-derived mesenchymal stem cell (MSC) therapies require in vivo tracking of the transplanted stem cells without invasive imaging technologies. In a study published in the October issue of Radiology (RSNA.org/Radiology), to determine whether intravenous ferumoxytol can be used to effectively label MSCs in vivo and for tracking of stem cell transplants, Aman Khurana, M.D., of Stanford University School of Medicine, and colleagues injected Sprague-Dawley rats with ferumoxytol 48 hours prior to extraction of MSCs from bone marrow. Ferumoxytol uptake by these MSCs was evaluated with fluorescence, confocal and electron microscopy and compared with results from traditional ex vivo labeling procedures. The in vivo-labeled cells were subsequently transplanted in osteochondral defects of 14 knees of seven athymic rats and evaluated with MR imaging up to four weeks after transplantation. In vivo ferumoxytol–labeled MSCs, harvested from bone marrow and transplanted into osteochondral knee defects, showed significantly shortened T2 relaxation times compared with unlabeled control cells (11.459 vs. 24.423 msec; P = .0002). Histologic examination confirmed the presence of iron in labeled transplants and defect remodeling. “We developed an immediately available, potentially clinically applicable approach for in vivo stem cell labeling with an FDA-approved iron supplement,” the authors write.

Assessment of Liver Tumor Response to Therapy: Role of Quantitative Imaging

The substantial recent progress in nonsurgical therapeutic options for malignant primary and metastatic liver tumors has created a new challenge for radiologists who must assess the response of liver tumors to therapy. During the costly and time-consuming steps of clinical trials to obtain regulatory approval of drugs and for the efficacy evaluation, incremental therapies for hepatic malignancies, imaging biomarkers can provide reliable quantitative assessment of tumor treatment response by acting as surrogate endpoints to the traditional survival-based endpoints. Accurate evaluation of the efficacy of new therapies at earlier stages is crucial to avoid potential toxic reactions, unnecessary interventions and costly failure. In an article in the October Special Issue of RadioGraphics (RSNA.org/RadioGraphics), Fernanda D. Gonzalez-Guindalini, M.D., of Northwestern Memorial Hospital, Northwestern University, Feinberg School of Medicine, Chicago, and colleagues review the current quantification criteria used in the evaluation of treatment response in liver tumors, summarizing their indications advantages and disadvantages, and discuss future directions with newer methods that have the potential for assessment of treatment response. “Quantitative imaging allows robust evaluation of hepatic tumor response. In addition to size changes, various biologic and functional parameters can be quantified by using new imaging technologies,” the authors write. “Measurement of these parameters is especially important for the evaluation of tumor response to novel targeted therapies, in which change in functional status sometimes precedes anatomic modification.”

Research Highlights

Iron Administration Before Stem Cell Harvest Enables MR Imaging Tracking after Transplantation

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Dysplastic nodule in segment V of the liver in a 61-year-old man with cirrhosis. Axial image from MR elastography demonstrates that the dysplastic nodule has lower stiffness (green), compared with the adjacent cirrhotic liver parenchyma (red). (RadioGraphics 2013;33:1781-1800:RSNA, 2013. All rights reserved. Printed with permission.)

This work was supported by a grant from the National Institutes of Health, Bethesda, Md.

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Education and Funding Opportunities

Writing a Competitive Grant Proposal Program

Registration is open for the Writing a Competitive Grant Proposal workshop, designed for researchers in radiology, radiation oncology, nuclear medicine and related sciences who are interested in actively pursuing federal funding. Guided by a faculty of leading researchers with extensive experience in all aspects of grant applications and funding, the program will focus on developing realistic expectations and will provide tools for getting started. Faculty includes C. Scott Gaugler, M.D., Ph.D., M.P.H., and Udo Hoffman, M.D., of Massachusetts General Hospital in Boston, Ruth Carlos, M.D., of the University of Michigan Health System in Ann Arbor, and Francis Blankenberg, M.D., of Lucile Packard Children’s Hospital at Stanford University in Palo Alto, Calif.

The course fee is $175. Register online at RSNA.org/CGP Contact Fiona Miller at 1-630-590-7741 or fmiller@rsna.org for further information.

Medical Meetings October-November 2013

OCTOBER 10-12 The Society of Chairs of Academic Radiology Departments (SCARD), 2013 Fall Meeting, Charleston Place, Charleston, S.C. • www.scardweb.org
OCTOBER 11-12 European Society of Breast Imaging (EUSOB), Annual Scientific Meeting, Rome • www.eusobi.org
OCTOBER 17-20 Royal Australian and New Zealand College of Radiologists (RANZCR), 64th Annual Scientific Meeting, SYCITY Auckland Convention Centre, New Zealand • www.ranzcr2013.com
OCTOBER 17-20 Chinese Congress of Radiology (CCCR), 13th Chinese Society of Magnetic Resonance in Medicine Conference, Zhejiang International Conference and Exhibition Center, Hangzhou, China • www.chinaradiology.org/cccr

RADIOGRAPHICS

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This article means the criteria for AMA PRA Category 1 Credit™. SA-CME is available online.

Liver with cancerous tumor. Axial image from MR elastography demonstrates that the liver has lower stiffness (green), compared with the adjacent normal liver parenchyma (red). (RadioGraphics 2013;33:1781-1800:RSNA, 2013. All rights reserved. Printed with permission.)

This work was supported by a grant from the National Institutes of Health, Bethesda, Md.

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Radiology in Public Focus

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

Atypical Lobular Hyperplasia and Lobular Carcinoma in Situ at Core Breast Biopsy: Use of Careful Radiologic-Pathologic Correlation to Recommend Excision or Observation

Waxman careful radiologic-pathologic correlation is conducted in the setting of a breast core biopsy with atypical lobular hyperplasia or lobular carcinoma in situ, some women may be safely triaged to observation, according to new research.

Kuiren A. Atkins, M.D., of the University of Virginia in Charlottesville, and colleagues examined 50 cases of atypical lobular hyperplasia (ALH) or lobular carcinoma in situ (LCIS) from 49 women aged 40-73 years (mean age, 59 years) devoid of any additional lesion that required excision. Researchers performed detailed radiologic-pathologic analysis while blinded to subsequent follow-up information, comparing all biopsy-related images with the histologic findings at core biopsy and designating each core biopsy finding as concordant or discordant.

Of the 43 benign concordant core biopsy findings, none were upgraded at surgery or extended follow-up. Of the seven discordant biopsy findings, two were upgraded to ductal carcinoma in situ at surgery; none of the cases were upgraded at follow-up. “Focused and complete radiologic-pathologic correlation may obviate excisional biopsy in patients with benign concordant biopsy findings,” the authors write.

 Probably Benign Lesions at Screening Breast US in a Population with Elevated Risk: Prevalence and Rate of Malignancy in the ACRIN 6666 Trial

Breast Imaging Reporting and Data System (BI-RADS) category 3 lesions are common at screening ultrasound, new research shows. Richard G. Barr, M.D., Ph.D., of Radiology Consultants, Youngstown, Ohio, and colleagues analyzed data from the American College of Radiology Imaging Network (ACRIN) trial 6666, in which both annual mammography and ultrasound screenings were performed on women with dense breasts at 21 sites around the country. BI-RADS Category 3 lesions were discovered in nearly 20 percent of 2,662 participants over three years of screening and accounted for 25 percent of 2,916 ultrasound-detected lesions other than simple cysts. The malignancy rate of BI-RADS category 3 lesions was 0.8 percent (six of 745 lesions; 95 percent confidence interval [CI]: 0.3 percent, 1.7 percent).

“Since BI-RADS Category 3 lesions have a low malignancy rate and since only 0.1 percent of lesions had suspicious changes at short-interval follow-up and another 0.1 percent showed a suspicious change at 1-year follow-up, both of which were node-negative invasive cancers, a recommendation of yearly follow-up for BI-RADS category 3 lesions may be appropriate,” the authors write.

Screening Mammography Recall Rate: Does Practice Site Matter?

Practice setting, which may be influenced by patient or institutional factors, can significantly affect a radiologist’s recall rate in screening mammography, according to new research.

Jason Rothschild, M.D., of Albert Medical School of Brown University, Rhode Island Hospital in Providence, and colleagues reviewed data between May 2008 and September 2011 for five radiologists with expertise in breast imaging who interpreted mammograms at a community office practice and an academic referral hospital. Both sites utilized full-field digital mammography andbatch screening interpretation.

Researchers interpreted 74,297 screening mammograms between both sites. The total number of patients recalled was 5,799, for an overall recall rate of 7.8 percent. At 6.9 percent, the recall rate at the community site was significantly lower than the hospital rate of 8.6 percent. The data suggest that patient population factors may affect recall rates at different institutions.

“At being cognizant of the effect of practice site on screening mammography recall rate may help radiologists improve practice by assessing conditions and performance at sites where recall rates are high,” according to researchers.

Comparison of Tomosynthesis Plus Digital Mammography and Digital Mammography Alone for Breast Cancer Screening

Breast tomosynthesis reduces screening mammography recall rates, particularly for younger women and women with dense breasts, without significant changes in cancer detection, according to new research.

In a retrospective study, Brian M. Haas, M.D., of Yale University School of Medicine in New Haven, Conn., and colleagues reviewed screening recall rates and cancer detection rates in two groups: women who received conventional digital mammography alone and those who received tomosynthesis in addition to mammography. Of the 13,158 patients who underwent screening mammography, 6,100 received tomosynthesis. The cancer detection rate was 5.7 per 1,000 in patients receiving tomosynthesis, compared with 5.2 per 1,000 in patients receiving mammography alone. The addition of tomosynthesis resulted in a 30 percent reduction in the overall recall rate, from 12 percent for mammography alone to 8.4 percent in the tomosynthesis group.

“The greatest benefit from the reduced recall rates are realized by younger women and those with dense breasts, which could potentially increase compliance with screening mammography in two very sensitive patient populations,” the authors write.

Media Coverage of RSNA

In July, 1,127 RSNA-related news stories were tracked in the media. These stories reached an estimated 578 million people.

Print and broadcast coverage included Sun-Sentinel, WPXN-TV (New York), KCBS-TV (Los Angeles), KCL-TVA (Atlanta) and WSBM-TV (Baltimore).


RadiologyInfo.org Posts New “Your Radiologist Explains” Videos

Visit RadiologyInfo.org, RSNA and ACR’s jointly-sponsored public information website, to view recently posted “Your Radiologist Explains” video presentations, including:

• Inferior Vena Cava Filter Placement and Removal
• Transperitoneal Intraprostatic Shunt

OCTOBER AND NOVEMBER PUBLIC INFORMATION ACTIVITIES FOCUS ON BREAST AND LUNG CANCER AWARENESS

To highlight National Breast Cancer Awareness Month in October and National Lung Cancer Awareness Month in November, RSNA is distributing public service announcements (PSAs) focusing on the importance of regular screening mammograms and the symptoms, risk factors and possible treatment options related to lung cancer. RSNA is also distributing the “60-Second Checkup” audio program focusing on the use of 3D mammography for better breast cancer detection and CT screening to help reduce lung cancer deaths.
The Value of Membership

R&E Foundation Grants Launch Careers, Spur Added Funding

RSNA members can take an active role in moving the specialty forward by supporting—or applying for—the Research & Education (R&E) Foundation grants that represent the future of radiology and related scientific disciplines.

The R&E Foundation has grants available for medical students, residents, fellows and faculty at all levels. From hypothesis-driven basic science, translational and clinical studies to development of new strategies for teaching methods, the Foundation supports projects that are changing the way radiologists practice and learn.

In 2013, the Foundation will fund 83 grant projects totaling more than $3 million—and that’s just the beginning. An R&E grant is a pathway to greater funding. Surveys show that in the Foundation’s brief history, R&E grant recipients have gone on to receive upwards of $1 billion in subsequent funding from other sources such as the National Institutes of Health (NIH).

“While searching for scholarships for my project, funding opportunities for radiological studies were much scarcer than other fields of medicine,” said Aileen Kim, B.S., a third-year medical student at Duke University. “I am very grateful that RSNA found value in my project and provided financial support during the research period. This was my first research project in which I was the principal investigator. I had an invaluable opportunity to work with my research mentor, a renowned expert in the field, and other co-investigators who gave their time and guidance. I was given a unique learning experience with cutting-edge imaging data and technology. This project definitely reinforced my interest in a research career.”

Visit RSNA.org/foundation for more details or to submit an application.

Residents & Fellows Corner

RSNA Recognizes Chief Residents

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

“The contributions of these physicians help our specialty continue to advance,” said RSNA Board Chair Ronald L. Arenson, M.D. “We congratulate them on their success.”

Aileen Kim, B.S., (left) with scientific advisor David M. Brizel, M.D. (right)

Along with the traditional stand-alone posters and electronic education exhibits, RSNA 2013 will feature a new concept: Enhanced Education Exhibits, said Isaac R. Francis, M.D., Education Exhibits Program Committee chair.

“We will be trying Enhanced Education Exhibits on a select few traditional stand-alone posters, which will have embedded QR codes as well as additional features such as video clips, quiz material and teaching points,” Dr. Francis said.

“These can be downloaded to smartphones and tablets to be viewed at the meeting or later.”

“I am always amazed at the increasing quality, diversity and innovation of the comprehensive offerings at each year’s annual meeting.”

Francis

Mauro

RSNA 2013 Offers ‘Don’t-Miss’ Science, Education Programs

RSNA 2013’s rich offering of scientific presentations, education exhibits and courses will keep attendees abreast of the latest discoveries and techniques in medical imaging. The RSNA 2013 program delivers exciting content for every level of experience—from member-in-training to veteran radiologist.

“Imaging science is continuing to expand at a rapid pace,” said Scientific Program Committee chair Matthew A. Mauro, M.D. “New modalities or techniques such as tomosynthesis, elastography, immunoradiology, MR/PET and high-intensity focused ultrasound are well represented within this year’s scientific program.”

Applications of current imaging modalities are expanding to better explore neurodegenerative diseases, traumatic brain injuries and atherosclerosis, and presentations will describe the expansion of mobile devices for on-site image interpretation and the investigation of emergency imaging utilization, Dr. Mauro added. “There will be components of the scientific program that will stimulate all attendees,” he said. “It should not be missed.”

RSNA 2013: The Power of Partnership

With more than 40,000 radiologists, technologists and other health professionals gathered together in one place, the RSNA Annual Meeting is an outstanding year-round learning opportunity.

Annual Meeting Preview
Breast Imaging

This year’s roster of breast submissions includes presentations on clinical tomosynthesis, synthetic 2D images with tomosynthesis, quantitative imaging and MR phantoms, MR screening of intermediate risk women—breast cancer survivors or women with cellular atypia—and clinical implementation for tomosynthesis, said Scientific Program Breast Subcommittee chair Emily F. Conant, M.D. There is a trend toward imaging and risk prediction tailored toward the individual patient, Dr. Conant said.

A wide mix of educational presentations will appeal to learners of every level, said Education Exhibits Breast Subcommittee chair Hyeokja Abe, M.D. “We have multiple reviews for residents and beginning radiologists, such as quality control and radiology-pathology correlations of various benign and malignant diseases, and up-to-date presentations for practicing radiologists such as reviews for tomosynthesis, breast imaging and related procedures, and automated whole breast ultrasound,” Dr. Abe said. Newer techniques featured include opto-acoustic breast imaging, preoperative localization techniques and high-intensity focused ultrasound.

Cardiac Radiology

Quantitative imaging with MR is one of this year’s hottest topics, said Arthur E. Stillman, M.D., Ph.D., chair of the Scientific Program Cardiac Subcommittee. Along with validation of automated software for perfusion, correlation of biomarkers with coronary artery disease and software to reduce coronary motion, Dr. Stillman reported a trend toward dose reduction strategies for cardiac CT.

“We have material for all levels, from resident to fellow to practicing radiologist,” said Dr. Stillman.

Gastrointestinal Radiology

CT dose reduction remains one of the most competitive areas for gastrointestinal radiology abstract submissions and acceptance, said David H. Kim, M.D., Scientific Program Gastrointestinal Radiology Subcommittee chair. “Besides assessing image quality, it is beginning into the important issue of lesion detection ability at these reduced doses,” Dr. Kim said. “It is evident that a trade-off exists with dose reduction, particularly in low-contrast situations such as metastatic disease to the liver.”

Research in imaging biomarkers other than size to assess chemotherapeutic response is highlighted this year, Dr. Kim added. “Given the wide use of anti-angiogenic agents where lesion size may not reflect response, these other markers hold greater importance in assessment during therapy,” he said.

Some of the most exciting topics include the innovative applications of dual-energy CT within the liver, pancreas and bowel, the early results of PET/CT/MR imaging of oncologic settings, and the widening applications of ultrasound elastography in the abdomen, Dr. Kim said.

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Emergency Radiology

“This year, the emergency radiology scientific sessions will highlight a continued focus on CT protocol optimization for emergency imaging of all organ systems in order to improve diagnostic yield and reduce radiation dose,” said Scientific Program Emergency Radiology Subcommittee chair Aaron D. Siddickian, M.D., Ph.D. “Dual-energy CT applications continue to grow in the ED setting. There is excellent content focusing on imaging utilization and emergency radiology practice management,” Dr. Siddickian said. This year’s Series Courses, combining refresher course content and scientific presentations, are “Advanced Concepts in Imaging of Trauma” and “Leveraging Technologies for State-of-the-Art Practice.”

Emergency radiology continues to be a hot topic, with a roughly 25 percent increase in education exhibits accepted for 2013, said Education Exhibits Emergency Radiology Subcommittee chair Stephen F. Halem, M.D. “These exhibits cover the gamut of the specialty, including submissions on technique and protocols, from organ-centered to disease-specific. The breadth is impressive. Reviews of traumatic injuries and nontraumatic emergencies, as well as forensic imaging, will provide attendees with a variety of educational opportunities.”

Genitourinary Radiology/Uroradiology

Because prostate cancer remains a deadly opponent, many national and international abstracts focus on screening and tumor staging both before and during therapy, said Scientific Program Genitourinary Radiology Subcommittee chair Julia R. Fielding, M.D. “Results of international trials for uniform reporting of disease stage open the door to multi-institutional therapy assessment,” Dr. Fielding said. “Total body imaging for staging of gynecologic malignancies using diffusion imaging and combined MR and PET imaging are new hot topics for the year.”

Kidney neoplasms and prostate neoplasms are among the most popular abstract submissions for 2013, said Aykten Otto, M.D., Education Exhibits Uroradiology Subcommittee chair, adding that emerging topics in adrenal imaging are also highlighted.

Health Services Policy and Research/Policy and Practice

“In recognition of its increasing importance in our radiology practice, we introduced a new subcategory this year: economics,” said Dean R. Shibata, M.D., Education Exhibits Policy and Practice Subcommittee chair, adding that related sessions will include, “The Role of Radiology in Accountable Care Organizations,” “What Does the Fiscal Cliff Compromise and Sequestration Really Mean,” and “Hospital Readmissions: A Penalty that will Affect Interventional Radiologists.”

The largest subcategory, quality improvement, includes exhibits on process mapping and managing a sentinel event, Dr. Shibata said. Attendees can explore widely appealing topics such as “Top Ten Commonly Misdiagnosed Diagnostic Imaging Studies by Primary Care Physicians” and “Current Status of Nephrogenic Systemic Fibrosis.”

“There will also be a number of interesting topics with medicolegal themes—important subjects which impact everyone practicing radiology today,” Dr. Shibata said. Evidence-based medicine, quality, practice management and medical management are among this year’s noteworthy presentations, said Scientific Program Services Policy and Research Subcommittee chair Anne M. Kelly, M.D. Innovative research projects include utilization management and its impact on radiology, as well as “smaller packaging of materials—such as contrast material—to save costs overall, a simple concept and solution to a large, important problem,” Dr. Kelly said.

Informatics

“Evidence of the efficacy of decision support tools for ordering clinicians is growing,” said Scientific Program Radiology Informatics Subcommittee chair David S. Hirschorn, M.D. “People keep finding new uses for mobile devices—for patient education about pre-test preparation, for tracking resident procedure logs, and even for use as a microphone and speech recording system for dictation. The most popular category of submission remains image processing.”

Important subjects include crowd sourcing in radiology, immediately catching errors in reports, communicating results directly to patients and effective use of decision support, Dr. Hirschorn said.

Education Exhibits Radiology Informatics Subcommittee chair Katherine P. Andriole, Ph.D., said, “We continue to receive a large number of submissions for the educational tools and for the image processing and analysis categories, including an increase in quantitative imaging methods. This year we...
saw an increase in the number of submissions for the emerging technologies and for the quality-safety categories.” RSNA 2013 attendees can view these exhibits throughout the week, Dr. Andrlie noted. “Some focus on hands-on technology while others are translational research and clinical research exhibits.”

**Molecular Imaging**

RSNA is providing a critical venue for national and international scholars to present their latest findings in molecular imaging and to discuss emerging technologies encompassing MR imaging, PET, CT, ultrasound, optical imaging and tracer development, said Susan M. D., Ph.D., chair of the Scientific Program and Education Exhibits Molecular Imaging Subcommittee.

“Attendees will be able to see translational efforts in molecular imaging—cutting-edge technologies developed in basic sciences and their clinical applications,” Dr. Minshina stated. Multimodal imaging continues to be a focus of RSNA’s molecular imaging offerings, said Dr. Minshina continued, noting an increase in “non-radioactive” studies in areas including MR, ultrasound and optical imaging. Applications for non-cancer conditions, such as infection, are increasing, he said. Unique investigational studies address molecular MR immunomodulatry in multiple sclerosis, novel optical imaging probe for colorectal cancer, targeted ultrasound for pancreatic cancer, imaging evaluation of cytokine-based therapy for traumatic brain injury and MR colophonography with nanoparticles.

**Musculoskeletal Radiology**

This year’s submissions include an increasing focus on diagnosis and treatment of various musculoskeletal tumors, said Jon A. Jacobson, M.D., Scientific Program Musculoskeletal Radiology Subcommittee chair. “For example, several abstracts use MR imaging-guided high intensity focused ultrasound for the treatment of osteoid osteomas,” Dr. Jacobson said. “From a diagnostic perspective, several abstracts discuss the use of whole-body MR imaging for the diagnosis and staging of multiple myeloma,” Dr. Jacobson continued. “In addition, functional MR imaging was used in several presentations in the evaluation of soft tissue sarcomas to diagnose recurrent disease and to assess early response to tumor treatment. As a result of an increase in these high-quality abstract submissions, several scientific sessions will be offered on musculoskeletal intervention and tumor imaging.”

**Neuroradiology**

Arterial vessel wall imaging is a new and interesting trend in neuroradiology, said Pratik Mukherjee, M.D., Ph.D., Scientific Program Neuroradiology Subcommittee chair. Other topics include intravascular volume CT angiography vs. intravascular digital subtraction angiography (IA DSA), 4DCT angiography vs. IA DSA for dual aortic aneurysms, molecular imaging of multiple sclerosis, quantitative imaging of Alzheimer disease and structural connectomes for mapping Alzheimer disease. William Y. Uhl, M.D., Education Exhibits Neuroradiology Subcommittee chair, reported a 5 percent increase in neuroradiology abstracts this year, with an increasing variety of topics and a wider spectrum of disease processes. “There are these useful for teaching purposes,” Dr. Uhl said. “There has been an increase in head and neck abstracts, including a good number of anatomy and congenital developmental subcategory submissions. We will see more exhibits on advanced techniques and more that address true research questions. Together with advanced neuroradiography and their applications, the respective disease processes, such as head and neck cancers, the exhibits will be interesting to follow.”

**Nuclear Medicine**

“Hybrid imaging with PET/IMR for oncologic, cardiovascular and neurologic applications continues to grow and is an active area of investigation for clinical and research applications,” said Jonathen E. McCloskey, M.D., Ph.D., Scientific Program Nuclear Medicine Subcommittee chair. “Many exciting presentations will focus on the technical considerations, clinical applications and potential limitations of this new imaging modality.”

A number of noteworthy abstracts will be presented during the Non-PDG PET Radiotracer workshop on Oncology sessions series on Tuesday, Dr. McGrath said. “Some of these emerging PET tracers are on the cusp of widespread clinical use and have the potential to substantially improve imaging capabilities for patients with cancer.”

“Prostate cancer imaging is an area to watch this year,” Dr. McGrath continued. Recent exciting results with PET/CT tracers such as sodium fluoride-18 (F-18) fluorde, (F-18) fluorothymidine, and (F-18) fluorocholine, as well as hybrid PET/IMR imaging techniques will be presented. “Given the frequency of prostate cancer and the limitations of current widely available imaging techniques, these new tracers and technologies may be an important area of growth in nuclear medicine in the next few years,” Dr. McGrath said. Nuclear medicine education exhibit submissions increased by about 25 percent this year, said Education Exhibits Nuclear Medicine Subcommittee chair Rathan M. Subramaniam, M.D., Ph.D. “The major trend was increasing numbers of PET/IMR imaging abstracts along with PET/CT.”

Dr. Subramaniam said, “This reflects the interest of PET/IMR scanners for clinical purposes at many centers around the world. We expect this trend will continue in the future.” PET/IMR abstracts are news-worthy, as this is a major development and will influence radiation in training, technical, clinical, economical and administrative aspects, likely as a disruptive technology.”

**Obstetrics/Gynecology**

New trends to watch in obstetric and gynecologic radiology include 3D PET imaging of the female pelvis, new applications for 3D ultrasound and PET/CT; “The major focus of the gynecologic malignancies,” Dr. Robert D. Harris, M.D., M.P.H., chair of the Education Exhibits Obstetrics/Gynecology Subcommittee, “An old topic revisited, with some interesting new aspects, is ultrasound reviews of fetal anomalies,” Dr. Harris said.

**Pediatric Radiology**

Neuroradiology saw the biggest increase in pediatric submissions, said Harish Krishnamurthy, M.D., Scientific Program Pediatric Radiology Subcommittee chair. Trends include increasing use of low-dose CT compared to MR imaging for cardiac indications, PET/IMR in pediatrics, and advances in diffusion-weighted imaging andr and functional imaging MR in children. Provocative topics this year include diffusion kurtosis imaging of the brain, respiratory navigator-free breathing cine steady-state free-precession techniques for evaluating the heart, amide proton transfer in hypothyroma, and MR-guided drilling of osteochondritis, Dr. Krishnamurthy said. Fetal imaging and radiation dose saw the largest increase in education exhibits, said Education Exhibits Pediatrics Subcommittee chair Craig E. Barnes, M.D. “There is a large variety of topics presented this year that will be of interest to trainees, general radiologists and those practicing pediatric radiology,” Dr. Barnes said.

**Physics**

An important focus for attendees is dual-energy and spectral (photo-counting) CT, while spectral CT and low-dose CT remain hot topics for the year, said Scientific Program Physics Subcommittee chair Xiaochuan Pan, Ph.D. “A frequent comment from participants in last year’s physics sessions was that there was a considerable session overlap on CT topics at the same time,” Dr. Pan said. “In an attempt to address that, we have re-organized the CT sessions to spread out throughout the meeting.”

**Radiation Oncology and Radiobiology**

Head and neck cancer abstracts have doubled this year, according to Scientific Program Radiation Oncology/Radiobiology Subcommittee chair Nina A. May, M.D. Adding that breast cancer abstracts have also increased. “These increases will synergize well with the respective Biostereoring Oncodiagnostics and Oncoradiotherapeutics Skills for Tomorrow (BOOST) course topics, which include anatomy and contouring and case-based reviews of head and neck and breast cancer,” Dr. May said. “The head and neck cancer program has an e-contouring session, adding to the quality of the program,” she said. Outcomes research remains strongly represented in radiation oncology, she added. The challenges of incorporating new imaging technologies into radiation treatment planning, image registration and response assessment, and an appreciation of the limits of quantitative imaging are of interest this year, said Sunil Krishnan, M.D., Education Exhibits Radiation Oncology Subcommittee chair.

Dr. Krishnan observed, “These research trends again highlight the need for constant communication between radiation oncology and diagnostic radiology to accurately diagnose, treat and monitor patients.”

**Vascular Interventional Radiology**

Scott O. Tremoli, M.D., Scientific Program Vascular and Interventional Subcommittee chair, identified radioembolization and dose reduction—contrast and radiation—as hot topics for 2013, along with research on evidence supporting prostate embolization. “Hopefully this is the ‘next big thing’ in interventional radiology,” Dr. Tremoli said. “Athersclerosis imaging (IMR and CT) is becoming popular, and prostate embolization is still on the radar,” he added. Submissions were strong in interventional oncology, venous disease and vascular imaging, said Education Exhibits Vascular Intervventional Radiology Subcommittee chair David C. Maddox, M.D. “In addition, many exhibits will highlight specific newer techniques and treatment strategies such as renal denervation, prostate artery embolization and reversible electroporation,” Dr. Maddox said.
Plenary Lectures

RSNA 2013 will feature plenary session lectures on a spectrum of healthcare topics. All lectures will be presented in the Arie Crown Theater.

Annual Oration In Diagnostic Radiology

Sunday, December 1 • 8:30 a.m.

We Must Stand on the Shoulders of Giants

Radiology and interventional oncology share a strong focus on cancer detection and staging, locoregional therapy and follow-up. Despite their mutual goals and complementary skill sets, however, many radiology and oncology departments struggle to be autonomous and at times compete for hospital resources and patients. In the new healthcare paradigm of evidence-based medicine, a cohesive team approach to cancer care makes the most economic sense, says Damian E. Dupuy, M.D., who encourages deeper collaboration between these departments given the shared interests and synergy between their treatments. Patients stand to benefit from the reunification of spirit as well as intellect, he says. Quoting the timeless words of Sir Isaac Newton, Dr. Dupuy notes, “I have seen farther than others, it is by standing upon the shoulders of giants.”

Dr. Dupuy is director of tumor ablation at Rhode Island Hospital and a professor of diagnostic imaging at the Warren Alpert Medical School of Brown University. Internationally recognized for his clinical expertise, teaching and research in image-guided ablation, Dr. Dupuy has helped broaden clinical applications to successfully combat adrenal cancer and cancers of the kidney, liver, lung, head and neck and skeleton. He pioneered technologies such as percutaneous microwave ablation, cryoablation and combination therapies using radiofrequency ablation with external radiation or brachytherapy. Dr. Dupuy has been the principal investigator of two National Cancer Institute-funded multicenter trials. Dr. Dupuy chairs the Interventional Oncology Symposium at the RSNA Annual Meeting and is a member of RSNA’s Public Information Advisors Network.

Eugene P. Pendergrass
New Horizons Lecture

Monday, December 2 • 1:30 p.m.

Normal and Neoplastic Stem Cells: Implications for the Radiological Sciences

Research that bears on the earliest stages of cancer development as well as the sequence of cancer treatment is important not only to radiation oncologists but to diagnostic radiologists as well. An investigation led by Irving L. Weisman, M.D., into blood-forming stem cells and their non-self-renewing progeny found that they hold promise for regenerating the hematopoietic system after chemotherapy and radiation for cancer, replacing genetically defective or otherwise damaged blood-forming systems, understanding the stages of hematopoiesis that harbor the earliest stages of pre-leukemia and providing the first constant target found on all cancers.

Dr. Weisman is a professor in the Department of Pathology and director of the Institute for Stem Cell Biology and Regenerative Medicine in the Stanford University School of Medicine. He has devoted his career to stem cell research, with particular interests including hematopoietic stem and progenitor cells, central nervous system stem and progenitor cells, and lymphocyte differentiation.

Dr. Weisman has founded three companies focused on bringing stem cell therapies into the clinic and served on the founding scientific advisory boards of three others. He has been an investigator of the Howard Hughes Medical Institute in Chicago and the Karle Beekhous Professor of Cancer Biology and chair of the immunology program at Stanford. Dr. Weisman is a fellow in the American Association for the Advancement of Science and was elected to the Institute of Medicine of the National Academy of Sciences.

Special Lecture*

Tuesday, December 3 • 1:30 p.m.

 Mobilizing Human Potential

Continuing to address the healthcare challenges of the 21st century means answering some critical questions: How do we educate the students of tomorrow? How do we foster leadership among present and future practitioners? Former U.S. Secretary of State Condoleezza Rice, Ph.D., will offer her personal insights in her new book in how resources can be identified, attracted and mobilized to solve problems and forge new paths for the benefit of people worldwide.

From 2005 to 2009, Dr. Rice served as the 66th Secretary of State of the United States, the second woman and first African American woman to hold the post. She also served as national security advisor for President George W. Bush from 2001 to 2005, the first woman to hold the position. Her numerous books include two best-sellers, “No Higher Honor: A Memoir of My Years in Washington” and “Extraordinary, Ordinary People: A Memoir of Family.”

*Note: Tickets are required for the Special Lecture to be delivered by Dr. Condoleezza Rice. Tickets may be obtained via the RSNA 2013 Course Enrollment process at RSNA.org/register.

Annual Oration In Radiation Oncology

Wednesday, December 4 • 1:30 p.m.

Beneficial Liaisons: Imaging and Therapy

See the tumor, treat the tumor. How complicated can this be? Not long ago, noted Paul M. Harari, M.D., external anatomy and plan X-rays served as the primary guide for radiation therapy. Broad field design was the prevailing paradigm with the knowledge that the tumor surgery resided within. Collateral normal tissue damage was a necessary accompaniment of treatment and tumor dose was largely limited by normal organ tolerance. Today, says Dr. Harari, ablative radiation doses are delivered to complex 3D tumor shapes virtually anywhere in the body. Sharp dose gradients are created between tumor and critical normal tissues and high precision is sought for daily treatment across thousands of patients. We are poised to move well beyond “see the tumor, treat the tumor.”

Dr. Harari says, as we cross the threshold of unparalleled visualization within tumors, tracking individual tumor cells, developing diagnostic agents to simultaneously image and treat, and harnessing early response profiles to shape more personalized and effective future therapies.

Dr. Harari is the Jack Fowler Professor and chair of the Department of Human Oncology at the University of Wisconsin School of Medicine and Public Health. Early career development awards from the American Cancer Society and the RSNA Research & Education (R&E) Foundation helped launch Dr. Harari’s career as a physician scientist. His clinical and laboratory research focuses on treatment advances for head and neck cancer patients with emphasis on the interaction of molecular growth inhibitors combined with radiation. His clinical work emphasizes the highest quality imaging for cancer patients and the advancement of new imaging modalities that enhance our ability to assess both tumor anatomy and biology.

RSNA/AAPM Symposium
Thursday, December 5 • 1:30 p.m.

Imaging in Partnership: With Radiation Therapy

In this symposium presented in conjunction with the American Association of Physicists in Medicine, Dr. A.Jaffrey, Ph.D., will discuss how multimodality imaging methods are being used in combination with high-precision radiation therapy delivery techniques to understand fundamental mechanisms of cancer progression, treatment accuracy and treatment response.

Dr. Jaffrey is a professor in the Department of Radiation Oncology, Medical Biophysics, and Institute for Biomaterials and Biomedical Engineering at the University of Toronto. With primary research interests in the development and application of image-guided radiation therapy, Dr. Jaffrey has numerous patents issued and several licensed, including kilovoltage cone-beam CT for image-guided radiation therapy. Dr. Jaffrey serves as the head of radiation physics and a senior scientist within the Ontario Cancer Institute at the Princess Margaret Hospital in Toronto, where he also holds the Orey and Mary Tada Family Chair in Radiation Physics and is a principal in the STIARR Innovation Centre and Guided Therapeutics Group of the University Health Network. Dr. Jaffrey is the director of the recently established Institute of Health Technology Development at the University Health Network (TECHNA).

Imaging in Partnership: With Physics and Quantitative Medicine

James A. Deyo, Ph.D., will address the challenges and advances associated with quantitative imaging, and how more accurate and quantitative imaging is central to advancing the understanding of the following major questions in 21st century medicine: Imaging in partnership with medical physics and other technical and clinical disciplines provides a

Continued on next page
Our mission is to advance and help fulfill the promise of imaging and information technology to improve health and health care worldwide.

The Society for Imaging Informatics in Medicine (SIIM) is a society of professionals with an interest in the medical imaging information systems, services and applications. The SIIM Annual Meeting is the premier event for imaging informatics professionals to learn about the latest innovations in medical imaging information systems, services and applications.

Join us for the SIIM 2013 Annual Meeting, May 11-15, 2013, Austin, Texas, to:

- learn about the latest innovations in medical imaging information systems, services and applications
- network with professionals in the field
- attend educational sessions and workshops
- participate in scientific sessions and presentations
- engage in social activities and events

For more information, visit SIIM's website or contact the SIIM Annual Meeting team at info@siim.org. See you in Austin!
Radiology Informatics

Integrating the Healthcare Enterprise (IHE®)

Visit the Integrating the Healthcare Enterprise (IHE®) exhibit in Booth #840 in North Building, Hall A, for demonstrations by care sites and commercial vendors of IHE® methods for sharing image-enabled electronic health records and radiation dose information. Demonstrations take place regularly during exhibit hours.

Informatics Courses

More than 30 informatics courses will be offered on topics including advanced imaging tools, online searching, and RSNA Informatics projects such as mRSNA®, MRIc®, RadLex®, IHE® and Reporting.

Informatics Area—Learning Center

Informatics exhibits in the Lakeside Learning Center include posters and stand-alone computer exhibits on a range of topics in imaging informatics.

Image Sharing Demonstration—Hall A (North Building)

The annual Image Sharing Demonstration features cutting-edge developments in imaging informatics to improve patient care in radiology. These include standardization of technology, structured radiology reports, radiation dose monitoring and image sharing based on technology used in RSNA’s NIBB-funded Image Share Network. For more information, go to RSNA.org/Informatics.aspx.

RSNA Education

Earn SAM, CME Credits

Thirty-four in-person self-assessment module (SAM) courses will be offered at RSNA 2013, allowing participants to obtain both continuing medical education (CME) and SAM credit for each course attended. With the help of SAM faculty, this year’s courses have been designed to cover a wide range of subspecialties.

RSNA offers SAMs that meet the American Board of Radiology’s (ABR) criteria for a self-assessment activity in the ABR Maintenance of Certification program. Participants can earn 150 SAM credit for each SAM course in addition to 150 ABR PRA Category 1 Credits*. The RSNA Annual Meeting in-person SAMs is an Accredited Self-Assessment Program (SAP – Section 3) as defined by the new Maintenance of Certification program (MOC) at the Royal College of Physicians and Surgeons of Canada (RCPSC), and has been approved by the Canadian Association of Radiologists (CAR) for a maximum of 150 credit hours.

Guarantee your seat in SAM courses by pre-registering at RSNA.org/Registration by November 27. Attendees interested in sold-out SAM courses can go directly to the SAM course room and attendees will be seated on a first-come, first-serve basis after all ticketed attendees have been seated. Members attend RSNA 2013 SAM courses free, non-members pay a fee of $50.

RSNA Store Features CD Refresher Courses, New Collections, Demonstrations

Visit the RSNA Store to experience all the educational products and services that RSNA has to offer and to talk to RSNA staff about the newly redesigned online education offerings, learn how to access CME content from your mobile tablet device, and more. This year, the RSNA Education Center offers 20 new refresher courses for purchase on CD at the RSNA Store. Including, “Emergency Neuroradiology,” “Practical Gynecologic MRI” and “Acute & Chronic Pulmonary Embolism.” Most courses focus on specific imaging challenges and cover a broad range of subspecialty topic areas. Individual CDs are $55 for members and $80 for non-members.

The RSNA Store will also feature new CD collections, in either a two- or three-disc format. A sam collection contains a set of refresher course CDs pertaining to a particular subspecialty and offers an audio-visual presentation, along with line-by-line transcript and CME text. Collections provide the opportunity to earn multiple CME credits and offer a 25 percent discount as compared to individual CD purchases. CD collections from previous annual meetings will also be available for purchase at the RSNA Store. Collections are priced based on the number of CDs per collection but generally range from $80 to $175 per collection.

RadioGraphics special editions 2009-2013 will be available for browsing and purchase. The RSNA Store will also feature the print version of Radiology Select Volume 1: Pulmonary Nodules, Volume II: Stroke, Volume III: Coronary Artery Disease and Volume IV: Breast Cancer Screening. Radiology Select is a continuing series of selected Radiology articles that highlight developments in imaging science, techniques and clinical practice. Radiology Select in-print editions are available for $50 to both members and non-members.

RSNA staff will also be available in the store to give demonstrations of the RSNA/eAIPM Informatics Platforms, online Education search, CME Credit Repository and more.

Academy of Radiology Leadership and Management

Forty-two courses at RSNA 2013 count toward the Certificate of Achievement offered by the Academy of Radiology Leadership and Management (ARLM). RSNA has collaborated with the Association of Administrators in Academic Radiology Departments, American Roentgen Ray Society, Association of University Radiologists, and the Society of Chairs of Academic Radiology Departments in the ARLM.

Medical imaging professionals can earn a Certificate of Achievement from ARLM by participating in 50 hours of education per year across a spectrum of domains including financial skills, human resources, professionalism, legal/contracting and academic mission.

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

NEW PROCESS FOR CLAIMING CREDIT AT RSNA 2013

Online Evaluation and Claim Center (OECC) Makes Process Easier; More Immediate

RSNA 2013 attendees need not look for attendance “chits” in their registration materials. Attendees will now document their attendance by evaluating RSNA 2013 courses and sessions and claiming their credits online—via their own laptop and mobile devices or at any of the Internet Kiosks within McCormick Place.

The new Online Evaluation and Claim Center (OECC) allows attendees to begin their evaluations as early as 10 minutes after a course begins, claim their credits onsite and walk away with printed certificates in hand. Attendees will also receive links via email that allow printing of certificates at home, and for RSNA members credits are automatically added to the RSNA CME Repository.

After the meeting, attendees will still be able to evaluate courses and claim credit for one week. Detailed instructions will be included in the Meeting Bags distributed to professional registrants and RSNA staff will be on hand at the Internet Kiosks to assist with the process.
Technology
Take advantage of digital resources to learn more about specific sessions, get general information, and find your way around RSNA 2013 and McCormick Place.

RSNA 2013 Website
The official annual meeting website, RSNA2013.RSNA.org, is your source for the very latest, up-to-date information on the annual meeting program, including course exhibitor listings, maps and more.
• RSNA Meeting Program
The online RSNA Meeting Program offers easy-to-follow, detailed information about each of the hundreds of presentations happening at RSNA 2013. Along with searching for courses by title and name of presenter, users can search the online program by day, area and specialty, and then sort findings from earliest to latest. The program will remain online after the meeting.
• Online Help Center
Whether you’re wondering where to pick up your PDA, how to make travel arrangements, how to access the RSNA 2013 Meeting Program or what the weather is like in Chicago, the Online Help Center has the answers. The center is divided into “Before You Go,” “While You’re Here” and “After the Meeting” categories.

Meeting App
Download the RSNA 2013 app for iPhone, iPad and Android smartphones and get Meeting Program access even when you’re offline. The app also offers maps for navigating McCormick Place, online help during the annual meeting, a QR code scanner for accessing exhibit hall and drawing, an agenda planner and exhibitor list access, along with a notification center for important meeting alerts. Available via the App Store and Google Play. The RSNA 2013 app is sponsored by Siemens.

Mobile Connect
Get the most out of your personal digital devices, including the on-the-go flexibility offered by RSNA’s mobile apps. Tech experts will be on hand in this casual, open environment in RSNA Services to help attendees get familiar with their mobile devices’ functions and introduce them to the apps RSNA offers for RSNA 2013. Radiology, RadioGraphics, RSNA News, and RadiologyInfo.org. Stop by anytime during RSNA Services hours for personalized, hands-on help from an RSNA expert.

Mobile Connect
Presentations from annual meeting presenters and technical exhibitors will also occur during the week for the schedule, go to RSNA.org/Mobile_Connect_Presentations.aspx.

• QR Codes for Quick Info
Look for the QR codes accompanying scientific sessions and multisession and refresher courses listed in the printed RSNA 2013 Program in Brief. Use your smartphone to scan the code (try the sample to access the annual meeting website) and automatically download abstract information for the session or course. Information can also be downloaded using the QR codes on signs outside meeting rooms at McCormick Place. And look for QR codes in RSNA Services—get information without having to pick up and carry multiple brochures.

• Internet Kiosks
Computers will be available at Internet Kiosks throughout McCormick Place for use in accessing the RSNA 2013 website and the new Online Evaluation and Claim Center (see Page 36).

• WiFi
Get connected with wireless connectivity available throughout McCormick Place. Note: These wireless networks are not secure and should not be used for sending sensitive information.

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

Technical Exhibition
Technical Exhibits at RSNA 2013 will feature nearly 700 exhibitors in two halls: Hall A in the South Building and Hall B in the North Building. A balanced mix of companies will be located in both halls. Featured at the Technical Exhibit.

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

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

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

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

Associated Sciences: Organizations for allied professionals are located together in South Building, Hall A.

Bistro RSNA: Enjoy a great lunch without leaving the exhibit halls.

Detailed maps of exhibit halls are available at RSNA.org/exhibits. Browse a comprehensive, up-to-the-minute list of the exhibitors and their products and services to map out your visits to the exhibit halls.

RSNA 2013 meeting app is available for download to help you plan your visit to the RSNA Technical Exhibition. This app lists complete exhibitor information including floor plans.

Technical Exhibition Guide
At McCormick Place, the Technical Exhibition Guide is available for navigating the exhibition including floor plans, exhibitor list, Exhibitor Product Theater schedule, food service and other exhibit floor activities. Distributed in bins adjacent to the Daily Bulletin and at exhibit hall entrances, the Technical Exhibition Guide is an essential navigational tool for RSNA attendees.

For the most-up-to-date meeting and exhibitor information, visit the Internet Kiosks located throughout McCormick Place.

Technical Exhibition Hours
Hall A (South Building) and Hall B (North Building)
Sunday-Wednesday 10 a.m. – 5 p.m.
Thursday 10 a.m. – 2 p.m.

RSNA Services
Find new networking opportunities and enhanced resources to connect radiology professionals from around the world at the Global Connection booth and a new Radiology Care booth in the bustling RSNA Services area at RSNA 2013. Anchored by the RSNA Plaza, RSNA Services on Level 3 of the Lakeside Center offers:

• RSNA Global Connection: This newly expanded booth offers unique networking opportunities to connect radiology professionals from around the world. An enormous map will allow attendees to leave their own mark from their country of origin. Meeting attendees are also encouraged to use the new interactive map that allows fellow attendees to search and connect, based on specialty or home country. Navigating RSNA 2013 discussions, perfect for first-time RSNA attendees, will be led by veteran meeting attendees and presented in seven languages: Chinese, English, French, Japanese, Portuguese, Russian and Spanish. In addition to various planned events, attendees are encouraged to facilitate round-table discussions with colleagues interested in a particular topic or schedule impromptu meetings with colleagues from their country. Representatives of international radiology societies and teaching institutions from developing nations are also on hand at the booth to learn about the available education programs, grant opportunities and discounted resources. For an updated schedule and more information on these opportunities visit RSNA.org/GlobalConnection.

Career Connect: Looking for a job? Then stop by the Career Connect booth to view current job openings and upload your résumé to the website. Trying to hire the perfect candidate? Place a current job opening on Career Connect for FREE—a $225 savings. Visit the booth for more information and to post the position.

Journals, News & RadiolgyInfo.org
Check out RSNA’s print, online and mobile publications and news including Radiology, RadioGraphics, Radiology Legacy Collection, RadiologySelect and RSNA News. RSNA staff will help with subscriptions, hold tutorials on the new mobile apps and journal websites, and demonstrate RadiologyInfo.org, the RSNA American College of Radiology public information website. Visitors to RadiologyInfo.org can enter a drawing to win a Kindle Fire HD and can also pledge to “Image Wisely.”

Membership: Visit this booth for answers to questions about membership, renewal, subscriptions, dues payments or making the most of your benefits. RSNA staff will assist you with updating your personal information in your membership record such as your education, address and contact information.

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

ENROLL BY OCTOBER 15 FOR GLOBAL ENTRY INTERVIEW AT RSNA 2013
Tired of waiting in line at U.S. Customs and Border Protection when your flight arrives? Take advantage of completing your Global Entry interview while at RSNA 2013, eliminating the extra trips to the airport. Global Entry is a U.S. Customs and Border Protection (CBP) program that allows expedited clearance for pre-approved, low-risk travelers upon arrival in the United States. Global Entry is open to U.S. citizens and permanent residents, Dutch citizens and Mexican nationals. Though intended for frequent international travelers, there is no minimum number of trips necessary to qualify for the program. Sign up by October 15 to allow for adequate screening/processing time to qualify for the onsite interview. To enroll and for more information, visit RSNA.org/GlobalEntry.
Help Center
Look for the “1” icon throughout McCormick Place to find help. Visit one of the RSNA Help Centers located in the Grand Concourse, Level 3, or Lakeside Center Ballroom, Level 3, where RSNA staff can assist with general information or any of the following:
• Badge replacement/correction
• Chicago tourism information
• Hotel information
• Interpretation services
• Lanyard pickup
• Replacement course tickets
Also in the Grand Concourse, visit the RSNA Concierge Services Desk, where staff will assist with the following services:
• RSNA Tours & Events
• Chicago restaurant reservations
• Bistro RSNA ticket sales
• Ribbon pick-up

Reserve Your Room Now
Discounted hotel room rates are available for RSNA attendees. To see the hotel list and room rates, go to RSNA2013.RSNA.org. The deadline for housing reservations and changes through RSNA is November 8. A $30.00 deposit is required to confirm your hotel reservation. Reservations may be secured with a major credit card at the time of booking. The credit card must be valid through December 2013 and will be charged by the hotel approximately two weeks before the annual meeting. Registrants can also send a check, money order, or wire transfer (payable to RSNA) for the hotel deposit (attendees are responsible for all wire transfer fees).

Excluded Airline Discounts
American Airlines
AA offers a 5 percent discount on the lowest applicable published airfare. Use promotional code 31DI3AV when booking your reservation with AA.com. You can also call American (1-800-433-1790) and mention the American promotional code to be eligible for discounted fares. Service fees may apply when booking over the phone. Discounts are available on American Airlines, American Eagle and American Connection. Reservations involving any world alliance or codeshare partner airlines must be booked via phone.

Delta Air Lines
Delta offers a 10 percent discount on full/non-restricted fares and 5 percent discount on discounted/restricted fares. Reserva-
tions and ticketing are available via Delta.com or by calling Delta’s Meeting Network Reservations at 1-800-328-1111. When booking online, select Meeting Event Code and enter MNGSB in the box provided on the Search results page. Please note that a Direct Ticketing Charge will apply for booking by phone. Applicable restrictions may apply.

Restrictions
United.com offers a 2 to 10 percent discount off published fares. Call the United meetings desk at 1-800-426-1122 and mention the United agreement code T77715 and code ZV15 to be eligible for discounted fares. No service fee will be charged when booking over the phone directly with United Airlines. Please note this code is not valid on United.com. Discounts are available for the following travel dates: November 29 and 29, and December 4 through December 9.

G rant Travel
RSNA attendees who book air travel through Grant Travel experience the following:
• 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 Grant Travel at 1-877-613-1192, international +1 011 630-227-3873 or rsna@granttravel.com.

Meeting Materials and Publications

Name Badge
A name badge is required to attend RSNA courses and events and to enter the exhibit halls. RSNA encodes a QR code on name badges with the registrant’s name, institution, address, e-mail address, phone/fax numbers and radiology specialty as provided at the point of registration. These codes can be scanned by a technical exhibitor when an attendee is choosing to request information or follow-up. If you prefer that exhibitors contact you at a different address than on your registration record, provide alternate information directly to the exhibitor at the point of contact or at the RSNA Help Center.

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

Pocket Guide
The RSNA 2013 Pocket Guide is an important, easy-to-use reference guide to items such as:
• Complete A–Z listing of everything available to attendees
• Room assignments for all courses and events
• Floor plans of each building and each floor of McCormick Place
• Shuttle bus schedules, routes and boarding locations
• Taxi, loading and unloading areas
• Airport transportation service with times, costs and boarding information
• Complete Metra Electric Line Train System schedule

Onsite Registration
Those who registered after the mail deadline (Oct. 25, international; Nov. 8 domestic) and/or who did not receive badges in advance should proceed to Professional Registration/New Registration line in the Grand Concourse, Level 3, or Lakeside Center, Level 3, Hall D. Those that did not register in advance and wish to obtain a badge should proceed to Professional Registration/New Registration line in the Grand Concourse, Level 3, or Lakeside Center, Level 3, Hall D. RSNA encourages attendees to do this on Saturday, November 30, to avoid long lines later in the week.

RSNA 2013 Pocket Guide
Three complimentary copies of the RSNA 2013 Program in Brief, Official Meeting Bag and Lanyard are available with the presentation of a voucher at the distribution counters located in the Lakeside Center, Level 3, Hall D (across from registration), or in the Grand Concourse, Level 3. Additional copies of the Program in Brief will be available for purchase at the RSNA Store.

Continued on next page
Continued from previous page

**Bistro RSNA—The Best Place to Eat, Meet and Be Seen**

With an extensive gourmet menu and ample seating, Bistro RSNA is an excellent option for a comfortable lunch and networking with colleagues. Each technical exhibit hall, as well as the Lakeside Learning Center, houses Bistro RSNA. One low price of $20 gets you an all-inclusive meal, including tax, beverages and dessert. Purchase tickets online before Nov. 27 and save $2.00 off the onsite price. Purchase tickets at RSNA.org/attendee.php.

**Dining Guide**

Whether you prefer to eat your meals at McCormick Place or catch a cab to a trendy downtown Chicago eatery, we’ve got a full menu of dining options for RSNA 2013. Visit the Help Desk near the Grand Concourse for restaurant recommendations, reservations and service coupons.

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**Chicago Offers World-class Dining Options**

Round out your RSNA 2013 experience by taking an excursion to one of Chicago’s eclectic roster of restaurants or relaxing at one of the city’s wide array of clubs and lounges.

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**Bistro RSNA**

**NEW**—indicates a restaurant appearing on the RSNA list for the first time.

**Adventure**

161 N. Wacker Dr., 1-312-360-9530

This trendy hot spot serves contemporary American cuisine and interesting small-batch whiskeys. Food is paired with a roster of 30 bottled beers and wines. The menu is divided into four sections: toasts and sips, appetizers, entrées and desserts. The wine list is extensive, with more than 300 labels to choose from. In addition, the restaurant offers an extensive selection of craft beers and cocktails.

**American Can**

217 W. Hubbard St., 1-312-222-4940

Known for its innovative and reasonably priced menu, The American Can offers a variety of dishes with fresh, local and seasonal ingredients. The menu includes a selection of small plates and even sliders in a sophisticated setting.

**Birbited**

620 W. Division St., 1-773-235-8802

Dinner and cocktails are served in a vault of a former river bank. The main room balances historically refined banquet halls with a casual space to enjoy the bar scene and specialty drinks.

**Carmen’s Italian Restaurant**

217 W. Huron St., 1-312-624-9975

An old-fashioned Italian-American restaurant, the menu offers a selection of classic American Italian dishes and seasonal specials. Reserve a table early, as this restaurant is often crowded.

**Carriage House Restaurant**

652 W. Randolph St.; 1-312-234-9494

A variety of dining options are available at this restaurant, including a full bar, table service and carryout from one of the city’s wide array of clubs and lounges.

**Deco**

401 N. Orleans St., 1-312-269-1415

The perfect spot for guests at River North hotels, the Deco offers several choices including a sleek, fast-bar, table service and carryout from one of Chicago’s eclectic roster of restaurants.

**Eataly Chicago**

108 W. Randolph St., 1-312-255-2550

This Italian-themed restaurant offers a wide array of dishes and pastas, as well as a selection of wines and cocktails. The menu features a variety of dishes from all over Italy, including Neapolitan pizza and gelato.

**Giordano’s Pizza**

360 N. State St.; 1-312-664-4555

Known for its deep-dish pizza, Giordano’s has been a Chicago favorite for over 100 years. The menu includes a selection of salads, chicken and steak sandwiches, as well as a variety of desserts.

**Henri**

522 W. Division St.; 1-773-297-8080

Henri is a French-inspired brasserie located in the Lakeview neighborhood. The menu features a selection of savory and sweet dishes, as well as a selection of wines and cocktails.

**Loews Chicago**

200 N. Clark St.; 1-312-280-0720

The Loews Chicago offers a selection of dishes from around the world, including a selection of small plates and a variety of cocktails. The menu includes a selection of wines and cocktails.

**Lucas Local**

1501 N. Wells St.; 1-312-326-5444

Lucas Local is a farm-to-table restaurant located in the heart of the Gold Coast neighborhood. The menu features a selection of dishes from around the world, including a selection of wines and cocktails.

**Magnificent Mile**

720 N. Michigan Ave.; 1-312-223-4300

Magnificent Mile is a sprawling dining complex located in the heart of the Gold Coast neighborhood. The menu features a selection of dishes from around the world, including a selection of wines and cocktails.

**Mastro’s Steakhouse**

680 N. Lake Shore Dr.; 1-312-532-5700

Mastro’s Steakhouse is a Chicago classic, offering a selection of dishes from around the world, including a selection of wines and cocktails.

**Miller & Rhoads**

1 S. Michigan Ave.; 1-312-786-7001

This elegant restaurant offers a selection of dishes from around the world, including a selection of wines and cocktails.

**Mitsuwa Market Place**

215 W. Adams St.; 1-312-977-5500

Mitsuwa Market Place is a Japanese-themed restaurant located in the heart of the Gold Coast neighborhood. The menu features a selection of dishes from around the world, including a selection of wines and cocktails.

**Nevin’s**

620 W. Randolph St.; 1-312-234-9494

Nevin’s is a Chicago classic, offering a selection of dishes from around the world, including a selection of wines and cocktails.

**The New Acropolis**

17 N. Wacker Dr.; 1-312-223-9888

The New Acropolis is a Greek-inspired restaurant located in the heart of the Gold Coast neighborhood. The menu features a selection of dishes from around the world, including a selection of wines and cocktails.

**Sears Tower**

222 W. Washington Blvd.; 1-312-781-8000

Sears Tower is a Chicago classic, offering a selection of dishes from around the world, including a selection of wines and cocktails.

**The Union**

114 W. Washington Blvd.; 1-312-781-8000

The Union is a Chicago classic, offering a selection of dishes from around the world, including a selection of wines and cocktails.

**Volo Antico**

150 N. Michigan Ave.; 1-312-374-5757

Volo Antico is a Spanish-inspired restaurant located in the heart of the Gold Coast neighborhood. The menu features a selection of dishes from around the world, including a selection of wines and cocktails.

**Zunino’s**

340 N. Dearborn St.; 1-312-786-2000

Zunino’s is a Chicago classic, offering a selection of dishes from around the world, including a selection of wines and cocktails.
the food are substantial at this unmistakably 1940s man Theatre building, Petterino’s specializes in

The "Diner" keyboard consists red cheeks, toast garlic and soft-shell crabs served up in a metal bucket. Molfino.

Shanghai Terrace
301 N. State St.; 1-312-266-6744
The Peninsula Hotel’s Asian restaurant sparkles with white and red and red wall tiles just like the Hong Kong version, with more ambu-
lous offerings such as lunch and fried chicken. Molfino.

Suzi’s
222 E. Ontario St.; 1-312-691-9010
Flawless French food served in a downtown men-
tion with a picturesque entrance. As its cooking, it is occasionally used as the seating for movies.

Maison Rouge
11 N. Wacker Dr.; 1-312-809-3174
Catch the ultra, urban scene at Maison. The
downtown is the restaurant and bar, where basic drinks and food are served. The

downtown is the restaurant and bar, where basic drinks and food are served. The

Meat Market
821 N. Michigan Ave.; 1-312-266-3743
100-100 Winnetka Ave.; 1-312-588-9383
The restaurant in Donald Trump’s new Chicago
classic setting. Molfino.

Tiniefer
242 S. Wabash Ave.; 1-312-379-0970
Chinese, Japanese, Thai and Vietnamese dishes
grease the menu at this ambitious restaurant. Visit this imaginative

grease the menu at this ambitious restaurant. Visit this imaginative

Cajun/Creole
200-200 N. Michigan Ave.; 1-312-266-2473
11 E. Walton St.; 1-312-372-1622
Tiniefer a selectio

American
2901 N. Milwaukee Ave.; 1-773-241-2699
Bomani Byrd serves blackened tuna and barbecued baby back ribs. Enjoy the exhibition kitchen from the bar or dining room.

Asian
202 S. Wabash Ave.; 1-312-372-7307
Roy's
1516 N. Wells St.; 1-312-266-9355
Executive chef Tony Priolo essentially transforms this Chicago eatery into his Naples home.

Italian
312 Chicago
437 N. Rush St.; 1-312-222-0201
This Italian steakhouse, a block of Michigan Avenue, is the quaintest Italian restaurant in the city. Everything is made from scratch.

Fusion
Fusion
780 N. Michigan Ave.; 1-312-266-9300
This chic fusion cuisine includes cocktails, grilled salmon, blackened tuna and barbecued baby back ribs. Watch the exhibition kitchen from the bar or dining room. Molfino.

Vermilion
2100 W. North Ave.; 1-773-477-2100
Classic French steakhouse with a contemporary Lincoln Park setting. Molfino.

INEXPENSIVE

IPI’s
975 N. Rush St.; 1-312-243-9710
This restaurant in a former print shop is visually adventurous to experiment. Molfino.

Tru
116 W. Hubbard St.; 1-312-464-0466
The menu of this eclectic restaurant juxtaposes flashy, contemporary dishes with trim, simple entrees. Tru offers an extensive wine list and the city’s largest selection of specialty cocktails.

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Table Fifty-Two
702 N. Wells St.; 1-312-988-7864
Chinese, Japanese, Thai and Vietnamese dishes grace the menu at this ambitious restaurant. Visit this imaginative kitchen into his Naples home.

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Zoetico Restaurant and Tequila Bar
256 W. Ontario St.; 1-312-787-9999
Mexican cuisine has been reborn more festive at this popular River North restaurant where mariachi, panza cheese and the sound of musical is tabled flamed Moderately

MEDITERRANEAN

Spanish
153 N. Clark St.; 1-312-643-2250
Mexican food, prepared fresh daily, in classic Mexican dishes like tequila and fish or beef on the menu. Very Expensive

ING Restaurant
517 W. North Ave.; 1-312-836-4516
Whether you pay by the hour for the chef’s time, or by the dish, iNG promises to have a memorable experience. Moderate

ING Restaurant
600 W. Randolph St.; 1-312-237-5272
This trendy River North venue draws a sophisticated crowd eager to sample imaginative Latin American and Spanish small plates. The nightclub atmosphere is enhanced by specially designed table service. Very Expensive

Nellcôte
833 W. Randolph St.; 1-312-432-0500
Nellcôte’s menu and a 12-course tasting menu. White leather booths in the stunning space greet guests before the hosts can. Very Expensive

Boka
2333 N. Lincoln Park West; 1-312-787-0800
This welcome piano bar set in the base of the John Hancock Center are memorable, any day, any time, any day. Expensive

The Cheesecake Factory
640 N. Wells St.; 1-312-664-1707
The Cheesecake Factory serves vegan and vegetarian cuisine using soy and gluten free ingredients allowing experimentation. Inexpensive

BLUE BURGERS

Buddy Guy’s Legends
700 W. Madison St.; 1-312-427-1300
It’s real deal. In addition to eating real Chicago Burgers, you may also like the legendary Buddy Guy’s, where patrons and taking with performers.

Greenzebra
469 W. Chicago Ave.; 1-312-243-7000
Vegetarians rarely have an extensive choice in fine dining but Greenzebra has turned the tables, offering up vegetarian entrees in a fine dining setting. Carnivores will often find fish and chicken in the menu.

DESSERTS

Chocolate Bar on the Peninsula Hotel
865 E. Monroe St.; 1-312-222-3700
The Peninsula’s rendition of the famous chocolate bar is one of Chicago’s oldest restaurants. The Palm’s personality comes with walls covered with portraits of patrons—the famous as well as the unknown. Inexpensive

Boca
2333 N. Lincoln Park West; 1-312-787-0800
This well regarded steakhouse serves gourmet and creative cuisine using soy and gluten free ingredients allowing experimentation. Inexpensive

Red Rooster Bar
N. W. Ontario St.; 1-312-640-1000
This welcoming bar is the base of a Chicago Victorian offers fun for everyone and is a short walk from Michigan Avenue.

Signature Lounge
340 W. Lake Shore Dr.; 1-312-787-5956
The signature living from the 19th floor of the John Hancock Center are memorable, any day, any time, any day. Expensive

Studio Paris
875 N. Michigan Ave.; 1-312-932-0980
This award winer with a hot nighttime bar scene doubles as a photographer’s studio by day. Patrons sip champagne cocktails while enjoying a view of Chicago through the glass ceiling. Tables are by reservation and require bottle service after 9 p.m. Wednesday through Sunday.

Timothy O'Tool’s Pub
632 N. Dearborn St.; 1-312-266-9946
People in this neighborhood Irish pub is a great place to get together to watch a sporting event or stroll night.

CHICAGO'S FINEST RESTAURANTS

Avery
955 W. Fulton Market; 1-312-226-6688
The team responsible for “molecular cuisine” superstars Neat and Avery is now focusing on cocktails. The cocktail experience is so specialized that different cocktail menus are offered to seated patrons who have more space to interact with their concoctions than patrons that sit near the “cocktail kitchen.”

Carmin’s
1343 N. Rush St.; 1-312-966-1736
The classic Italian restaurant that is the perfect gathering place after dinner in the Rush Street area.

Cock’D
Door
147 E. Walton St.; 1-312-402-8267
Enjoy an overwrought “executive snack dip.” While the snail is a classic appetizer, the cock’a’s are the old Chicago Cityscape.

Tavern on Rush
638 N. Dearborn St.; 1-312-266-9946
People in this neighborhood Irish pub is a great place to get together to watch a sporting event or stroll night.

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RSNA 2013 HONOREES

Honorary Members

Presented Monday, Dec. 2 • 1:30 p.m.

Honorary Membership in RSNA is presented for significant achievements in the field of radiology. At RSNA 2013, Honorary Membership will be given to Gabriel P. Krestin, M.D., Ph.D., of Rotterdam, Netherlands; Anne W. Lee, M.D., of Shenzhen, China; and Małgorzata Szczerbo-Trojanowska, M.D., of Lublin, Poland.

An international ambassador for radiology, Gabriel P. Krestin, M.D., Ph.D., a professor of radiology and chair of the Department of Radiology at Erasmus University Medical Centre Rotterdam, the Netherlands, has worked passionately to widen the specialty’s reach while unifying the focus of its membership. As 2012 president of the European Society of Radiology (ESR), Dr. Krestin oversaw the launch of the first International Day of Radiology (IDR) aimed at building greater awareness of the value that radiology contributes to patient care and healthcare overall. The success of the joint initiative of ESR, RSNA, and the American College of Radiology (ACR)—which grew from the first European Day of Radiology in 2011—demonstrates Dr. Krestin’s commitment to keeping radiology in the spotlight across the globe.

Born in Romania, Dr. Krestin immigrated to Germany at the age of 19. He graduated from the faculty of medicine at the University of Cologne, Germany, where he completed his radiology residency and his doctoral thesis. In 1990 he was appointed staff radiologist and head of the MRI Centre at the Department of Radiology at Zurich University Hospital in Switzerland, where he became associate professor of radiology, head of the clinical radiology service and acting chair of the Department of Diagnostic Radiology. Dr. Krestin’s research interests primarily focus on imaging of abdominal organs and cardiovascular disease, molecular imaging and population imaging. He worked with ESR to establish the European Institute for Biomedical Imaging Research (EIBIR) in 2006 to foster and strengthen biomedical imaging research in Europe.

Dr. Krestin has authored more than 350 original articles and 80 book chapters and has edited seven books, some of which have been translated into several languages. He has served as president of the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) and the Association of University Radiologists Europe (AURE), of which he is a founding member. Among his numerous accolades, Dr. Krestin received honorary membership in the Belgian, French, Hungarian, Italian, Spanish and Swiss societies of radiology. ESMRMB bestowed Dr. Krestin Honorary Fellowship in 2011 and Honorary Membership in 2013. Decreasing mortality from nasopharyngeal cancer—a disease far more prevalent in Southeast Asia than in the Western world—can be attributed in large part to the efforts of Dr. Krestin’s team and his dedicated teams of colleagues. In addition to spending much of her career researching nasopharyngeal cancer, Dr. Lee has established departments of radiation oncology in hospitals in Hong Kong and mainland China and facilitated robust clinical trials testing new therapies in head and neck cancer worldwide.

Dr. Lee is the chief of service at the Center of Clinical Oncology at the University of Hong Kong–Shenzhen Hospital in Shenzhen, China. She is also an honorary consultant in the Department of Clinical Oncology at Pamela Youde Nethersole Eastern Hospital, Hong Kong, honorary consultant in healthcare management for the Hong Kong East Cluster, Hospital Authority, and an honorary clinical professor at the University of Hong Kong Li Ka Shing Faculty of Medicine.

In 2012, after more than 35 years of service to public hospitals in Hong Kong, Dr. Lee took up the challenge of starting the Center of Clinical Oncology at the University of Hong Kong–Shenzhen Hospital in Shenzhen, China, a project that attempted to introduce medical service reforms in mainland China. Dr. Lee also initiated the Hong Kong Nasopharyngeal Cancer Study Group to encourage multicenter collaboration in clinical trials and large scale retrospective studies. She is also a leader of clinical sciences in the Center of Nasopharyngeal Carcinoma Researches, an area of excellence project awarded by the University Grant Committee of Hong Kong. Currently Dr. Lee is the vice-president of the Hong Kong College of Radiologists and vice-chair of the Hong Kong Anti-Cancer Society. She has served as chair of the Hong Kong Nasopharyngeal Cancer Study Group and president of the Hong Kong Head and Neck Society. Her service to international organizations includes helping the Union for International Cancer Control set up the national Cancer Staging Committee in China.

Neither interventional radiology nor radiology in Poland would be what they are today without the contributions of Małgorzata Szczerbo-Trojanowska, M.D. Thanks to her commitment to education, she is also shaping the future of radiology across all of Europe.

Dr. Szczerbo-Trojanowska is a professor of radiology, chair of the Department of Radiology, and head of the Department of Interventional Radiology and Neuroradiology at the Medical University in Lublin, Poland. Some of Dr. Szczerbo-Trojanowska’s greatest accomplishments include her work with societies to raise the profile of radiology in Poland and across Europe. She co-founded the interventional radiology section of the Polish Medical Society of Radiology and co-founded the Polish Society of Magnetic Resonance. In 2001, Dr. Szczerbo-Trojanowska was elected president of the Polish Medical Society of Radiology and in that same year presided over its congress—she was the first female to hold either of those positions. Dr. Szczerbo-Trojanowska also has served on various committees of the European Congress of Radiology (ECR), as the first ECR president from Eastern Europe and as a member of the executive council of the Cardiovascular and Interventional Radiological Society of Europe (CIRSE).

Since 2006, Dr. Szczerbo-Trojanowska has been a member of the steering committee of the European School of Radiology. She also helped establish the first European School of Interventional Radiology (ESIR) courses in Eastern Europe. She has been a mentor to 26 radiologists who obtained their doctorate under her supervision.

With research interests in vascular interventions including embolizations, carotid stenting, aortic aneurysms and stent grafting, Dr. Szczerbo-Trojanowska has authored and co-authored 208 peer-reviewed publications and 10 book chapters. She has given more than 250 scientific presentations at numerous international scientific meetings, including more than 100 invited lectures. Dr. Szczerbo-Trojanowska is a reviewer for and editorial board member of many radiological and medical journals including Cardiovascular and Interventional Radiology, Acta Angiologica and the Polish Journal of Radiology.
A world-renowned thoracic radiologist, 2008 RSNA President Theresa C. McLoud, M.D., is one of the foremost educators in her field as well a passionate advocate of the globalization of radiology. Dr. McLoud has forged new territory for women, serving as the first woman in the history of radiology at the Massachusetts General Hospital (MGH) in Boston to hold the rank of professor at Harvard.

A Boston native, Dr. McLoud earned her medical degree from the McGill University Faculty of Medicine in Montreal, Quebec, Canada, where she also completed her residency training in radiology. Following a thoracic imaging fellowship at the Yale University School of Medicine in New Haven, Conn., she quickly became an assistant professor of diagnostic radiology at Yale. In 1976, she returned to Boston and joined Harvard Medical School where she has been professor of radiology since 1993.

Dr. McLoud served as chief of Thoracic Radiology from 1982 to 1996, chief of Thoracic and Cardiovascular Radiology from 1996 to 2001 and is currently vice-chair of education in the Department of Radiology at MGH.

Dr. McLoud’s impact is felt in the daily work of nearly all who practice thoracic radiology. Dr. McLoud’s research in interstitial lung disease, CT of the thorax, lung cancer imaging and occupational lung disease has taken her around the world to conduct postgraduate teaching and visiting lectures.

An RSNA member since 1979, Dr. McLoud began her term on the RSNA Board of Directors in 2001, was elected chair in 2006 and served as president in 2008. She has also worked on the Scientific Program Committee, serving as its chair from 1998 to 2000.

Dr. McLoud’s long list of awards includes gold medals from the American Roentgen Ray Society (ARRS) in 2003, the Society of Thoracic Radiology in 2010 and the International Cancer Imaging Society in 2012. In 2003 she received the Marie Cure Award, the highest honor bestowed by the American Association for Women Radiologists.

Highlights of her extensive scholarly career include serving as associate editor of Radiology, for which she received Radiology’s Editor’s Recognition Award for reviewing, with distinction. She has conducted more than 150 postgraduate courses and published more than 200 scientific papers, reviews and book chapters.

Throughout her career, Harvey L. Neiman, M.D., has combined skill in patient care, radiologic research, and education with business savvy and knowledge of health policy and economic issues to benefit patients, his fellow radiologists and all of medicine.

Dr. Neiman has served as chief executive officer of the American College of Radiology since 2003 and will retire in spring 2014. He is accomplished as an educator and administrator—he began his career in Washington, D.C., as an instructor at the Armed Forces Institute of Pathology and chief of cardiovascular radiology at Walter Reed Army Medical Center.

He spent the next 10 years as a professor at Northwestern University in Chicago, where he also served as director of angiography and sectional imaging. He also was director of angiography at Children’s Memorial Hospital in Chicago. Dr. Neiman was a clinical professor of radiology at the University of Pittsburgh from 1985 to 2002 and a professor of radiology at Temple University in Philadelphia from 2000 to 2003. During that time he also served as chair of the Department of Radiology at the Western Pennsylvania Hospital in Pittsburgh.

An RSNA member since 1977, Dr. Neiman has served as a refresher course faculty member and plenary session moderator for numerous RSNA annual meetings. Within the ACR he has served on numerous committees and commissions including those on education, ultrasound, and economics. Dr. Neiman chaired the ACR commissions on ultrasound and economics, served as a member of the Board of Chancellors from 1994 to 2002 and as chairman of the board from 2000 to 2002.

During his tenure as ACR CEO, Dr. Neiman has helped establish the ACR Education Center, Radiology Leadership Institute, Harvey Neiman Health Policy Institute, and the American Institute for Radiologic Pathology.

Dr. Neiman has published more than 125 scientific papers, 26 book chapters and is the author of the book, Angiography of Vascular Disease. He has given nearly 300 invited lectures and scientific presentations.

Renewed for his leadership and commitment to radiation oncology, J. Frank Wilson, M.D., was an early advocate for breast conservation therapy and is internationally regarded as an authority on breast cancer. He has been consistently recognized as one of the top physicians in America.

Dr. Wilson has lent his considerable expertise to teaching his colleagues the most cutting-edge radiation therapy techniques—including brachytherapy—and mentoring countless radiation oncology students, residents and junior faculty who rank among the specialty’s finest leaders today.

Born in Huntsville, Mo., Dr. Wilson joined the Medical College of Wisconsin (MCW) in 1974 as an assistant professor of radiology, rising to the position of professor of radiation oncology in 1985 and department chair in 1986. He served as director of the MCW Cancer Center from 1994 to 2000.

Today, Dr. Wilson serves as the chair and Bernard & Miriam Peck Family Professor of Radiation Oncology and director emeritus of the MCW Cancer Center.

Dr. Wilson has published more than 200 papers and abstracts, 21 books or chapters and has presented lectures across the globe. He has served as chair and principal investigator of the National Cancer Institute-funded American College of Radiology (ACR) Quality Research in Radiation Oncology project (Q-RRIO).

Dr. Wilson has served as editor of the International Journal of Radiation Oncology Biology Physics (IJROBP) and on the editorial board of the Journal of the American College of Radiology.

Throughout his career, Dr. Wilson has consistently been listed among Woodward & White’s Best Doctors in America and named one of America’s top breast cancer doctors by Good Housekeeping and Redbook magazines.

An RSNA member since 1985, Dr. Wilson delivered the Annual Oration in Radiation Oncology in 1998 and has held numerous positions within the Society, serving as RSNA second vice-president in 1999.

Dr. Wilson served six years on the ACR Board of Chancellors and as ACR vice-president in 2004. He was named an ACR Fellow in 1988. He is past-president of the American Society for Radiation Oncology and of the American Radium Society.

Continued on next page

ALEXANDER R. MARGULIS AWARD FOR SCIENTIFIC EXCELLENCE

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

Trainee Research Prize

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

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

Molecular Imaging Travel Award

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

France Presents

In recognition of the contribution from France for the “France Presents” session, ten select professed abstract presenters receive a travel award from RSNA. See the list of presenters next to the Société Française de Radiologie exhibition in the South Hall, Hall A, Booth 1122.
RSNA will honor two individuals at RSNA 2013 for their contributions to research and education. Norbert J. Pelc, Sc.D., of Stanford, Calif., is Outstanding Researcher. Bruce G. Haffty, M.D., of New Brunswick, N.J., is Outstanding Educator.

Outstanding Researcher

Radiologists’ understanding of the imaging modalities they use each day would not be the same without the career of Norbert J. Pelc, Sc.D. Having conducted research into all medical imaging modalities, and in particular digital X-ray CT and MR imaging, Dr. Pelc possesses extraordinary knowledge of the technical aspects of imaging and a one-of-a-kind insight into advanced applications and basic research.

Chair of the Department of Bioengineering at Stanford University, Dr. Pelc also serves as a professor in the departments of Radiology and Electrical Engineering and spent 10 years as associate chair for research in the Department of Radiology at Stanford. He received his master’s and doctorate degrees from Harvard University, his doctoral dissertation was titled, “A Generalized Filtered Backprojection Algorithm for Three Dimensional Reconstruction.”

Dr. Pelc’s current research focuses on CT, specifically in methods to improve the information content and image quality and reduce the radiation dose. In addition to hundreds of peer-reviewed publications and presentations, Dr. Pelc is an inventor in more than 80 issued U.S. patents.

Dr. Pelc served on the first national advisory council of the National Institute of Biomedical Imaging and Bioengineering of the National Institutes of Health. He served RSNA as third vice-president in 2010, as an annual meeting session moderator and as a member of the physics subcommittee of the Scientific Program Committee. Dr. Pelc is a member of the National Academy of Engineering and a fellow of the American Association of Physicists in Medicine, the International Society for Magnetic Resonance in Medicine and the American Institute of Medical and Biological Engineering.

Outstanding Educator

An internationally recognized expert in breast radiation oncology, Bruce G. Haffty, M.D., has forged a legacy as one of the specialty’s premier educators through a lifelong commitment to mentoring, educating and advising the scores of students fortunate enough to call him “teacher.”

Dr. Haffty’s groundbreaking work as a clinician and breast cancer researcher has consistently garnered him national recognition as one of the country’s leading physicians. His research has focused on developing novel methods of delivering radiation therapy targeting breast cancer and exploring novel molecular targets that may enhance the effects of radiation.

Dr. Haffty completed his medical school and residency training at Yale University School of Medicine in 1988 and spent the next 18 years specializing in breast and head and neck cancers in Yale’s Department of Therapeutic Radiology. Dr. Haffty served as a professor of therapeutic radiology from 1992 to 2001, as residency program director from 1992 through 2004, and vice-chairman and clinical director from 2002 to 2005. He accepted his current position as professor and chairman, Department of Radiation Oncology, Robert Wood Johnson Medical School and New Jersey Medical School of Rutgers University, and associate director of the Cancer Institute of New Jersey, in 2005.

As director of Yale’s Residency Training Program, Dr. Haffty personally mentored countless medical students, residents, fellows and junior attending physicians who have gone on to carve their own indelible marks within the specialty.

Through his extensive work with the American Society for Radiation Oncology (ASTRO), Dr. Haffty founded the Association of Directors of Radiation Oncology Programs (ADRDP) in 2000 and served as ADRDP president from 2000 to 2003.

Dr. Haffty is currently associate editor of the Journal of Clinical Oncology and has served on the RSNA Newsls Editorial Board since 2009.

Dr. Haffty served as president of the American Board of Radiology (ABR) from 2010 to 2012 and of the American Radium Society from 2008 to 2009. In 2010, Dr. Haffty delivered the RSNA Annual Oration in Radiation Oncology and is current co-chairman of RSNA’s Bolivia Bolstering Oncoradiologic and Oncoradiotherapeutic Skills for Tomorrow (BOOST) program. He is the current president of ASTRO.


Honored Educator

Established in 2011, the award recognizes RSNA members who have produced RSNA educational resources in the past calendar year. To be eligible for the award, members participate in qualifying activities including:

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

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

Helen C. Addley, M.R.C.P., F.R.C.R.
Alexander A. Bankier, M.D.
Daniel P. Barboriak, M.D.
John A. Carrino, M.D., M.P.H.
Jonathan H. Chung, M.D.
Subba R. Digumarthy, M.D.
Jason DiPace, M.D.
Theodore J. Dubinsky, M.D.
Albina A. Frazier, M.D.
J. David Godwin, M.D.
Mindy M. Horow, M.D.
Jeffrey P. Kanne, M.D.
Douglas S. Katz, M.D.
Jacob Kirsch, M.D.
Chandana G. Lal, M.D.
Susanna I. Lee, M.D., Ph.D.
David A. Markoff, M.D., Ph.D.
Christine O. Menias, M.D.
Mariam Moshir, M.D.
Peter R. Mueller, M.D.
Stephanie Nougaret, M.D.
Aytekin Ozb, M.D.
Sudhaakar Pipavath, M.D.
Caroline Reinhold, M.D., M.Sc.
Michael L. Richardson, M.D.
Daniel L. Rubin, M.D.
Osamu Sakai, M.D., Ph.D.
Evis Sala, M.D., Ph.D.

Kumarasri Sandrasegaran, M.D.
Mitchell D. Schnall, M.D., Ph.D.
Alameyda K. Shahrkhah, M.D.
Evan S. Siegelman, M.D.
Jorge Soto, M.D.
Joseph R. Steele, M.D.
Temit Tolkes, M.D.
Srinjy Vatoth, M.D., F.R.C.R.
Sadhna Verma, M.D.
Richard L. Wahl, M.D.
Christopher M. Walker, M.D.
Daniel E. Wessell, M.D., Ph.D.
You, your local radiology association, and your institution can build greater awareness of radiology and its contribution to patient care.

Help spread the word in your community with ready-to-use promotional materials available at RSNA.org/IDoR2013.