



# Daily Bulletin

THE OFFICIAL NEWSPAPER OF THE RSNA ANNUAL MEETING • ONLINE AT [RSNA.ORG/BULLETIN](http://RSNA.ORG/BULLETIN)

## PRESIDENT'S LETTER

### Welcome to RSNA 2016

IT IS MY PLEASURE to welcome you to RSNA's 102<sup>nd</sup> annual meeting and invite you to look "Beyond Imaging" and explore the many opportunities our specialty affords.

This year, we have incorporated your suggestions into some exciting changes for the meeting. The all-new Connections Center has been redesigned to make it easier for you to get answers about your membership benefits and all things RSNA. The new Discovery Theater affords opportunities to relax and listen to some local musicians or get a quick update on RSNA programs and activities at the meeting and throughout the year.

RSNA's selection of hundreds of educational courses and exhibits and thousands of scientific presentations offers unparalleled opportunities to learn. The technical exhibition features more than 600 companies demonstrating the latest innovations in the field.

You can expand your meeting experience by registering for the Virtual Meeting — available through December 23. Learn how radiology impacts healthcare around the world by visiting the Netherlands and Turkey Presents sessions.

The *Daily Bulletin* will keep you informed throughout the week with previews of upcoming sessions as well as coverage of some of the exciting things happening throughout McCormick Place this week. Each edition will highlight the cutting-edge research and clinical applications presented at the meeting. The Technical Exhibits Focus section includes news and product announcements from the exhibit floor.

Remember also to take time to connect with your peers during RSNA 2016 — this week offers you unique opportunities to network with colleagues and luminaries from around the globe. Relax in the Connections Center or meet for brunch on the exhibit floor.

On behalf of the RSNA Board of Directors, volunteers and staff, I wish you a rewarding and productive week in Chicago.

**RICHARD L. BARON, MD**  
RSNA PRESIDENT



**Richard L. Baron, MD**

## Radiologists Must Look Beyond Imaging to Remain at the Forefront of Healthcare

*Radiology's continued success lies in radiologists' unflinching dedication to delivering the best possible care to every patient.*

**R**SNA 2016's theme, "Beyond Imaging," signifies the shifting paradigm in the specialty and "that we, as radiologists, must extend our gaze beyond the constraints of the image to gain a broader perspective on the patient experience," said RSNA President Richard L. Baron, MD.

Radiologists need to be instrumental in building comprehensive healthcare teams, Dr. Baron said. He urges his radiology colleagues to think beyond the images they see in practice, stay abreast of advancing subspecialty medical knowledge, and more actively collaborate with referring physicians to improve patient outcomes.

"We have been a driving force in advancing patient care," said Dr. Baron, who will open RSNA's 102<sup>nd</sup> Annual Meeting with his presidential address "Beyond Imaging: Ensuring Radiology Impact in

Clinical Care and Research" today at 8:30 a.m. in Arie Crown Theater. "The medical imaging and treatment innovations that we have created are unparalleled. Yet, as amazing as these advances are, they alone are not enough. We must remain at the forefront of research, moving it into clinical practice, and we must build stronger bonds with our medical colleagues."

That message applies to radiology's critical role in imaging research as well, he said.

"We must reach beyond imaging in radiologic research, building truly multidisciplinary teams to develop multicenter, multi-investigator prospective trials that impact outcomes for entire populations," said Dr. Baron, professor of radiology and chair emeritus of radiology at the University of Chicago. "Today's research will become tomorrow's clinical practice, requiring radiologists to develop and lead impactful clinical imaging

research that will position us as an essential part of clinical care teams. And above all, we must look beyond imaging to gain a broader perspective on the patient experience."

Radiology and healthcare at large have entered a new era driven by changes to reimbursement models and an emphasis on value in patient care delivery, Dr. Baron said. Radiologists must produce examination reports that provide the solutions sought by patients and referring physicians rather than simply describe findings.

In his address today, Dr. Baron also will describe changes made to typical radiology practice models in the radiology departments of the University of Chicago and other institutions across the U.S. He will highlight measurable increases in value these changes are providing to radiologists' medical colleagues and patients.

"By embracing patient-centered medicine and building multidisciplinary teams in pursuit of better clinical outcomes, we position ourselves as an essential component of the patient's healthcare continuum," Dr. Baron said.

*By embracing patient-centered medicine and building multidisciplinary teams in pursuit of better clinical outcomes, we position ourselves as an essential component of the patient's healthcare continuum.*

**Richard L. Baron, MD**

## Dreyer, Wachter to Discuss the Good and Bad in Radiology's Digital Revolution

**R**SNA WELCOMES Keith J. Dreyer, DO, PhD, and Robert M. Wachter, MD, to Arie Crown Theater today to present lectures as part of the Opening Session, "Digital Revolution in Radiology — the Good and the Bad." The lectures are included in the RSNA 2016 Opening Session, which begins at 8:30 a.m.

Dr. Dreyer's presentation, "When Machines Think: Radiology's Next Frontier," will explore the state of clinical data science in medical imaging and its potential to improve the quality and relevance of radiology as well as the lives of patients. Leaders in radiology must shepherd the innovations of cognitive computing by defining its role within diagnostic imaging, according to Dr. Dreyer, the vice chair of radiology and director of the



**Keith J. Dreyer, DO, PhD**



**Robert M. Wachter, MD**

Center for Clinical Data Science at Massachusetts General Hospital and associate professor of radiology at the Harvard Medical School.

An internationally renowned informatics expert, Dr. Dreyer serves as chair of the

American College of Radiology Commission on Informatics. He has lectured worldwide on clinical data science, cognitive computing, clinical decision support, clinical language understanding, digital imaging standards, and implications of technology on the quality of healthcare and payment reform initiatives.

In his lecture, "Hope, Hype, and Harm as Medicine Enters the Digital Age: Lessons From (and For) Radiology," Dr. Wachter will describe what radiologists got right — and wrong — in their computerization journey, and why radiology was, to a large degree, a canary in the digital coal mine.

Dr. Wachter spent a year studying the digitization of healthcare in researching his 2015 *New York Times* bestselling book,

CONTINUED ON PAGE 6A

## Technology

### Tip of the Day

**Insufficient sampling rates on Doppler ultrasound can cause aliasing that looks like reversed flow, but isn't. Be sure when using Doppler that the velocity scale is set to a wide enough range.**

American Association of Physicists in Medicine

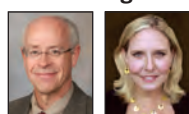
## INSIDE SUNDAY

### The Evolution of Diagnosis Live™



Back again for 2016, Diagnosis Live™ — RSNA's mobile-based audience-response technology — has evolved considerably since its RSNA 2011 debut. **6A**

### Outstanding Researcher, Educator Awarded Today



The 2016 Outstanding Researcher and Outstanding Educator awards are presented today during the opening session. **10A**

## Get More *Daily Bulletin* Online



The *Daily Bulletin* online edition features stories from our main news section and is offered in a mobile-optimized format for smartphones and other mobile devices.

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## Sunday At a Glance

8:30–10:15

**Opening Session** (Arie Crown Theater)

**RSNA Outstanding Educator and Outstanding Researcher Awards Presented**

**President's Address:**

*Beyond Imaging: Ensuring Radiology Impact in Clinical Care and Research*  
Richard L. Baron, MD

View the full program and add sessions to My Agenda on the RSNA 2016 App or at [Meeting.RSNA.org](http://Meeting.RSNA.org).

*When Machines Think: Radiology's Next Frontier*  
Keith J. Dreyer, DO, PhD

*Hope, Hype, and Harm as Medicine Enters the Digital Age: Lessons From (and For) Radiology*  
Robert M. Wachter, MD

10:15

**RSNA Business Session**  
(Arie Crown Theater)

10:30–11:30

**First-time Attendee Orientation** (Room E451A)

10:45–12:15

**Science Session with Keynote: Breast Imaging**  
(Arie Crown Theater)

**Oncodiagnosis Panel: Liver Cancer** (Room E353C)

**Pediatric Series: Neuro**  
(Room S100AB)

**Scientific Paper Sessions**

12:30–1:30

**Scientific Poster, Quality Storyboard and Education Exhibit Presentations**  
(Learning Center)

1:30–6:00

**Interventional Oncology Series: Renal and GU Tumors** (S405AB)

2:00–3:30

**Educational Courses**

4:00–5:45

**Plenary Session** (Arie Crown Theater)

**Report of the RSNA Research & Education Foundation**  
Burton P. Drayer, MD

**Image Interpretation Session**

## 2016 RSNA Scientific Assembly and Annual Meeting Program Dedication

*Herbert L. Abrams, MD, 1920–2016*

RSNA DEDICATES *The RSNA Meeting Program* of the 102<sup>nd</sup> Scientific Assembly and Annual Meeting to the memory of Herbert L. Abrams, MD. Dr. Abrams, who died Jan. 20, 2016, was a pioneer and renowned authority on cardiovascular imaging, a devoted teacher and a passionate advocate for peace. A founding father of the specialty of interventional radiology, he produced and edited the first comprehensive textbook of this new discipline, *Abrams*

*Angiography*, which is still in print today.

Born in New York, Dr. Abrams attended medical school at the Long Island College of Medicine and completed his residency in internal medicine at Long Island College Hospital and Montefiore Hospital in New York.

Dr. Abrams completed his radiology residency at Stanford Medical Center, where he later rose to director of diagnostic radiology. In 1967 he returned east to Harvard

Medical School and the Brigham and Women's Hospital and Dana Farber Cancer Center where he grew the radiology department and developed an outstanding teaching center. He returned to Stanford in 1985 to focus on research.

Dr. Abrams' growing concern about the health threat



Herbert L. Abrams, MD

of nuclear policies led him to become the founding vice president of the International Physicians for the Prevention of Nuclear War, an organization that was awarded the Nobel Peace Prize in 1985.

Dr. Abrams was married to Marilyn for 73 years. The couple had two children, three grandchildren and three great-grandchildren.

## Daily Bulletin

SUNDAY

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The RSNA 2016 Daily Bulletin is the official publication of the 102<sup>nd</sup> Scientific Assembly and Annual Meeting of the Radiological Society of North America. Published Sunday, November 27–Thursday, December 1.

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# GREETINGS

Welcome to RSNA 2016 from  
the RSNA Board of Directors



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**Richard L. Ehman, MD**  
President-elect and Secretary-  
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**BRUCE RAUNER**  
GOVERNOR

November 27, 2016

Radiological Society of North America (RSNA)  
RSNA 2016 Scientific Assembly and Annual Meeting  
820 Jorie Boulevard  
Oak Brook, Illinois 60523

Greetings!

As Governor of the State of Illinois, I am pleased to welcome everyone gathered for the Radiological Society of North America's 2016 Scientific Assembly and Annual Meeting.

This year's theme, "Beyond Imaging", encourages radiology professionals to collaborate and consider how important their role is in the larger medical community. This event presents an exciting opportunity for everyone in attendance to join together for educational opportunities and networking, and provides a forum for collaboration on the latest innovations by practitioners and manufacturers alike.

As you reflect on your accomplishments over the past year, I urge you to make plans for the future of your organization that build on your past successes. I am certain this meeting will go a long way toward furthering your goals for the future, both individually and collectively.

On behalf of the people of Illinois, I offer my best wishes for an enjoyable and memorable occasion.

Sincerely,

Bruce Rauner



OFFICE OF THE MAYOR  
CITY OF CHICAGO

**RAHM EMANUEL**  
MAYOR

November 27, 2016

Dear Friends:

As Mayor and on behalf of the City of Chicago, it is my pleasure to welcome everyone participating in the Radiological Society of North America's 102<sup>nd</sup> Scientific Assembly and Annual Meeting.

Established in 1915 as the Western Roentgen Society, the Radiological Society of North America (RSNA) is an international society of radiologists, medical physicists and other medical professionals dedicated to improving the study and multifaceted use of radiological techniques. The RSNA has promoted cutting-edge research and medical applications of radiology to enhance diagnostic procedures and overall health concerning the general public for a century. With more than 50,000 members across the globe, RSNA hosts the largest medical meeting in the world.

Themed, *Beyond Imaging*, this year's meeting features lectures, exhibits, receptions, panel discussions, and networking opportunities centered on the remarkable history of RSNA alongside its enduring work. Participants will be given the chance to learn about recent advancements in radiology and its effect on medicine. The meeting also provides radiologists, medical physicists and other medical professionals a common space to expand their knowledge on how to resourcefully, securely, and successfully promote and implement new strategies for practicing radiology. Headquartered in Chicagoland, RSNA has bolstered the city's standing as a true hub for innovation in medicine and technology. I commend the Radiological Society of North America for steadfast and innovative work to progress the widespread use of radiology and for the numerous collaborative contributions to the greater community.

I hope that those visiting our great city take time to experience some of the special places in Chicago. Our iconic skyline and incredible lakefront invite you to explore all Chicago has to offer. I hope you have a chance to sample our distinguished restaurants, tour our great universities, and visit our world-class museums during your stay.

Again, on behalf of the people of Chicago, I offer heartfelt congratulations. I hope you have an enjoyable and productive meeting. Best wishes for much continued success.

Sincerely,

Mayor







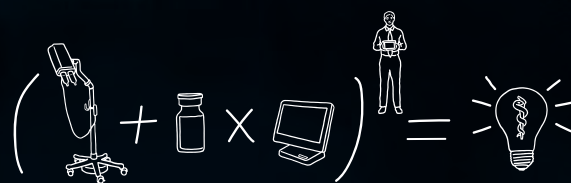
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to learn more.  
South Hall #2529**



**That's Radiological**



# The Dramatic Evolution of RSNA's Diagnosis Live™

By Lynn Antonopoulos

SINCE THE FIRST, large-audience, rapid-fire gaming sessions at RSNA 2011, RSNA's Diagnosis Live™ (RDL) has undergone many changes in design, infrastructure and scale. However, RSNA's primary goal — to create a mobile-based, audience response technology specifically designed to meet the unique needs of radiologists — has remained the same. Through RDL's ever-improving functionality and expansion into the global community, the application has become an invaluable educational tool and an increasingly popular draw at RSNA annual meetings. And Diagnosis Live is just getting started.

"We have barely scratched the surface of what Diagnosis Live can do," said Adam Flanders, MD, chair of RSNA's Radiology Informatics Committee (RIC), and an early collaborator on Diagnosis Live who continues to play a key role in its evolution. "It has enormous potential for transforming radiology education as we know it."

## Making Learning Interactive

RSNA staff began developing the Diagnosis Live concept under the guidance of Paul Chang, MD, a professor of radiology and vice chair of radiology informatics at the University of Chicago School of Medicine, who serves as a consultant to RSNA's RadSCOPE and myRSNA initiatives developed through the RIC.

Looking to experts in education theory, the team sought to leverage RSNA's information technology resources to create a product that would move beyond passive learning and make radiology education more engaging and long-lasting. With this in mind, the team designed Diagnosis Live as a gaming application that would encourage active engagement through competition, thereby improving retention.

"Through Diagnosis Live, we sought to move people to participate and to create an instrument to evaluate learners objectively using deep analytics so that areas for improvement could be identified and addressed," said Dr. Chang, also a member of RSNA's Public Information Advisors Network.

In 2012, after the success of the first large-audience gaming sessions, the team began exploring RDL as a radiology residency training tool. The program's analytics provided an objective measure of resident performance and could be used to address gaps in learning. The RDL team initiated a two-year beta test in three residency programs at institutions including Thomas Jefferson University Hospital (TJUH). Dr. Flanders, a professor of radiology and vice chair of imaging informatics

at TJUH, recalls his institution's role in the early days.

"We helped with rapid development by putting our residents through entire sessions even if we hit snags with the software's performance," Dr. Flanders said. "We took copious notes during these early sessions and sent them back to the developers, and they absorbed it all and addressed all of our concerns. It was a fun and rewarding iterative process."

Early adopters like TJUH dealt with obstacles including RDL's consumption of significant Wi-Fi resources and difficulties scaling to suit larger audiences.

"As an early adopter, you have to appreciate the greater vision and be willing to accept and work through the flaws," Dr. Flanders said. "Our residents and some faculty were tremendous early supporters of the project because they could see the potential of the software even very early."

Over the next two years, the team focused on improved functionality and greater ease-of-use in institutional settings. The test sites helped shape the software's evolution. Further updates included simplified controls for classroom projection, adding dashboard analytics optimized for user/teacher consumption, tools to make authoring games easier and a highly-scalable cloud-based architecture.



Adam Flanders, MD



Paul Chang, MD

## Residency Programs Adopt RSNA's Diagnosis Live

When the beta test ended in July 2014, the team released a new Institution Management account tool designed for radiology residency programs. RSNA began providing complimentary licenses for RDL to residency programs, and by the end of 2014, 16 residency programs had adopted the software. Additional updates in early 2015 included new features to copy games and export analytics to better support residency training and conference event goals.

Philipose Mulugeta, MD, a fourth-year resident at the University of Pennsylvania School of Medicine, regularly uses RDL for teaching surgical clerkship medical students. "Using RDL, lectures have become more lively as students can answer pre- and post-test questions as well as perform group answers of cases," he said. "Diagnosis Live has made the old hot seat case conference feel antiquated. Residents now expect an element of audience response in every lecture."

Brooke Beckett, MD, a radiologist at Oregon Health & Science University, says the majority of the faculty at her institution uses RDL for daily resident teaching conferences. "We've moved to a more consistent use of the program as part of a larger restructuring/revision of our didactic curriculum," she



A popular draw at past RSNA annual meetings, Diagnosis Live will support RSNA 2016 courses including seven rapid-fire sessions conducted by Adam Flanders, MD, Paul Chang, MD, and colleagues.

said. Dr. Beckett will present on the RDL session Wednesday morning (See below).

While primarily distributed to educational institutions, RDL is also available to other radiology organizations interested in using it for education conferences or annual meetings.

Dr. Chang conducted four Diagnosis Live sessions at the 2015 Royal Australian and New Zealand College of Radiologists' annual meeting, marking the beginning of the application's international expansion. As of May 2016, Diagnosis Live was used in select sessions at radiology conferences held by Deutsche Röntgengesellschaft (DRG), the Society of Abdominal Radiology, the Society of Pediatric Radiology and the Association of University Radiologists.

And the role of RDL at RSNA annual meetings has expanded each year. Diagnosis Live will support courses marked ARS at RSNA 2016 including nine rapid-fire sessions conducted by Drs. Chang, Flanders and colleagues. Dr. Flanders said the response has been incredible.

"We were shocked that our 7 a.m. rapid-fire sessions played to packed houses," he said. "RSNA attendees want interactive



Philipose Mulugeta, MD



Brooke Beckett, MD

participation and in response, Diagnosis Live is peppered throughout more RSNA event lectures than ever before."

## Diagnosis Live Has Boundless Potential

Though it began modestly, RDL has evolved into a fully-scalable, sophisticated application with cutting-edge, big data architecture. Today's version is cloud-based, hosted on Amazon Web Services™ and can be used anywhere in the world where internet access is found. How-to guides posted on YouTube help new users better understand RDL's various modules.

At time of printing, 68 residency programs worldwide hold RDL licenses including six non-North American institutions.

## BACK IN ACTION: RSNA DIAGNOSIS LIVE™ AT RSNA 2016

Always a popular draw, Diagnosis Live™ returns for a full week of programming.

This year's rapid-fire sessions:

• Winter is Coming  
Monday 7:15-8:15 AM | SPDL20

• Chest and Abdomen  
Monday 4:30-6:30 PM | SPDL21

• Imaging in the Cobra Kai Dojo  
Tuesday 7:15-8:15 AM | SPDL30

• High Resolution CT of Diffuse Lung Disease: Read Cases with the Experts (An Interactive Session)  
Tuesday 4:30-6:00 PM | RC401

• Do You Know Your Head and Neck Anatomy? (An Interactive Session)  
Tuesday 8:30-10 AM | RC306

• Keeping Radiology Weird — Spot Diagnoses from the Pacific Northwest  
Wednesday 7:15-8:15 AM | SPDL40

• Neuro and MSK  
Wednesday 4:30-6:00 PM | SPDL41

• Musculoskeletal and Emergency Department Imaging — From Sports to Trauma  
Thursday 7:15-8:15 AM | SPDL50

• Peds, IR, Potpourri  
Thursday 3-4 PM | SPDL51

Add Diagnosis Live sessions to MyAgenda at [Meeting.RSNA.org](http://Meeting.RSNA.org).

## Radiation Safety

## Question of the Day

Q What is dose creep?  
[Answer on page 12A.]

## Dreyer, Wachter to Discuss the Good and Bad in Radiology's Digital Revolution

CONTINUED FROM COVER

*The Digital Doctor: Hope, Hype and Harm at the Dawn of Medicine's Computer Age*, which he says is ultimately a hopeful story. The experiences of other industries demonstrate that it often takes a decade or more to obtain the promised benefits from automation — and that these improvements emerge only after the technology improves and the work

has been reimaged for a digital environment.

Dr. Wachter is professor and interim chair of the Department of Medicine at the University of California, San Francisco, where he also directs the division of hospital medicine. Author of 250 articles and six books, he coined the term "hospitalist" in 1996 and is generally considered the

father of the hospitalist field, one of the fastest growing specialties in the history of modern medicine. He is past president of the Society of Hospital Medicine and past chair of the American Board of Internal Medicine. In 2015, *Modern Healthcare* magazine ranked him as the most influential physician-executive in the U.S., his eighth consecutive year in the top 50.



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**RSNA<sup>®</sup> 2017**  
NOVEMBER 26 – DECEMBER 1



# Visit the All-new RSNA Connections Center

## Formerly RSNA Services

**T**HE ALL-NEW RSNA Connections Center was redesigned with RSNA attendees in mind.

The expanded lounge seating offers a spot to network, recharge your phone and enjoy new beverage options including gourmet coffee, wine and beer for purchase.

### Membership & Resources

Get answers about membership, journal subscriptions, paying dues and making the most of your membership benefits in the Membership & Resources section. Staff will also be available to answer questions on RSNA services including RSNA's international programs such as the International Visiting Professor program, the Derek Harwood-Nash International Fellowship and the Introduction to Research for International Young Academics.

The Membership & Resources section also has information about Career Connect, *RadiologyInfo.org*®, *Radiology Cares*® and *Image Wisely*®. Attendees can also check out all of RSNA's print, online and mobile applications in this area.

### R&E Foundation Donor Suite

The redesigned Research & Education (R&E) Foundation Donor Suite offers light refreshments, computers, a coat room and comfortable furniture exclusively to donors who contribute \$300 or more to the Foundation. Stop by to learn more about R&E Foundation activities, including the Inspire-Innovate-Invest Campaign. Read about current grant and award recipients as well as individual, private practice and corporate donors who provide funding for grants.

### Information Desk

Visit RSNA staff at the Information Desk for answers to all your questions about RSNA 2016.

### Digital Support

RSNA technology experts are available in the Digital Support area to provide one-on-one digital help with Meeting Central, the RSNA meeting app or the Virtual Meeting.

### RSNA Shop

Be sure to visit the redesigned RSNA Shop, your go-to resource for CME Refresher Course USBs, *Radiology Select* issues, journal samples and RSNA-branded merchandise and apparel. New branded items include cashmere scarves and pashminas, leather notebooks, power banks and plush teddy bears for the kids.



## Discovery Theater Features Music, RSNA Programming

Also new this year is the Discovery Theater, located within the Connections Center in the Lakeside Center East. The theater will feature musical performances, informational and education presentations from RSNA partners and employees, radiologists and researchers within the industry, along with social media engagements. The top 25 entries to the 2016 Image Contest will also be on display in the theater.

The stage will be surrounded by casual seating options, where attendees can relax and recharge and listen to music, watch a presentation or network with colleagues. Visit Meeting Central for the latest schedule and to add presentations to My Agenda.

### SOME SCHEDULED DISCOVERY THEATER EVENTS INCLUDE:

#### SUNDAY, NOV. 27

*3-D Printing Special Interest Group – Organization, Membership and Purpose*, 10:30 a.m.

*Navigating RSNA/Chicago (in Spanish)*, 11 a.m.

*Musicality*, Noon-1 p.m.

Established in 2008, the Chicago high school a cappella group *Musicality* placed as semifinalists on the 11th season of NBC's hit show "America's Got Talent."

*RSNA Tweet Up*, 1 p.m.

*Hilary Butler Quartet*,

1:30-2:15 p.m. and 2:45-3:30 p.m.

This four string quartet will provide a classic sound playing two sets.

*Experience Chicago on a Budget*, 3:30 p.m.

#### MONDAY, NOV. 28 TO WEDNESDAY, NOV. 30

*Live Painted Mural*

Nancy Pochis Bank and her team will be onsite for three days during RSNA 2016 to create a new work of art just for us. The large canvas mural will be at the entrance of the Connections Center from the sky bridge.

#### MONDAY, NOV. 28

*Image Wisely*® Update, 9 a.m.

*RSNA Quality Certificate Program: Defining Quality as the Ability to Meet or Exceed Expectations Reliably*, 9:30 a.m.

*RSNA Research Training Courses*, 10 a.m.

*RadiologyInfo.org—Providing Patients with Credible Information*, 3 p.m.

*Navigating RSNA Journals*, 3:30 p.m.

#### TUESDAY, NOV. 29

*RadiologyInfo.org—Providing Patients with Credible Information*, 9 a.m.

*The Impact of an RSNA R&E Grant*, 10 a.m.

*Chicago Diamond Trio*, Noon-1 p.m. and 2:30-3:30 p.m.

Relax in the Discovery Theater during the lunch hour and again in the mid-afternoon for musical entertainment from one of Chicago's best jazz entertainers.

*Resident and Fellow Tweet Up*, 3:30 p.m.

#### WEDNESDAY, NOV. 30

*Radiology Cares*®—*Practicing the Art of Patient-centered Care*, 9 a.m.

*Using RSNA's Career Center to Optimize Your Career*, 9:30 a.m.

*What's New at Image Wisely*, 10:30 a.m.

*Callaloo*, Noon-1 p.m.

One of the best world fusion steel pan groups performing in Chicago, Callaloo delivers a powerful musical experience built on strong Latin rhythms.

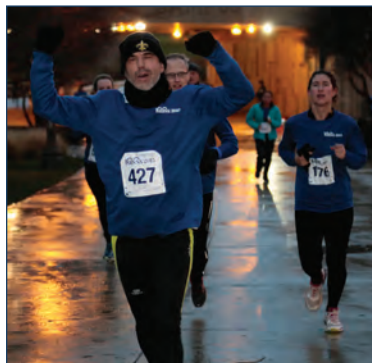
#### THURSDAY, DEC. 1

*Using RSNA's Career Center to Optimize Your Career*, 9 a.m.

*Hilary Butler Quartet*,

10-10:45 a.m. and 11:15 a.m.-Noon

This four string quartet will provide a classic sound playing two sets.



## RSNA's 5k Fun Run to Support Radiology Research

Whether you are a seasoned runner or a casual stroller, RSNA invites attendees to sign up for the 2016 Fun Run, kicking off Tuesday, Nov. 29, at 6:30 a.m., at Arvey Field, South Grant Park, Chicago.

**G**ET IN AN early run along Chicago's beautiful lake-shore and support critical funding for radiologic research and education. The annual 5K Fun Run benefits the RSNA Research & Education (R&E) Foundation, through the fully tax-deductible \$40 registration dona-

tion. Runners will receive a commemorative T-shirt while supplies last.

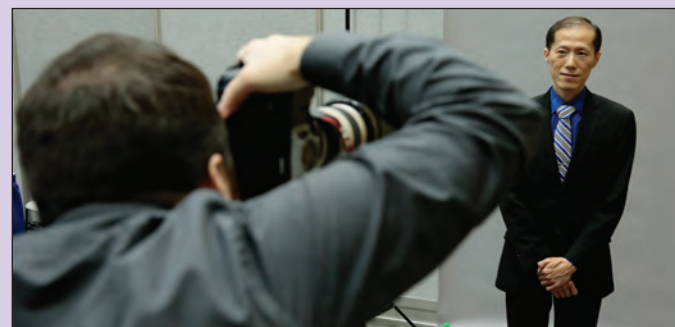
Register for the Fun Run at the Fun Run desk (Grand Concourse, level 2.5 of McCormick Place) Sunday and Monday between



7:30 a.m. and 5:00 p.m. Pre-registered runners should visit the desk to pick up their bibs and T-shirts.

Last year nearly 900 registrants supported the Foundation through the 5k Fun Run.

## Need a Fresh Headshot? Visit the Professional Portrait Studio



Attendees are invited to stop by one of RSNA's most popular attractions — the Professional Portrait Studio — to get a free professional headshot to use for CVs, passports and social media profiles. Photos are immediately e-mailed to you.

The studio is located in the Grand Concourse North Lobby, Level 3, and is open Sunday through Thursday from 10 a.m. to 5 p.m.



# Plug Into a Full Array of Technology at RSNA 2016

Take advantage of the latest technology and expert guidance offered at RSNA 2016 throughout the week.

## Online Resources

### Meeting Central

Optimized for tablets and mobile devices, the Meeting Central site at [Meeting.RSNA.org](http://Meeting.RSNA.org) is an essential resource for navigating RSNA 2016. Explore a host of valuable tools, including:

- **RSNA Meeting Program** — Browse the listings of educational courses, scientific presentations and search the site using helpful filters.
- **Technical exhibitors list** — Learn about the companies unveiling the latest equipment and technology.



• **Virtual Meeting program** — Browse virtual sessions available live or on demand either onsite or virtually from anywhere across the globe.

• **My Agenda** — Build your calendar and stay organized with a handy schedule personalized to your needs, and access Credit Eval.

### RSNA 2016 Meeting App

Download the RSNA 2016 meeting app for iPhone, iPad and Android smartphones to access and explore the Meeting Program even when you're offline. Browse the technical exhibitor list, access maps to navigate McCormick Place and

customize your daily meeting schedule with My Agenda. Available via the App Store and Google Play, the RSNA 2016 meeting app is sponsored by Siemens Healthineers.

### Stay Connected

#### Digital Support

Stop by the Connections Center, Lakeside Center East, or Grand Concourse North Lobby for one-on-one assistance for your mobile devices from RSNA's tech experts. Staff can help you navigate the RSNA 2016 meeting app, Meeting Central (including the Meeting Program and My Agenda), and Credit Eval for claiming CME credit.

### Internet Stations

Computers will be available at internet stations throughout McCormick Place for use in accessing Meeting Central and Credit Eval.

### Free Wifi

Free wireless connectivity is 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, phone or other mobile device at one of the Charging Stations located throughout McCormick Place.

## CREDIT EVAL FOR COURSE EVALUATIONS AND CME CREDITS

Access Credit Eval by clicking My Agenda from Meeting Central ([Meeting.RSNA.org](http://Meeting.RSNA.org)) to evaluate RSNA 2016 courses and claim credits online via your laptop or mobile device, or at any Internet Station in McCormick Place. You can begin your evaluations as early as 10 minutes after courses start, claim your credits onsite and walk away with printed certificates. For RSNA members, credits are automatically added to the RSNA CME Repository. Assistance is available in the Connections Center, Lakeside Center East, Level 3.

## Continuing Education Credits Available

RSNA IS ACCREDITED by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

RSNA designates this live activity for a maximum of 100.25 *AMA PRA Category 1 Credits™*. Physicians should claim only credit commensurate with the extent of their participation in the activity. Attendees can evaluate CME courses and claim credit electronically using Credit Eval.

The Commission on Accreditation of Medical Physics Education Programs (CAMPEP) has approved the direct transfer of *AMA PRA Category 1 Credits™* to Medical Physics Education Programs (MPCEP) on a credit-for-credit basis for medical physicists.

RSNA is an American Registry of Radiologic Technologists (ARRT)-approved Recognized Continuing Education Evaluation Mechanism Plus (RCEEM+) and will provide Category A+/A continuing education credits for radiologic technologists and radiologist assistants.

### Self-Assessment Modules (SAMs)

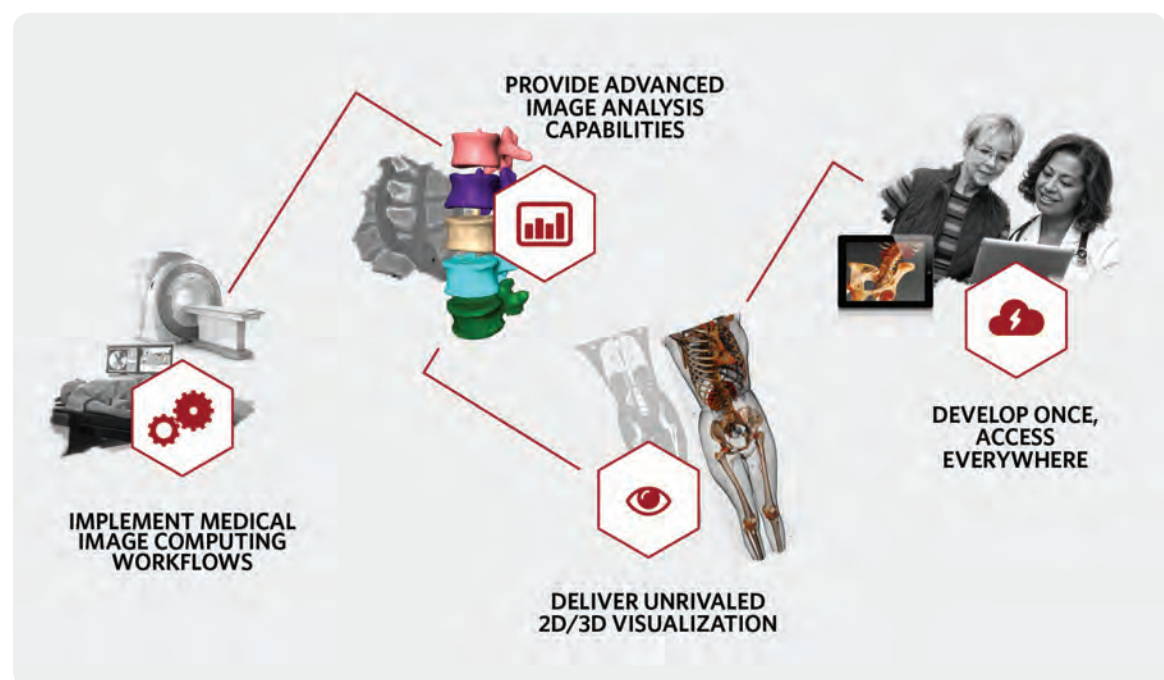
Select RSNA courses have been approved for SAMs. Each RSNA in-person SAM is available for up to 1.50 SAM credits and 1.50 *AMA PRA Category 1 Credits™*. RSNA annual meeting in-person SAMs are accredited by the MOC program of the Royal College of Physicians and Surgeons of Canada and approved by the Canadian Association of Radiologists.

### Academy of Radiology Leadership and Management

Receive an Academy of Radiology Leadership and Management Certificate of Achievement by earning 50 education credits across a spectrum of core learning domains including financial skills, human resources, professionalism, legal/contracting and more.

## Open Inventor Medical Edition

2D/3D Software Development Tools



## Discover FEI's dedicated toolkit for medical image computing

Attend our live demos and learn how the Open Inventor® Medical Edition can help your software development team implement applications with 2D and 3D medical image computing workflows.

Leverage Open Inventor Medical Edition for integrating advanced 2D/3D visualization and image processing into your application – from the desk to the cloud.

Join us at booth #1849 Hall A for live demonstrations!

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# 2016 Outstanding Researcher, Educator Honored Today

Clifford R. Jack Jr., MD, and Kristen K. DeStigter, MD, will be honored during the RSNA 2016 Opening Session beginning at 8:30 a.m. in the Arie Crown Theater.

## Outstanding Researcher

A PIONEER in Alzheimer's disease (AD) research, Clifford R. Jack Jr., MD, has devoted his career to investigating cognitive aging and dementia imaging/biomarkers. Dr. Jack, the Alexander Family Professor of Alzheimer's Disease Research and a clinician investigator at the Mayo Clinic, Rochester, Minn., guides a research group that serves as the central MRI lab for national and international observational and therapeutic studies in AD. His group heads the MRI section for the Alzheimer's Disease Neuroimaging Initiative.

Dr. Jack has introduced imaging methods to help identify aspects of AD in the brain, determine its severity and measure and predict disease progression. His research group develops and validates anatomic MRI, resting fMRI, DTI, amyloid PET, fluorodeoxyglucose PET and tau PET quantitative methods for diagnosing and measuring progression of AD and related disorders.

His early work focused on anatomic and functional MRI in epilepsy. In the early 1990s he began to focus on Alzheimer's disease and cognitive aging research. His group published many of the early studies in the Alzheimer's field

on quantitative MRI, diffusion imaging, functional MRI, and high-field micro-imaging. In the past decade his group has focused on multi-modality imaging, combining various MR modalities with FDG PET, amyloid PET and most recently tau PET. He has also focused on modeling biomarker progression in



Clifford R. Jack Jr., MD

Alzheimer's. The National Institute of Aging and Alzheimer's Association criteria for presymptomatic Alzheimer's are based largely on his model. He currently is chair of the group that is updating the National Institute of Aging and Alzheimer's Association research criteria for Alzheimer's disease.

Dr. Jack earned his medical degree from Wayne State University and completed his radiology residency at Henry Ford Hospital, both in Detroit. He served as a senior staff member, Division of Radiology, at Henry Ford Hospital from 1984 to 1985. After completing his fellowship in neuro-radiology in the Department of Diagnostic Radiology at the Mayo Clinic, Dr. Jack joined the clinic as an assistant professor of radiology and was later appointed a clinician investigator. His research has been continuously funded by the National Institutes of Health since 1991.

## Outstanding Educator

A DEDICATED educator and mentor, Kristen K. DeStigter, MD, has earned an international reputation for innovation in education, leadership, and ultrasound outreach.

Dr. DeStigter is the John P. and Kathryn H. Tampas Green & Gold Professor and Interim Chair of Radiology at the University of Vermont College of Medicine. Prior to being selected as interim chair, she served as vice chair for 10 years. She has extensive leadership experience and long-standing service to local and national committees, boards and professional societies.

Additionally, she is the co-founder and president of Imaging the World (ITW), a nonprofit organization currently operating in Uganda that integrates ultrasound diagnosis into systems of care in rural health facilities.

With a career focused on education, Dr. DeStigter is the past program director of the diagnostic radiology residency at the University of Vermont. During her tenure, Dr. DeStigter received three University of Vermont residency teaching awards. Prior to serving as program director, she served as the radiology director of Medical Student Education for three years. She has taught, mentored and sponsored trainees at various levels of their education as well

as mentored faculty in their professional development.

Dr. DeStigter's scholarly interests and accomplishments include unique applications of ultrasound in rural medicine, the provision of integrated medical imaging services in under-served communities, medical education in diagnostic radiology, and global

advances in women's health care. She is a champion of many projects for safety and quality of care in clinical radiology.

In the international community, Dr. DeStigter leveraged her knowledge and experience through her participation as a member of the World Health Organization Referral Guidelines Development Group as part of the International Radiology Quality Network. Currently, Dr. DeStigter is chair of the RSNA Committee on International



Kristen K. DeStigter, MD

Radiology Education (CIRE) and a member of the RSNA Education Committee. She has served on the RSNA Annual Assembly Faculty. Dr. DeStigter serves on the American College of Radiology (ACR) Foundation's International Outreach Committee.

Dr. DeStigter completed her undergraduate training at Calvin College, her medical training at Case Western Reserve University, and her diagnostic radiology residency and body imaging fellowship at University Hospitals of Cleveland, Ohio.

## R&E Foundation Innovators Move the Specialty Beyond Imaging

SUPPORTING A record 101 research and education grant projects this year totaling over \$4 million, the RSNA Research & Education (R&E) Foundation is helping radiology's most innovative thinkers take the specialty beyond imaging to truly affect patient care.

That is the message R&E Foundation Board of Trustees Chairman Burton P. Drayer, MD, will deliver today at 4 p.m. from the Arie Crown stage during the Report of the RSNA R&E Foundation. "R&E grant recipients pursue projects that



go beyond radiologic sciences and touch every area of healthcare delivery and discovery," he said, adding that support for the Foundation is critically needed to continue the development of researchers and educators within the radiology community.

To ensure continued success, the Foundation launched Inspire—Innovate—Invest: The Campaign for Funding Radiology's Future at RSNA 2014. The Campaign is moving steadily toward its goal of \$17.5



Burton P. Drayer, MD

million because of the dedicated support of individuals, private practice groups and corporate colleagues.

"For the future of radiologic research to belong to the next generation of radiologists, the specialty must put its financial support squarely behind its Foundation," Dr. Drayer said. He encouraged for everyone in the specialty to support the Campaign.

Survey results show that every dollar awarded by the Foundation results in an additional \$40 in funding

received as principal or co-investigator from sources such as the NIH, demonstrating a remarkable return on investment. With those research monies becoming increasingly difficult to secure, donors to the R&E Foundation can fill that gap, Dr. Drayer said.

Attendees can visit the R&E Foundation booth in the Connections Center in Lakeside Center East, Level 3 during the meeting to learn more about the 2016 grant recipients and their innovative projects, and to find out how they can help reach the Campaign goal.

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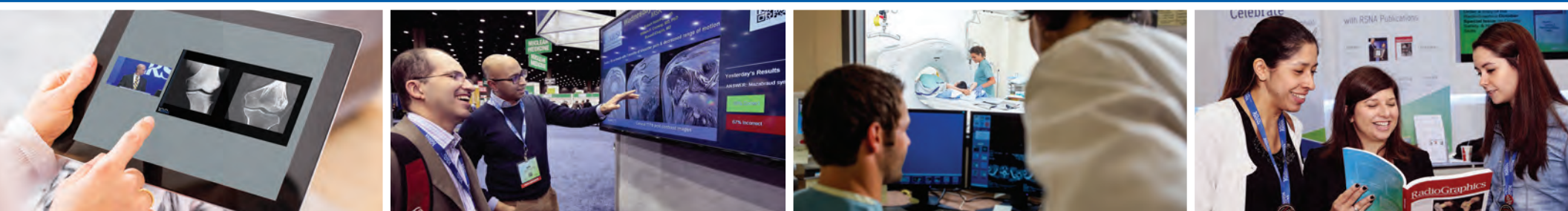
### **RSNA Members Enjoy:**

- ▶ Free advance registration to the **RSNA annual meeting**
- ▶ Free subscriptions to ***Radiology*** and ***RadioGraphics***
- ▶ **eLearn** online education resources
- ▶ **Grant opportunities** that launch careers
- ▶ **Community** for networking, advocacy and innovation

Demonstrate your commitment to radiology education, professionalism and community.

# Join Today!

Learn more at [RSNA.org/Membership](http://RSNA.org/Membership)



1-877-RSNA-MEM (776-2636)  
1-630-571-7873 (outside the U.S. or Canada)

**RSNA<sup>®</sup>**  
Radiological Society  
of North America



# Virtual Meeting Enhances the RSNA 2016 Experience

**T**HE RSNA 2016 Virtual Meeting now features expanded content, longer availability and CME credit for live sessions — plus 13 CME-eligible courses on demand. Both RSNA 2016 registered attendees and medical professionals around the globe can participate in the Virtual Meeting. The Virtual Meeting is available 24 hours a day beginning at 8 a.m. Central Time (CT) on Saturday, Nov. 26. Live programming will run simultaneous to the RSNA 2016 annual meeting, which ends Friday, Dec. 2. After that date, all Virtual Meeting programming will be available on demand through Friday, Dec. 23, at 4 p.m. CT.

Virtual Meeting participants may also participate in Cases of the Day

and access scientific posters and educational exhibits. New this year is a Virtual Meeting viewing lounge located in the Learning Center. The space offers comfortable seating, device charging opportunities, computers and headphones for registered meeting attendees to view live or on-demand sessions.

The fee is \$100 for RSNA/AAPM members, \$300 for non-members, and \$25 for RSNA members-in-training and RSNA medical student members. The Virtual Meeting is free for retired members. Register online at [RSNA.org/Register](http://RSNA.org/Register).

Visit [RSNA.org/Virtual](http://RSNA.org/Virtual) to view the complete Virtual Meeting course listing and to access live and on-demand courses during and after the meeting.



## Radiation Safety Answer

[Question on page 6A.]

**A** Dose creep occurs when technologists begin overexposing to ensure good image quality. Exposure index should be monitored over time to prevent unnecessary overexposure of patients.

Q&A courtesy of AAPM.

# AI-POWERED IMAGING

## BEYOND HUMAN VISION

Data-driven Imaging Biomarker is a novel AI-powered image analysis technology created by Lunit's exceptional deep learning researchers.

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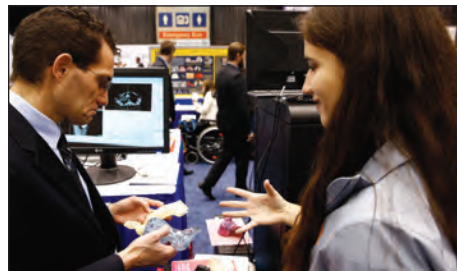
contact@lunit.io  
<http://www.lunit.io>



# Learning Center Highlights

Located in Lakeside Center East, Level 3, the newly redesigned Learning Center houses thousands of education exhibits and scientific posters covering a range of specialties. This year, RSNA is also spotlighting:

## 3-D PRINTING DEMONSTRATION AND SHOWCASE



In addition to many hands-on courses related to 3-D printing, the Learning Center will include theater poster presentations on 3-D printing along with general presentations on the value of the modality throughout the week. A demo area with additional information will also be featured.

Developed by the RSNA Radiology Informatics Committee, the exhibit will showcase the increasing clinical significance of 3-D printing and its connection to medical imaging.

## NCI IMAGE PERCEPTION RESEARCH

Researchers supported by the National Cancer Institute (NCI) will be conducting studies on radiologic image perception in an open lab environment. RSNA meeting attendees will be able to learn about this important



Medical Image Perception Lab supported by the National Cancer Institute

area of research and, if they wish, participate in the studies as volunteers in this lab environment. Nine different laboratories from the U.S., Canada and Australia have been selected by NCI to conduct the radiological image perception studies.

The lab is equipped with four testing stations and eye tracking equipment and will be staffed by laboratory personnel. Located in the back of the Learning Center (near the Resident & Fellow Lounge), the lab will be open Sunday through Thursday, from 7:30 a.m. to 6 p.m. Attendees can sign up at <https://goo.gl/joWhff>.

## CME LEARNING CHECKPOINT

New this year in the Learning Center, CME Learning Checkpoints will highlight 11 award-winning hard-copy exhibits from RSNA 2015. Attendees can study an exhibit and take the corresponding quiz on their mobile devices or laptops. Attendees receive 0.5 AMA PRA Category 1 Credit™ for each completed quiz.

## QI STORYBOARD POSTER WALK

Join David Larson, MD, and Paul Nagy, PhD, experts in quality improvement in radiology, as they walk through the QI storyboards, highlighting examples of great work and sound methodology. Bring your walking shoes for this interactive session. Monday, Nov. 28, 3-4 p.m., in the Quality Storyboard Section.

# Special Recognition for In-Kind Support

RSNA would like to recognize the following companies for contributing equipment to the Educational Courses at RSNA 2016:

## Algea Therapies\*

Analogic Corporation

Argon Medical Devices, Inc.\*

Bard Biopsy Systems

Bracco

CIVCO Medical Solutions

Cook Medical

Esaote

Galil Medical\*

GE Healthcare

## Hitachi Healthcare

Hologic, Inc.

Invivo

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Konica Minolta

Healthcare Americas, Inc.

Mammotome

Medtronics

Merge Healthcare

Mindray / ZONARE

## NeuWave Medical\*

Parker Laboratories, Inc.

Philips

Siemens Healthineers

Stratasys

SuperSonic Imagine

Toshiba Medical Systems

Vital

TeraRecon

Welch Allyn\*

\*Companies not exhibiting

# STAY CONNECTED THROUGH SOCIAL MEDIA AT #RSNA16

Join — or start — the conversation on social media at RSNA 2016. Follow RSNA on Facebook, Twitter, Instagram and LinkedIn to get the latest updates, connect with colleagues and share your favorite meeting moments. Include the official RSNA 2016 hashtag, #RSNA16, to connect with fellow attendees or to see what other attendees are saying throughout the meeting. Tracking your steps? Tweet the number of steps you've taken each day on #RSNAWalkingChallenge and you will be entered to win one of several fitness-themed prizes.

In addition, RSNA 2016 will feature two "tweetups," which bring together Twitter users for a face-to-face gathering. A general tweetup is scheduled for 1-1:30 p.m. on Sunday. And a Resident & Fellow Committee Tweetup is happening 3:30-4:30 p.m. on Tuesday. Both events take place in the Discovery Theater, located in the Connections Center, Lakeside Center East, Level 3.





# From Herbs to Hops, McCormick Place Rooftop Garden Yields a Healthy Harvest

Wondering where some of the produce you're eating this week at McCormick Place restaurants is grown? The answer just may be up on the roof.

By Mary Henderson

Sitting atop the McCormick Place convention center is the Midwest's largest soil-based rooftop garden. Now in its fourth year, the garden covers three-quarters of an acre and produces up to 8,000 pounds of vegetables and herbs — from carrots, tomatoes and kale to peppers, herbs and beans — for the convention center's catering operation SAVOR... Chicago.

While the garden mainly yields produce during warm weather, the staff planned to extend this year's growing season by planting cool weather crops like kale, spinach and collard greens for McCormick Place restaurants.

But there is one sure way for RSNA 2016 attendees to sample the rooftop garden produce. Last summer's crop of 70 hops plants were used by Brickstone Brewery to create the McCormick Place Everyday Ale, being served on beverage carts in the Connections Center. (See sidebar)

## Getting the Garden Off the Ground

The initial transition to the vegetable garden meant removing the cactus-like sedum covering the roof and choosing plants that can thrive in the wind and weather conditions 300 feet above the ground.

"SAVOR approached us about creating a rooftop garden on McCormick's green roof, which was covered with low-maintenance perennials," said Kelly Larsen, director of operations for Windy City Harvest, the urban agriculture program of the Chicago Botanic Garden.

"We amended the soil to support vegetable production by adding compost and rock minerals," Larsen said.

McCormick Place found the perfect gardening partner in the Botanic Garden's Windy City Harvests urban agricultural program, which offers a variety of education and job training programs in collaboration with City Colleges of Chicago.

Windy City provides all materials, a full-time coordinator, three interns per summer and a five-member operations crew for harvest days at the garden.

"Interns are apprentices in our certificate program in sustainable urban agriculture and the operations crew comes from a transitional job training program," Larsen said.

Once harvested, produce is washed

and transported via elevator to the kitchen of Chef Michael Kingsley who works with staff to create the dishes served to roughly three million visitors a year in McCormick's cafes and markets, banquet halls and private dining rooms. Chilled carrot soup, quinoa salad, roasted eggplant

spread and tomato and basil tartlets are just a few of the dishes Chef Michael has created using vegetables freshly harvested on the roof.

"It is fantastic produce and it's amazing to see what the chef can make with vegetables that are just a day or two from being picked," said Douglas Bradley, vice president of culinary at SAVOR... Chicago.

In addition to the main terrace gardens — each filled with just four inches of soil — container gardens were added this year to provide greater crop flexibility.

"We'd like to bring back some heirloom plants such as the Plumb Cider Apple and Deer Tongue Lettuce to promote biodiversity," Bradley said. "We also hope the container gardens inspire



Image courtesy of SAVOR...Chicago.

visitors to plant their own container gardens at home."

Larsen said it's no small feat for a catering operation as large as SAVOR to incorporate an unpredictable influx of seasonal produce into its weekly food preparation.

"It takes a while to figure out how to use hundreds of pounds of green beans all at once," Larsen said. "This year, literally everything grown on the roof was used."

Three hives of honey bees and 20,000 red wiggler worms that compost unused plant parts are also located on the roof, earning McCormick's garden high marks for sustainability.

Going forward, Bradley hopes not only to see the garden expand with a variety of new plants, but also for SAVOR to establish more local connections like its partnerships with Chicago Botanic Garden's Windy City Harvest and Brickstone Brewery.

"It's more important from a business perspective to be immersed in the local economy," Bradley said. "We'd rather put money back into the community than spend it elsewhere."

## McCormick Place Eateries Add New Dining Options

Along with favorites including Starbucks, Jamba Juice, Connie's Pizza, McDonalds, Ambrosia Café, Kosher Express, 23rd Street Café, Lakeside Café, Market Cart and more, new dining options have been added to the menu this year at McCormick Place:

- Chicago Beef Sandwich
- Grinders Toasted Subs
- Heartland Burger Company
- Luzita's Street Style Tacos
- Midwest Melt Grilled Cheese

## New for 2016: Beverage Carts

Visitors to the Connections Center and Grand Concourse North Lobby can keep an eye out for beverage carts serving:

- Metropolis Third Coast Roast Coffee
- Everyday Ale (beer); wine



# Technical Exhibit Spotlights World's Newest Innovations

A First-Time Exhibitors Pavilion is one of the new offerings in this year's Technical Exhibits, one of the world's largest medical exhibitions featuring nearly 700 exhibitors from across the globe. Shop and compare equipment supplies, devices and software demonstrated by leading manufacturers, suppliers and developers of medical information technology in two halls:

## NEW: FIRST-TIME EXHIBITOR PAVILION

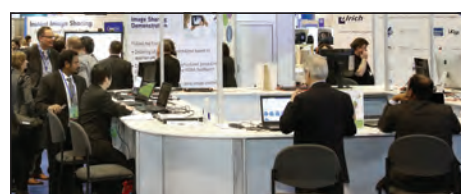
A new showcase area inside the North Hall will feature first-time exhibitors demonstrating new products and services. Other first-time exhibitors located throughout the exhibit hall will be identified with a First-Time Exhibitor logo.



## VENDOR WORKSHOPS

Vendors provide hands-on tutorials of commercial software systems in a classroom setting.

## RSNA IMAGE SHARE EXHIBIT



This exhibit will showcase the RSNA Image Share Network and the Image Share Validation Program, which tests radiology systems for their conformance with interoperability standards and ability to support sharing of medical images and reports.

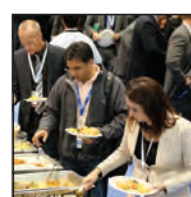
## INTERNATIONAL PAVILIONS

Visit exhibitors from Canada, China, France, Germany, Korea and the Netherlands.

## PUBLISHERS ROW

Visit top medical publishers that will display their educational materials from across all areas of medical imaging.

## BISTRO RSNA-LUNCH



Sunday, Nov. 27 to Wednesday, Nov. 30  
11 a.m. to 2:30 p.m.

Technical Exhibits, North & South Buildings  
With an extensive gourmet menu and

ample seating, Bistro RSNA is a convenient option to sit down to a comfortable lunch and network with colleagues. Purchase your tickets in advance for \$22 per meal. For more information, visit [bistroticket.com/rsna](http://bistroticket.com/rsna).

## TECHNICAL EXHIBIT HOURS

Hall A in the South Building and Hall B in the North Building

Sunday, Nov. 27 to Wednesday, Nov. 30  
10 a.m. to 5 p.m.

Thursday, Dec. 1  
10 a.m. to 2 p.m.

## BISTRO RSNA-SPECIAL BRUNCH

Thursday, Dec. 1  
10:30 a.m. to 1:30 p.m.

Technical Exhibits, North & South Buildings  
Enjoy this hearty Special Brunch featuring an optional Bloody Mary bar for an additional fee.



# The Netherlands, Turkey, Honored at RSNA 2016

**D**rawing more than 10,000 international professional attendees, the RSNA annual meeting continues to shine the spotlight on top research from across the globe. This year, RSNA honors the Netherlands and Turkey with its Country Presents series, acknowledging the nations that are helping shape the global future of radiology.

RSNA is partnering with the Radiological Society of the Netherlands and the Turkish Society of Radiology (TSR) for the 90-minute sessions featuring the latest research from top radiologists in each country.

The Netherlands presentation includes the "Multicenter Randomized Clinical Trial of Endovascular Treatment of Acute Ischemic Stroke in the Netherlands (MRCLEAN) and Follow-up Results" presented by Charles Majoie, MD, PhD, interventional neuroradiologist and head of the Department of Neuroradiology at Academic Medical Center, Amsterdam, the

Netherlands, and chair of the Dutch Society of Neuro-radiology.

Presenting research results on behalf of the Radiological Society of the Netherlands is a great honor, he said. "The Netherlands is a small country with excellent infrastructure to perform high quality research," Dr. Majoie said.

For Turkey Presents, the topic, "The Meaning of Evolution for Radiology and Medicine" was selected to draw attention to the practice of evolution in medicine and its advantages for medical education in an international platform offered by RSNA, said Tamer Kaya, PhD, an interventional radiologist with Acibadem Healthcare



Charles Majoie, MD, PhD



Tamer Kaya, PhD

Group, Turkey, and president of the TSR.

"Taking this topic into consideration at an international meeting will provide attendees with educational sessions and will make a huge contribution to medical practice," he said.

The neuroradiology session, "Hemodynamic Basics Governing Endovascular Treatment of Intracranial Aneurysms," will focus on underlying hemodynamic factors leading to aneurysm formation and the biochemical definition of endovascular aneurysm treatment.

Attendees from the Netherlands and Turkey will be recognized with badge ribbons during these special presentations.

Sessions can also be viewed live or on demand through the RSNA 2016 Virtual Meeting.

## The Netherlands, Turkey Booths Featured Throughout the Week

Visit the Nederlandse Vereniging voor Radiologie (NVvR/Radiological Society of the Netherlands) booth to learn about the radiology community in the Netherlands in the North Hall B: Booth 8521.

Stop by the Turkish Society of Radiology (TSR) booth to learn about the radiology community in Turkey in the South Hall A: Booth 1014.

**The Netherlands Pavilion**  
Visit Dutch exhibitors throughout the pavilion to experience the latest products and innovations.

### THE NETHERLANDS FOCUSES ON NEURORADIOLOGY

MONDAY • 10:30 A.M. TO 12 P.M.

The Netherlands Presents: Advances in Neuro-degenerative and Neuro-vascular Diseases, will include:

- Opening remarks, RSNA President Richard L. Baron, MD
- Prediction of Stroke and Dementia Based on Population Imaging: The Rotterdam Scan Study, Meike W. Vernooij, MD
- Hemodynamic Contributions to Age-related Cognitive Decline: The Heart-Brain Connection, Mark A. Van Buchem, MD, PhD
- High-Resolution Brain Imaging in Old Age: Experiences in the Virtual Institute of Seven Tesla Applications, Jeroen Hendrikse, MD
- Multicenter Randomized Clinical Trial of Endovascular Treatment of Acute Ischemic Stroke in the Netherlands and Follow-up Results, Charles B. Majoie, MD, PhD
- Closing Remarks: James P. Borgstede, MD, RSNA Board of Directors liaison for international affairs



### TURKEY LOOKS TO THE FUTURE OF RADIOLOGY, NEURORADIOLOGY



TUESDAY • 10:30 A.M. TO 12 P.M.

Turkey Presents: The Meaning of Evolution for Radiology and Medicine and Advances in Neuroradiology, will include:

- Opening Remarks, RSNA President Richard L. Baron, MD
- Activities of Turkish Society of Radiology (TSR), Aysenur Oktay Alfatli, MD, TSR vice president
- Hemodynamic Basics Governing Endovascular Treatment of Intracranial Aneurysms, Civan Islak, MD
- Meaning of Evolution for Radiology and Medicine, Tamer Kaya, MD, TSR president
- Imaging the Human Brain beyond Anatomy: The Human Connectome Project, Kamil Ugurbil, MD
- Closing Remarks: James P. Borgstede, MD, RSNA Board of Directors liaison for international affairs

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## Corporate Symposia at RSNA 2016

Attend sponsored education provided by RSNA 2016 exhibitors throughout the week.

SUNDAY, NOV. 27

1:30 - 3 p.m.

Addressing the Clinical Need for 3DTM Breast Biopsy Technologies: Prone and Upright Solutions: Supported by Hologic, Inc. Room S101AB

1:30 - 3 p.m.

Chronic Thromboembolic Pulmonary Hypertension (CTEPH): How to Diagnose it and Why You Should Care: Supported by Bayer Pharma AG. Room S105D

MONDAY, NOV. 28

8:30 - 10 a.m.

How to Incorporate CEUS into your Imaging Practice: Supported by Samsung. Room S101AB

3 - 4:30 p.m.

The Use of Ultrasound Contrast Imaging in the Characterization of Focal Liver Lesions: Supported by GE Healthcare. Room S101AB

TUESDAY, NOV. 29

8:30 - 10 a.m.

Personalized Breast Care Across the Globe: Supported by GE Healthcare. Room S101AB

8:30 - 10 a.m.

Successfully Transforming Radiology into a Value-based Care Organization: Supported by Siemens Healthineers. Room S105D



1:30 - 3 p.m.

Image Guided Interventional Radiology Procedures Using a Combined Angiography CT System: Supported by Toshiba America Medical Systems. Room S105D

3 - 4:30 p.m.

Advancing the Emerging Role of Radiologist as Enterprise Imaging Leader: Expertise, Collaboration, and Patient Safety: Supported by Agfa HealthCare. Room S101AB

WEDNESDAY, NOV. 30

8:30 - 10 a.m.

Computed Tomography - What's Next and Why, New Hardware & Software Transformations: Supported by Toshiba America Medical Systems. Room S101AB

8:30 - 10 a.m.

Enhancing Diagnostics Through Innovation and Partnership: Supported by Philips. Room S105D

1:30 - 3 p.m.

Emerging Topics in Ultrasound - Bridging Current Clinical Perspectives with Future Potential: Supported by Bracco. Room S101AB



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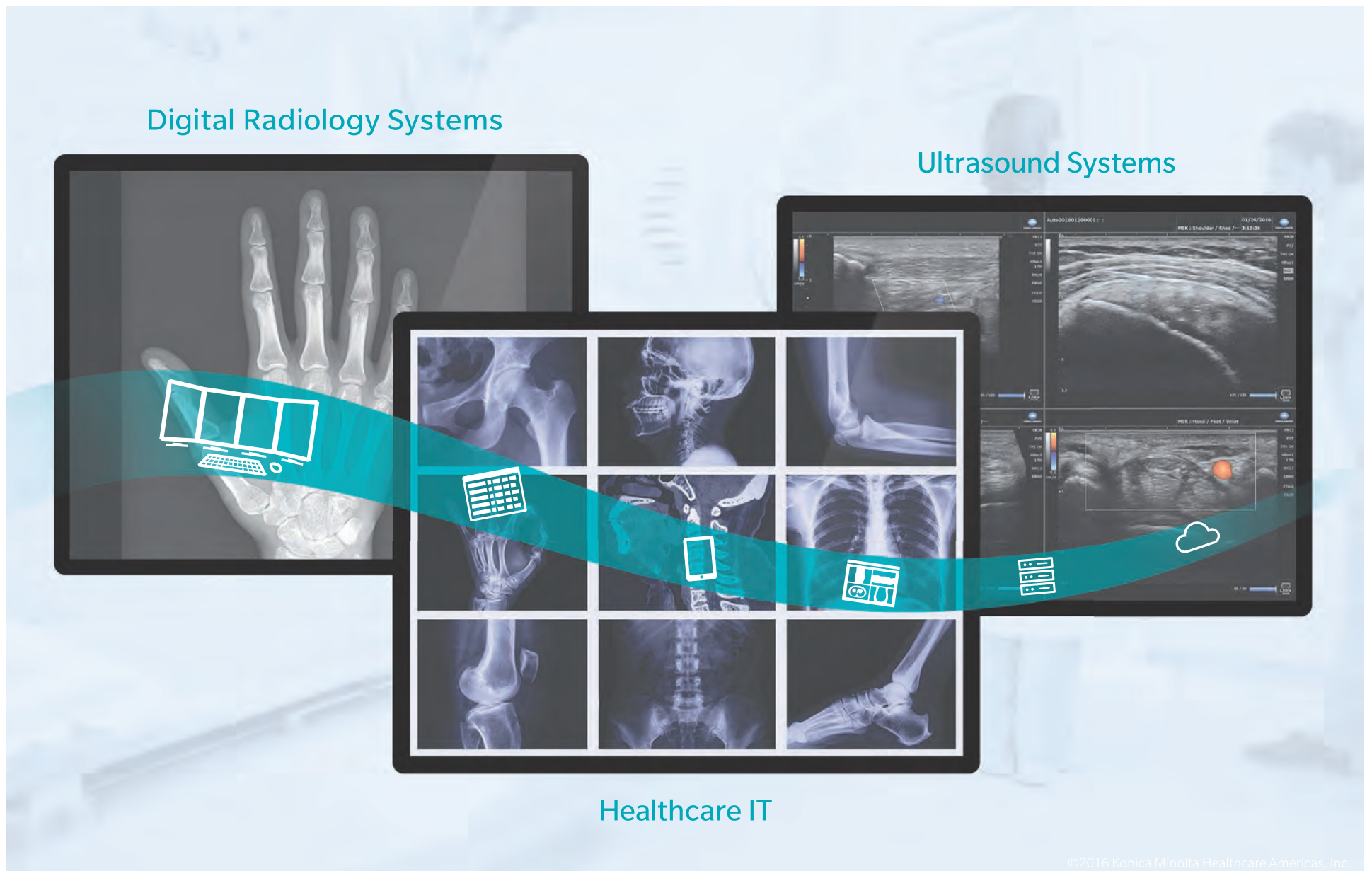


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