

RSNA *News*



PDAs Offer Mobility to Busy Radiologists

Also Inside:

- Washington Shows Commitment to Medical Technology
- Biomarkers in Imaging Show Tremendous Promise for Improving Patient Care
- RSNA Presents New Image-guided Therapies to NY Media
- Making the Most of the Internet
- Chicago Has Something for Everyone During RSNA 2003

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RSNA News

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Thrall New ARRS President

James H. Thrall, M.D., is the new president of the American Roentgen Ray Society (ARRS). During his installment ceremony in June, he said: "My goals for the society are to continue the traditions of educational and scientific excellence through the *American Journal of Roentgenology* and the annual meeting. Equally important are the newer programs of the society aimed at identifying, supporting and nurturing new scientific and clinical leaders for the specialty of radiology."

Dr. Thrall is chair of the Department of Radiology at Massachusetts General Hospital and is a professor and Juan M. Taveras Chairman of Radiology at Harvard Medical School. He is also a member of the Board of Trustees for the RSNA Research & Education Foundation and is an associate editor for *Radiology*.



James H. Thrall, M.D.

Tsai Named Hasso Brothers Chair

Fong Y. Tsai, M.D., has been named the Hasso Brothers Endowed Chair in Radiological Sciences at the University of California, Irvine (UCI). Dr. Tsai, a well-known expert on stroke, is a professor and chairman of the Radiology Department at the UCI College of Medicine.



Fong Y. Tsai, M.D.

The chair was established in 2002 by **Anton N. Hasso, M.D.**, and **Peggy J. Fritzsche, M.D.**, to support clinical activities and research initiatives in the radiology department and to strengthen ties with specialists in head and neck surgery.

Hawkins Honored with Leaders in Innovation Award

A man who has been called the "Leonardo da Vinci of interventional radiology" is the first recipient of the Leaders in Innovation Award from the Cardiovascular and Interventional Radiology Research and Education Foundation.

Irvin (Dick) Hawkins Jr., M.D., a professor of radiology and surgery at the University of Florida (UF), was honored at the Society of Interventional Radiology's annual meeting in Salt Lake City.

Foundation Chairman **Matthew Mauro, M.D.**, said: "We looked at 20 years of radiology history and many great innovators. ...No one else in our discipline has Hawkins' track record of continuing innovations over such a long period of time."

UF colleague **Jim Caridi, M.D.**, added: "[Hawkins] was the vanguard for using small catheters, biopsy needles and wires. At the time some thought it was crazy, now it's standard."



Irvin (Dick) Hawkins Jr., M.D.

Stephens to Receive Cannon Medal

David H. Stephens, M.D., a professor of radiology at the Mayo Clinic in Rochester, Minn., will receive the 2004 Cannon Medal from the Society of Gastrointestinal Radiologists (SGR). **Joel E. Richter, M.D.**, professor



David H. Stephens, M.D.

and chairman of the Department of Gastroenterology at the Cleveland Clinic Foundation in Ohio, will be the Cannon Lecturer at the 2004 SGR Annual Meeting next February in San Antonio.

Jakobsson First Director of NIGMS Center

Eric Jakobsson, Ph.D., a professor in the Department of Molecular and Integrative Physiology at the University of Illinois at Urbana-Champaign, is the first director of the Center for Bioinformatics and Computational Biology at the National Institute of General Medical Sciences. The center supports research and training in areas that join biology with the computer sciences, engineering, mathematics and physics. Examples include computer modeling of biological networks and dynamic processes; quantitative approaches to cellular, molecular and developmental biology; and the development of databases and other analytical tools.



Eric Jakobsson, Ph.D.

Andriole on AMICAS Advisory Board

Katherine P. Andriole, Ph.D., chair of the Society for Computer Applications in Radiology, has been named to the AMICAS company advisory board. AMICAS provides Web-based, software-only medical and diagnostic image management solutions — anywhere patient care needs demand.

She is also an associate professor of radiology and biomedical engineering and PACS clinical coordinator at the University of California, San Francisco.



Katherine P. Andriole, Ph.D.

Franzen New Berlex President, CEO

Reinhard Franzen has been named president and chief executive officer of Berlex Laboratories, the U.S. affiliate of Schering AG Germany. Franzen had previously served as chief operating officer of the specialized pharmaceutical and biotechnology company.

Invitrogen Hires GE Exec

Gregory T. Lucier has left his position as president and CEO of General Electric Medical Systems Information Technology to become president and CEO of Invitrogen Corp.

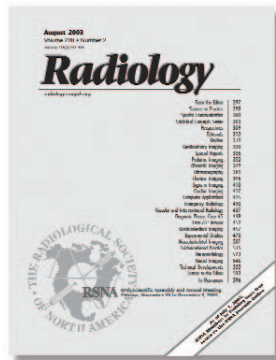
Konica President Resigns

Wayne Thompson, president and chief operating officer of Konica Medical Imaging, has resigned to join the Joint Purchasing Corporation in a similar capacity.

The new president of Konica Medical Imaging will be **Terry Hasegawa**, formerly the company's vice-president/treasurer.

ANNOUNCEMENTS

Radiology Adds “Science to Practice” Feature



A new feature debuts in this month's issue of *Radiology* that emphasizes the importance of basic research and how it eventually translates into clinical practice.

The feature, “Science to Practice,” describes and explains research included in the experimental studies section.

“Each Science to Practice piece will be authored by an individual knowledgeable in the

topical area of the experimental studies manuscript,” says *Radiology* Editor Anthony V. Proto, M.D. “Moreover, each Science

SCIENCE TO PRACTICE

to Practice article will have been reviewed by the corresponding author of the experimental studies article about which the piece has been written.”

Science to Practice will typi-

cally be found at the beginning of the numbered pages that follow the “A” pages in the front of each issue of *Radiology*.

Science to Practice will be published monthly, depending on the availability and type of experimental studies also being published that month in the journal. The feature may be extended to more complex, nonexperimental studies in the future.

Model Available for Electronic Archiving and Publishing

The National Library of Medicine (NLM) has created a standard model for electronically archiving and exchanging journal articles. The files are available for free at dtd.nlm.nih.gov.

This model “will simplify journal publishing and increase the accuracy of the archiving and exchange of scholarly journal articles,” said David Lipman, M.D., director of the Library’s

National Center for Biotechnology Information.

NLM plans similar models for textbooks and online documentation.



Abstracts by Specialty

A record 7,780 scientific abstracts were submitted for consideration for RSNA 2003—that's 106 more than last year's 7,674. This year's abstracts include 5,173 scientific paper or poster abstracts, 2,426 education exhibit

abstracts and 181 *infoRAD* abstracts.

The final selections for scientific presentations were made in mid-July. Notices have been sent to individuals about the status of their submitted abstracts for scientific papers and

poster presentations; 1,549 scientific papers and 609 posters were accepted. Notices for education exhibits were sent in mid-June; 1,128 were accepted including 12 cases of the day. 165 *infoRAD* abstracts were accepted.

Scientific Presentation Abstract Submissions by Specialty:

Breast Imaging	366
Cardiac	321
Chest	451
Gastrointestinal	852
Genitourinary	312
Health Services, Policy and Research	182
Musculoskeletal	379
Neuroradiology/Head and Neck	712
Nuclear Medicine	160
Pediatric Radiology	183
Physics	416
Radiation Oncology and Radiobiology	90
Radiology Informatics	107
Ultrasound	129
Vascular and Interventional	513
TOTAL:	5,173

Education Exhibit Abstract Submissions by Specialty:

Breast Imaging	113
Cardiac	102
Chest	226
Gastrointestinal	437
Multisystem/Special Interest	138
Musculoskeletal	313
Neuroradiology	299
Nuclear Medicine	37
Obstetrics/Gynecology	94
Pediatric Radiology	111
Physics and Other Basic Sciences	101
Policy and Practice	21
Radiation Oncology	14
Radiology Informatics	47
Uroradiology (Genitourinary)	146
Vascular/Interventional	227
TOTAL:	2,426



The RSNA Scientific Program Committee met at RSNA Headquarters in June to discuss the scientific sessions for RSNA 2003. Committee Chairman George S. Bisset III, M.D. (left), exchanges ideas with Board Liaison for Science Gary J. Becker, M.D.

Medical Professionalism Project

The Medical Professionalism Project is offering a 15-month update and a list of future activities for its collaborative effort to raise the concept of professionalism. The update is available in the May 20 issue of the *Annals of Internal Medicine*. Full text is available at www.annals.org/issues/v138n10/full/200305200-00012.html.

The project is sponsored by the American Board of Internal Medicine Foundation and the American College of Physicians Foundation, along with endorsements by 90 professional medical organizations including the American Board of Radiology and the American College of Radiology.

Charter on Medical Professionalism:

FUNDAMENTAL PRINCIPLES:

- Principle of primacy of patient welfare
- Principle of patient autonomy
- Principle of social justice

PROFESSIONAL RESPONSIBILITIES:

- Commitment to professional competence
- Commitment to honesty with patients
- Commitment to patient confidentiality
- Commitment to maintaining appropriate relations with patients
- Commitment to improving quality of care
- Commitment to improving access to care
- Commitment to a just distribution of finite resources
- Commitment to scientific knowledge
- Commitment to maintaining trust by managing conflicts of interest
- Commitment to professional responsibilities

Retired Physicians Enjoy Lifestyle

A study of retired physicians and their spouses finds high life satisfaction during the retirement years.

The study, by researchers at the Indiana University School of Medicine, found that 88 percent of physicians and their spouses reported being mostly satisfied or better with their lives. Factors associated with better life satisfaction for physicians included better health, optimism, feelings of financial security, participation in activities and hobbies and a good sexual relationship.

The study also found that physicians who were retired at least 10 years reported higher satisfaction than those who were newly retired. When asked about the challenges of retirement, one 66-year-old male radiologist answered, "extra time."

The abstract of the study, published in the March issue of the journal *Social Psychiatry and Psychiatric Epidemiology*, is available at link.springer-ny.com/link/service/journals/00127/bibs/3038003/30380134.htm.

NIH Offers Loan Repayment

The National Institutes of Health has announced that the next extramural application cycle for its Loan Repayment Programs (LRP) will open September 1, 2003. Eligibility requirements for the programs are located on the LRP Web site at www.LRP.nih.gov.

Additional information about this program is also available in the February 2003 issue of *RSNA News*.

ADVERTISEMENT

MARK YOUR CALENDAR

WE WOULD LIKE TO EXTEND AN INVITATION TO ATTEND the 23rd International Congress of Radiology (ICR) to be held in Montreal from June 25 to 29, 2004 at the Palais des Congrès de Montréal.

About 3,000 attendees are expected from around the world. Along with taking a glimpse into new approaches

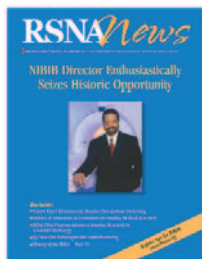
and new applications of medical imaging technology, this event will allow you to keep track of any

changes that we may have to confront in the ever-evolving world of radiology. The goal of the meeting is to represent the international context in which radiology is both done and managed. Fifteen concurrent tracks as well as five symposia will be held. For more information please visit our Web site at www.icr2004.com.

We hope you will join us and participate actively in our 2004 meeting, hosted by the friendly and cosmopolitan city of Montreal, Canada. □ □ □



LETTER TO THE EDITOR



TO THE EDITOR

I found the feature article about Dr. Sava Roberts (December 2002, *RSNA News*) fascinating. His commitment to radiology at age 93 is admirable and a lesson to us all regarding the "use it or lose it" philosophy of living.

As a point of information, the x-ray equipment Dr. Roberts used in the U.S. Army in 1939 and after at the VA Hospital in Augusta, Ga., was called "Keleket," after the names of the two owners of the company—Mr. Kelley and Mr. Koet.

Keleket was said to be the first manufacturer of quality x-ray equipment in the United States and the first producer of ceiling mounted x-ray tube-stands.

Very truly yours,

ALBERT B. SHACKMAN, M.D.

ASSOCIATE PROFESSOR OF RADIOLOGY
JOHNS HOPKINS UNIVERSITY AND HOSPITAL

RSNA News

RSNA News welcomes Letters to the Editor. Let us know what's on your mind. Send your letter by mail to *RSNA News*, 820 Jorie Blvd., Oak Brook, IL 60523, by fax to (630) 571-7837, or by e-mail to rsnanews@rsna.org. Please include your full name and telephone number. Letters may be edited for purposes of clarity and space.

RSNA Board of Directors Report

At the June RSNA Board of Directors meeting, Board members laid the groundwork to provide more meaningful, more efficient tools for radiologic research and education. One way will be by studying adult learning and incorporating programs and techniques that will maximize the learning experience. A second way is through the increased use of digital technology.

While it's too early to provide all of the specific details, committees of staff and member volunteers are working on projects including:

- Development of a digital presentation system for the annual meeting, including abstract submission and electronic posters
- Incorporation of digital technology into various RSNA education courses
- Conversion of RSNA Education Center materials to CD-ROM

Photography and Recording Guidelines at Annual Meeting

Because of the significant advances in recording technology, including digital cameras and other devices, the Board of Directors has approved photography and recording guidelines for the Scientific Assembly and Annual Meeting. These guidelines are to ensure that authors and presenters are not distracted by a series of camera flashes during their presentations. These guidelines will also help to ensure that proprietary scientific information is not recorded without the author's approval. The guidelines will be printed in the *RSNA Program* and in the *RSNA 2003 Daily Bulletin*.

MIRC

The Board has approved the first release of teaching file software produced by

the RSNA Medical Imaging Resource Center (MIRC). The goal of MIRC (mirc.rsna.org) is to enable the medical imaging community to share images and information for education, research and clinical practice. Originally conceived as a central point of storage for such information, MIRC has evolved into a community of libraries searchable via the Internet.

In September, RSNA will release an authoring tool, called MIRCat. A detailed article will appear in the September issue of *RSNA News*.

International Visiting Professor Program

The following host societies have been selected for the 2004 International Visiting Professor Program:

- Argentine Society of Radiology
- Romanian Society of Radiology and Medical Imaging
- Mexican Society of Radiology and Imaging

Applicants selected to take part in the Visiting Professor Program will be announced later.

Online Index

The online *RSNA Index to Imaging Literature* will be discontinued in January 2005. Prior to then, RSNA members will be informed about various alternatives to search the medical literature. A series of articles will appear in *RSNA News*; the first article is on page 14.

Other Board Action

- The RSNA 2004 Categorical Course in Diagnostic Radiology will be "Advances in Emergency Radiology."
- The Board established an Emergency Radiology Subcommittee of the Scientific Program Committee.



DAVID H. HUSSEY, M.D.
Chairman, 2003 RSNA Board of Directors

- A Medical Student Research Award will be developed for each subspecialty area of the Scientific Program Committee.
- The RSNA Derek Harwood-Nash International Fellowship will be extended annually to a second Fellow.
- Beginning in 2004, the number of awards will increase from 15 to 17 in the Introduction to Research for International Young Academics programs.
- The Society will conduct focus groups of international attendees and residents at the RSNA annual meeting to learn more about their meeting experience.

DAVID H. HUSSEY, M.D.
CHAIRMAN, 2003 RSNA BOARD OF DIRECTORS

Editor's Note: In our continuing efforts to keep RSNA members informed, the chair of the RSNA Board of Directors will provide a brief report in RSNA News following each board meeting. The next RSNA Board Meeting is in September.

Washington Shows Commitment to Medical Technology

Patients may soon have better access to the newest medical technology now that the Senate has launched a Medical Technology Caucus and both the House and Senate have included important provisions of the Medicare Innovation Responsiveness Act of 2003 in Medicare reform bills.

“Medicare has long needed reform to eliminate the 38-year-old policies that do not allow the program or its beneficiaries to realize the many life-saving and cost-saving benefits of 21st century medical technology innovations,” says Pamela G. Bailey, president of the Advanced Medical Technology Association (AdvaMed). “This landmark legislation provides an overall framework that encourages competition and private health participation that is better equipped to keep up with the pace of innovation.”

Companies such as Philips and Siemens Medical Solutions were among those mingling with Senators Evan Bayh (D-Ind.) and Norm Coleman (R-Minn.) when the new Senate Medical Technology Caucus was announced on June 18 during a medical device expo in Washington, D.C. The existing House Medical Technology Caucus is chaired by Representatives Jim Ramstad (R-Minn.) and Anna Eshoo (D-Calif.).

“We need to get smarter and devise new means to pass appropriate laws and regulations regarding technology,” said Sen. Coleman during the event. “We can’t be afraid of technology nor can we be naive.”

A survey of 81 medical technology industry executives found that regulatory and reimbursement challenges clearly pose the greatest problems for the industry.

Laurel Sweeney, director of government affairs for Philips Medical Systems, says it is important to educate Congress on how diagnostic imaging

can positively impact healthcare. “So often, diagnostic imaging equipment is perceived as the cost driver in healthcare,” she explains. “But devices such as cardiac CT are helping to improve outcomes and possibly eliminate more invasive procedures.” It is not always easy for busy legislators to stay informed about the fast-moving imaging industry, she adds.

The Senate and House caucuses will be forums for companies to explain how their products work and

how they improve outcomes and save consumers and the federal government healthcare dollars via Medicare and Medicaid.

The expo featured 26 companies, from small start-up firms with no reported revenue to the largest corporations in the industry. These companies told the lawmakers that regulatory and reimbursement challenges clearly pose the greatest problems for the industry.

During the event, AdvaMed released the results of a survey of the major factors most affecting a company’s ability to develop new medical technologies. The survey of 81 medical technology industry executives found that regulatory and reimbursement challenges clearly pose the greatest problems for the industry.

“Medicare reimbursement for our equipment goes up and down every year, sometimes wildly,” says Eleanor



Senator Norm Coleman (R-Minn.) announced the formation of the Senate Medical Technology Caucus during a medical device expo in Washington, D.C. He and Senator Evan Bayh (D-Ind.) (foreground right) co-chair the caucus.



Siemens Medical Solutions was one of 26 companies featured at a medical device expo in Washington, D.C.

Kerr, director of legislative affairs-healthcare for Siemens. “Hospital payments for PET services have faced enormous cuts in rates the last couple of years.”

Fluctuating reimbursement isn’t the only problem. Medicare has been slow to establish payment rates—via new payment codes—for new technologies once the equipment or product is FDA approved.

Not surprisingly, Sen. Coleman, who has a substantial medical device industry presence in his state, is one of the sponsors of the Medicare Innovation Responsiveness Act of 2003. The bill includes provisions that would shorten the timeframes for making national coverage decisions. In addition, the Centers for Medicare & Medicaid Services (CMS) would be required to make public the clinical evidence and other data used in making national coverage determinations that differ from the Medicare Coverage Advisory Committee’s recommendations.

But Sweeney says the bill does not completely correct the problem. She says that national coverage decisions for diagnostic imaging can be tied to therapeutic outcomes. “This places an unfair burden on diagnostic imaging

technologies,” says Sweeney. “A real fix will require CMS to clearly articulate coverage criteria that focus on the technologies’ capabilities to affect clinical decision making, not necessarily outcomes.”

FDA approval has been less of an issue for manufacturers of diagnostic imaging equipment because they have gone through the less onerous 510K clearance process for most of their applications. More complex technologies have to get what is called premarket approval (PMA) from the FDA, a process that can drag out for years. But Sweeney notes that as imaging manufacturers start introducing more breakthrough technologies and applications, such as molecular imaging, they too will have to go through the PMA process.

Additional Mammography Benefits

Also as part of a Medicare reform package, the House and Senate have each passed provisions to increase the technical reimbursement for diagnostic mammography procedures performed in a hospital outpatient setting.

The Senate’s action, which came after the House vote, represents a major legislative victory for the American College of Radiology, which lobbied

extensively for the provision.

The House and Senate will now work out a final Medicare reform package that, if passed by both houses, will be sent to President Bush for his signature. □

Editor’s Note: An article in the September issue of RSNA News will address an FDA workshop to speed the approval of dual-device drug systems.

Tax Breaks for Equipment Purchases

New tax laws could mean larger deductions for medical equipment purchases. A new rule allows for deductions up to \$100,000 on equipment or computer purchases up to \$400,000.

The so-called bonus depreciation deduction was also increased. Under the new law, the initial deduction is 50 percent of an asset’s value, rather than 30 percent. The remaining value is deducted on a sliding scale over three, five or seven years depending upon the asset.

For more information, go to www.irs.gov and click on the article, “New Law’s Tax Cuts Mean Extra Cash Now.” There is a link at the bottom of the page called Changes For Businesses.

Biomarkers in Imaging Show Tremendous Promise for Improving Patient Care

Radiologists at Massachusetts General Hospital (MGH) in Boston are building support for a biomarker program that could have a huge impact on the entire radiology community.

John J. Smith, M.D., J.D., and James H. Thrall, M.D., are the co-directors of the MGH Center for Biomarkers in Imaging (CBI) based in the Department of Radiology. They and CBI director A. Gregory Sorensen, M.D., published an opinion piece in the June issue of *Radiology*, “Biomarkers in Imaging: Realizing Radiology’s Future,” that outlines the tremendous potential for radiology to take the lead in developing new medical treatments.

A unique aspect of this research is the willingness of MGH to share the knowledge with all interested radiologists and other physicians, researchers, pharmaceutical companies and government regulators.

“This is a real opportunity for the radiology community to expand its role in the development of medical therapies,” says Dr. Smith. “This can impact patients beyond imaging their conditions. Together we can develop more effective treatments.”

Dr. Thrall says the purpose of writing the opinion piece in *Radiology* was to call attention to the fact that many of the parameters that radiologists can image are turning out to be extremely valuable as measures of drug efficacy. “For example, we can measure a cancerous tumor through imaging, then re-measure it after a patient has undergone



John J. Smith, M.D., J.D., and James H. Thrall, M.D., are the co-directors of the Center for Biomarkers in Imaging at Massachusetts General Hospital.

chemotherapy,” he says. This measurement can indicate the effectiveness of the drug therapy.

“In the *Radiology* article, we’ve organized our thinking about imaging biomarkers,” says Dr. Thrall. “We need a massive educational process to teach radiologists and vastly increase the recognition of the potential for biomarkers in the pharmaceutical industry. Right now, the research is being done on a project-by-project basis. We need strategic impact. The *Radiology* article is a very organized document to show

how this can be done.”

While the MGH Center is one of the first to organize this research, Dr. Thrall says all radiologists should participate. “This is work that most academic radiology departments are already engaged in. We haven’t recognized the full potential. This is an opportunity for the radiology community to work on this, together,” he says.

What are Imaging Biomarkers?

According to the CBI Website (www.biomarkers.org), biomarkers are

anatomic, physiologic, biochemical or molecular parameters associated with the presence and severity of specific diseases. "Biomarkers may be used as pre-clinical and clinical surrogate endpoints in evaluating the safety and effectiveness of new drug, biologic and device-based medical therapies, speeding the regulatory evaluation of exciting new treatments," according to the Website.

Dr. Thrall, who is also a member of RSNA's Research & Education Foundation Board of Trustees, says before physicians knew about biomarkers, patients undergoing experimental research trials had to be followed for much longer periods of time. In 1997, the Food and Drug Administration (FDA) began to approve some imaging biomarkers as surrogate endpoints, particularly for cancer-fighting drugs, such as Herceptin for treating breast cancer.

Dr. Smith says in traditional, double-blind experimental research studies, morbidity and mortality were the endpoints. He says that led to a number of problems, including the length of time that drugs and other medical treatments had to be tested, the large number of people required in such testing programs and the enormous expense. "Today, with rigorous science, surrogate endpoints can evaluate the presence and severity of the disease," he adds.

"Your lifetime ability to receive an experimental chemotherapy, for example, can be limited by the expense, potential complications and the possibility that once you use one drug, you may not be able to use another," Dr. Thrall says. Using imaging techniques to test biomarkers can improve the chances that more targeted drugs will provide better treatments.

Another problem with mortality as an endpoint is that physicians sometimes cannot determine the exact cause

of death. Was it the disease or something else? Morbidity or impairment level is a subjective measure. Dr. Smith says a patient taking part in a study of a pain medication may have a higher pain threshold than another patient participating in the same study. However, he says functional MR imaging may help provide a surrogate endpoint in this type of research by allowing the patient to serve as his or her own control.

Measuring Biomarkers

Radiologists can use several techniques to measure biomarkers, including x-rays, CT, MR imaging, optical imaging and nuclear medicine techniques, such as PET. The challenge for radiology is to find more anatomic, metabolic and functional surrogate endpoints.

Dr. Thrall says radiologists must be careful and serious about what they are measuring. For example, the calcium content of bones can be measured and quantified. However, calcium content is not a surrogate endpoint when testing an osteoporosis drug. "A sack of cement powder can have the same weight as a cement block. However, the structural integrity is different," he explains. The proper surrogate endpoint for osteoporosis drugs is a measure of the vertebral body height.

Dr. Smith says biomarkers may also be used to evaluate a therapy's safety, not just its effectiveness. "A patient taking part in a research trial of a cancer drug may undergo nuclear

medicine imaging to see how his or her heart may be affected," he says.

At the MGH Center, radiologists are conducting validation work. "We'd like to see generic methods created to assess some of the hundreds of anti-angiogenesis drugs that are going to be tested in the years to come," Dr. Thrall says. "This is a new frontier for a high-profile subject."

Dr. Thrall says it has been a career-long dream to put together a program like this. "In the past, I've joined research projects late. Now we are doing the basic research," he says.

As exciting as all the possibilities are, Dr. Smith warns against over-expectations. "This is not a panacea. Good science is still needed," he says. "Our specialty as a whole has to get more active in this research. We can move the technology forward using rigorous scientific techniques." □



A. Gregory Sorensen, M.D.,
Director, Center for Biomarkers
in Imaging

Dr. Thrall says it has been a career-long dream to put together a program like this. "In the past, I've joined research projects late. Now we are doing the basic research," he says.

Editor's Note: RSNA members and subscribers can view the full text of the Radiology article online at radiology.rsna.org/cgi/content/full/227/3/633.

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—John J. Smith, M.D., J.D.

RSNA Presents New Image-guided Therapies to NY Media

RSNA's Public Information Committee (PIC) has launched a new program to help educate patients about the critical role that radiology plays in their healthcare. Before an audience of New York City reporters in June, RSNA presented its first media briefing.

The theme of the media briefing was image-guided therapies. Innovators and leaders in radiology offered information on topics ranging from uterine fibroid embolization (UFE), pelvic congestion syndrome and detachable coil embolization, to chemoembolization, gene therapy and new research published in *Radiology* about combination radiofrequency ablation (RFA) and chemotherapy.

"A few years ago, conventional surgery with a prolonged hospital stay was a mainstay of surgical practice," explained Hedvig Hricak, M.D., Ph.D., RSNA Board Liaison-designate for Publications and Communications. "With the advancement of the technology, minimally invasive surgery has been introduced. Today, another development in the field of surgical practice is image-guided therapy. It is performed on an outpatient basis and, in many cases, is nothing short of a miracle."

These new therapies shorten hospital stays, ease pain, reduce recovery time and lower healthcare costs.

PIC Chairman Burton P. Drayer, M.D., added, "The radiologist is now in the forefront of patient care—not only in diagnosis, but also in therapy."

Women's Health

Robert L. Vogelzang, M.D., from Northwestern University Medical School and Northwestern Memorial Hospital in Chicago, stressed the



Innovators and leaders in radiology presented information on image-guided therapies to the New York media on June 19. (front row, from left) **Jacques E. Dion, M.D., Anne C. Roberts, M.D., Burton P. Drayer, M.D.** (moderator). (back row, from left) **Bradford J. Wood, M.D., Jonathan B. Kruskal, M.D., Ph.D., Jeff Geschwind, M.D., David M. Williams, M.D. Robert L. Vogelzang, M.D.**, is pictured on the next page.

importance of interventional radiology in modern healthcare, "It is without too much overstatement to say that we are the first and we continue to be the leaders in image-guided therapies for a wide-variety of disorders."



His presentation centered on UFE for the treatment of symptomatic fibroids. "Of all the applications I've seen using embolization, this has the most potential impact on public health and will positively influence the lives of women," Dr. Vogelzang said. "We

no longer consider it experimental or in the feasibility stage. It has close to 90 percent effectiveness."

In a second presentation on women's health, Anne C. Roberts, M.D., from the University of California, San Diego School of Medicine, offered information on what may be a grossly underdiagnosed condition called pelvic congestion syndrome—abnormal blood flow into the pelvis causing engorgement of pelvic veins.

"The patients describe a dull, aching pain in their pelvis," explained Dr. Roberts. "The pain is there most of the time. It's better in the morning but gets worse during the day and gets particularly bad when they are standing for

long periods of time.”

The big problem with diagnosing chronic pelvic congestion is there are often no findings on physical examination. The condition is also difficult to diagnose with laparoscopy and other methods in which the patient is lying flat or tilted head-down and the blood egresses out of the pelvis. The difficulty in making the diagnosis may lead to referral for psychiatric treatment, according to Dr. Roberts, who performs venography to confirm chronic pelvic congestion and then embolization to treat it with a 95 percent success rate.

Vascular Disease

Detachable coil embolization is an important new treatment option that needs to be offered to patients with brain aneurysms, according to Jacques E. Dion, M.D., from Emory University Hospital and the Atlanta Veterans Affairs Center.

He pointed to the landmark International Subarachnoid Aneurysm Trial (ISAT) in which more than 2,100 patients were randomized to either craniotomy or coiling. “The bottom line of this study is that it had to be stopped short of the planned enrollment of 2,500 patients because the coil patients did so much better than the surgical patients,” Dr. Dion explained. “There was a nearly 23 percent relative difference in death and significant disability causing dependence. It would have been unethical to continue this study.”

Endovascular coiling is done in about one third of all brain aneurysm cases in the United States, but in Finland, Great Britain and France, close to 90 percent of aneurysms are treated with endovascular coiling, he said. He also pointed to future coiling procedures using hydrogel as a transporting vector for cells that will allow for healing from inside the aneurysm.

A second presentation on

aneurysms focused on abdominal aortic aneurysms (AAAs) and how the image-guided endograft is offering a promising treatment option. “Because patients experience less anesthesia and less blood loss with endovascular repair, they are able to recover and return to



Robert L. Vogelzang, M.D., from Northwestern University Medical School and Northwestern Memorial Hospital in Chicago, presented information on uterine fibroid embolization.

their customary activities more quickly,” said David M. Williams, M.D., from the University of Michigan in Ann Arbor.

He cautioned, however, that endovascular repair is not an option in many cases. “It depends on the

The radiologist is now in the forefront of patient care—not only in diagnosis, but also in therapy.

—Burton P. Drayer, M.D.

anatomy of the aneurysm, the anatomy of the arteries and the medical risks of the patient,” he said.

Because as many as nine percent of Americans between the ages of 60 and 70 suffer from AAAs, and because 50 percent of ruptured AAAs result in death, Dr. Williams is advocating a nationwide screening campaign to screen for abdominal aortic aneurysms. “We estimate we can save 10,000 lives a year in the United States with a screening program,” he said. “If you can treat AAA

electively, we estimate we can save \$50 million a year in healthcare costs.”

The Society for Interventional Radiology plans to incorporate AAA screening into its Legs for Life Campaign this fall.

Treating Cancer

Jonathan B. Kruskal, M.D., Ph.D., from Harvard Medical School and Beth Israel Deaconess Medical Center in Boston, provided a glimpse into how research at the laboratory level is changing the way interventional radiology is involved in treating cancer.

“Radiologists are going to play a very important role in the entire field of gene therapy,” he said. “The role we will be playing will be the actual delivery of genes into patients. Radiologists will also help to evaluate the effect of gene therapy.”

In addition to a brief overview of molecular imaging and gene therapy, Dr. Kruskal also presented findings from a study in the July 2003 issue of *Radiology* in which he and colleagues used RFA combined with liposomal chemotherapy to treat breast tumors in rats. They found that the combination therapy increases the amount of tumor that is killed, slows tumor regrowth, leads to more drug delivered to the tumor and improves survival.

The combination technique has now been used successfully on 25 liver cancer patients at Beth Israel Hospital with future tests under way.

Chemoembolization is also improving treatment of liver cancer. Jeff Geschwind, M.D., from Johns Hopkins Hospital and Johns Hopkins University School of Medicine in Baltimore, explained that when surgery for liver cancer is not possible, chemoembolization is the treatment of choice for widespread or diffuse liver cancer.

“With chemoembolization, you keep the drugs within the tumor for longer periods of time and reduce systemic toxicity. That is a clear goal of therapy,” said Dr. Geschwind.

Continued on page 16

PDAs Offer Mobility to Busy Radiologists

If you've put off buying a handheld computer until displays and networking capabilities are improved, you may be depriving yourself of other features that can streamline your daily activities, according to an article in the July-August issue of *RadioGraphics*.

Lead author Adam E. Flanders, M.D., a professor of neuroradiology at Thomas Jefferson University Hospital in Philadelphia, says radiologists are discovering the value of personal digital assistants (PDAs) for personal information management.

"You can carry all your contacts, appointments, research data, memos and a reference library with you at all times," says Dr. Flanders, a member of the RSNA Electronic Communications Committee (ECC).

Dr. Flanders points out that PDAs certainly are familiar to residents, who use them to better coordinate clinical schedules, maintain procedure logs and use a repository of teaching/reference material. "Reference material stored on a PDA has become

the preferred method for residents to take notes on the run and to maintain lists of differential diagnoses instead of carrying a cumbersome handbook or textbook," he says.

"Of course, the best sources of information for the practicing radiologist can usually be found right in the reading room where there is ready access to an array of information systems," concedes Dr. Flanders. "But today's radiologist has additional responsibilities that require him or her to be in a number of places besides the reading room or the office. Radiologists want to be responsive to the needs of the patients and clinicians."

Often, in order to meet these needs, radiologists must have access to information that is not readily accessible from outside the office or reading room environment.

"For example, if you get paged by a clinician who wants to know where his

patient is in the workflow queue, you could get the answer from your PDA in far less time than it would take to make the additional phone calls it would nor-



Screen shot of a midline sagittal T1-weighted image of the brain displayed on a higher resolution PDA.

© RSNA 2003. Photos and charts printed with permission. (*RadioGraphics* 2003; 23:1035-1047)



Adam E. Flanders, M.D.

mally require to get the answer," says Dr. Flanders.

Workflow monitoring and maintenance may be the most compelling future PDA application for radiology. "As radiology practices continue to expand, not only is there an impetus to tightly integrate workflow with resources, but also to have this information readily available. A wireless handheld device that monitors the clinical schedule and modality work list has potential value to the 'mobile' radiologist," the authors write in *RadioGraphics*.

Dr. Flanders adds that mobile access to patient, workflow and clinical

Mobile Computing Pavilion at RSNA 2003

Under guidance from the ECC, RSNA 2003 will feature a Mobile Computing Pavilion.

The Pavilion will be located near Publishers Row in the South Building, Hall A. It will feature companies that exhibit

products and services in the mobile computing market, as well as a theater where speakers will give peer-reviewed educational presentations throughout the week.

Topics include:

- devices
- security
- communication protocols
- presentation protocols
- programming languages
- healthcare applications
- healthcare efficacy

In addition, registrants will enjoy the hands-on experience of the devices and applications presented by Mobile Computing exhibitors.



RSNA'03
COMMUNICATION FOR
BETTER PATIENT CARE

Today



Tomorrow



A conventional film on a light box (left) eventually will be replaced with the PDA driving a wall-mounted digital flat panel (right) for image display. The appliance is mounted in a hospital corridor and the user controls the display from a wireless PDA, which contains a list of relevant patients. The display is connected to the hospital imaging network. The user can review an imaging study by selecting it on the handheld device.

(Courtesy of Osman Ratib, M.D., Ph.D., University of California, Los Angeles)

data is valuable only if it is relevant to how you practice—if electronic data delivery saves you more time than conventional means, and if the data are presented in a concise and understandable format.

“This activity basically involves getting many information systems to talk to each other, share key pieces of information and analyze/summarize parameters that you might need to help you understand how your practice is running on a given day,” says Dr. Flanders. “In these and other ways, radiologists can monitor the metrics of their practices and have unlimited access to the kind of information normally available at the desktop.”

An *infoRAD* exhibit at RSNA 2002 demonstrated active wireless transmis-

sion of a modality work list from a RIS/PACS to a handheld device with subsequent initiation of a query-retrieve by the handheld unit to a PACS archive. “In addition,” says Dr. Flanders, “they were able to show that PACS workflow could be remotely monitored on a handheld device.”

Physicians are looking for more creative ways to use their PDAs, often taking cues from businesses that do everything from monitor inventory to track the progress of a package being sent from Beijing to St. Louis. “In the same fash-

ion, a radiologist with a Web-enabled PDA can track a patient’s progress,” says Dr. Flanders. “Did he arrive at the hospital on time? Did he get on the

scanner? What did his script say? Was he protocolled properly? Are we doing the appropriate study to match the clinical problem?”

Moreover, wireless, handheld computing can be of great help to the department’s PACS administrator who can use his or her PDA to remotely monitor the “health” of various information systems and network traffic in the department.

Some of the most practical and diverse uses of PDAs in radiology are database applications. “There are both commercial and shareware database utilities that allow the user to develop customizable databases with specific fields and content,” he says. “The fields are populated with data via a form that is displayed on the handheld computer. Field types can be specified during the design of the database to allow for free text entry or pull-down lists. Uses include maintaining patient lists, teaching files, research data collection or procedure logs.”

“For example, clinical research in

Radiologists can monitor the metrics of their practices and have unlimited access to the kind of information normally viewed at the desktop.

—Adam E. Flanders, M.D.

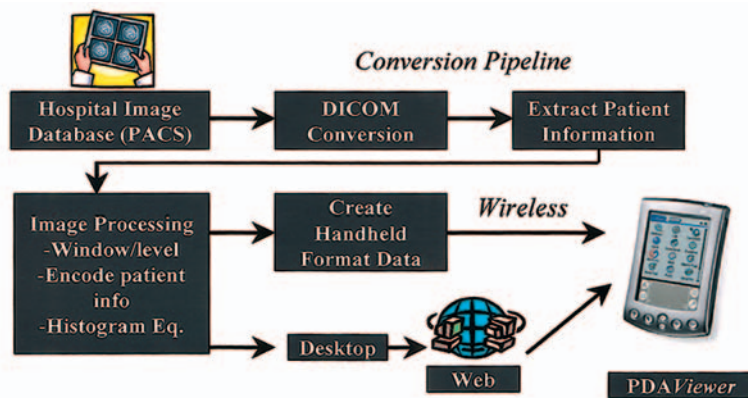


Diagram illustrates the flow of image data that occurs when DICOM images from a PACS are converted to a handheld format.

(Courtesy of C. F. Beaulieu, M.D., Ph.D., Stanford University)

Continued on page 16

Making the Most of the Internet

The Internet is now a vital part of life for radiologists and other medical professionals. From signing reports, protocoling studies and finding a patient's clinical history, to answering tough clinical questions, performing research and communicating with others, medical professionals can take advantage of many Internet-related services and information.

Katarzyna J. Macura, M.D., Ph.D., an assistant professor in the Russell H. Morgan Department of Radiology and Radiological Science at the Johns Hopkins Medical Institutions in Baltimore, began using the Internet back in 1992. She says e-mail and the World Wide Web are both deeply embedded in her life and work. "I cannot envision either professional or private life without it," she says.

Johns Hopkins resident Heather M. Seymour, M.D., was introduced to the Internet in the mid-1990s by her husband, a Java programmer. "He said that it would revolutionize the way we live," she says. "Of course, I did not believe him and now I hear, 'I told you so.'"

She first used the Internet in 1995 during her first year of medical school to receive her grades via e-mail. By her

second and third years, Dr. Seymour was using learning modules on the Web. Now, she says she can't live without the Internet. "We have DSL and wireless at home so the Internet is always 'on.' Family arguments are frequently solved with Google," she explains. "I currently use the Internet for routine communication with family, friends and colleagues—and of course shopping."

Dr. Seymour says the hospital's text paging system is Web-based and there are a number of other Internet-related applications. "We use a RAD Assistant site in our department that interfaces with the hospital information system to provide comprehensive patient data in a

Almost every radiologist has, or should have, Internet access at their immediate disposal. . . . It makes us better physicians.

—Heather M. Seymour, M.D.

rapidly accessible radiologist friendly format," she explained. "Our radiology information system now has a Web-based report sign-off as well. And our MRI fellow this year, Bob Peters, has been working on a Hopkins Body MR site which has detailed information on all the protocols that we use in our department."

How Radiologists Use the Internet

Many physicians conducting research



Katarzyna J. Macura, M.D., Ph.D.
Internet user since 1992

will start with MEDLINE (medline.com), according to Dr. Seymour.

"Abstracts and some full-text articles can be downloaded immediately from the Web—saving hours of searching through the library and photocopying references," she says.

Dr. Macura suggests radiologists should use the Internet to read journals, do literature searches, and view the news, events and scientific programs offered by many radiologic organizations. She also advocates taking advantage of online course registrations, direct access to libraries, online CME and discussion forums.

Dr. Seymour says she has found a

Web-based Classes Available at RSNA 2003

- National Library of Medicine/Internet2 Tutorial 2003
- PubMed/MEDLINE for International Users
- Advanced PubMed/MEDLINE for Research in Radiology

- Distance Learning & Literature Searching Through the RSNA Web Site
- How to Submit Work to the RSNA Journal, *Radiology*

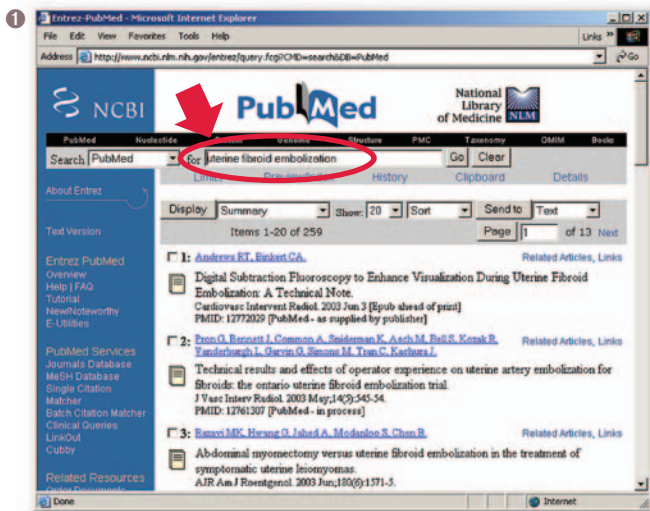
- Preparing Your Manuscript for *Radiographics* and Overview of the Publication Process
- The Radiologist and the Internet: Continuous Learning While You Work

- How Your Radiology Practice Can "Work the Web"

To register, go to www.rsna.org/register or see page 25.



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Literature searches on PubMed are easy. ❶ Enter a search term, such as uterine fibroid embolization. Click Go. Then click on one of the related articles. ❷ This article from *Radiology* was one of 259 results.

number of sites especially useful in her medical education and as a resident. “We are lucky to have Elliot Fishman, M.D., at our institution,” she says. “His site *CTisus.com* was one of the first radiology sites I ever visited. The case files on the site number in the thousands in all organ systems below the neck. There are tutorials, lectures, quizzes and journal reviews. It is absolutely the most comprehensive site on the Web in any particular subject.”

“Wheeless’ ortho text (*ortho-u.net*) got me through my three years of ER call,” she recalls. “Every fracture, joint derangement or other ortho problem is outlined on the site with diagrams and especially radiographs. The site also offers suggestions of additional radiographic views to help the surgeons plan their management.”

Dr. Seymour says *RadQuiz.com* has consolidated many university sites into one. “It is separated into the 10 sections

that are on the boards,” she says. “From *RadQuiz*, you can access *BrighamRad*, which has great cases. The nuclear medicine teaching files from the Mallinckrodt Institute of Radiology are comprehensive and easy to navigate. Many fourth year residents use that heavily to study for boards. The University of Washington has great information for bone.”

Dr. Seymour also recommends the MR physics (www.cis.rit.edu/htbooks/mri) site created by Joseph Hornak, Ph.D., of the Rochester Institute of Radiology, which she says is useful for residents or practicing radiologists who are still trying to grasp MR fundamentals.

The Internet for Novices

For radiologists and other medical professionals who have had limited experience online or who may be trying the Internet for the first time, Dr. Macura recommends finding a favorite search

tool that will allow quick access to the information they need.

“Try using your favorite keywords in different search engines or directories. You will see the different hits you might get with each search tool,” she suggests. “Remember that using many search engines will help you get a feel for how the different kinds of services work.”

“Google is a popular search engine that uses a unique ranking algorithm that is based on how many other sites link to a particular Web site,” Dr. Macura explains. “The popularity ranking operates under the assumption that other Web pages should make a link to the best pages. This type of ranking usually works very well, returning quality documents. Google also offers direct searches for images that are linked to certain keywords.”

Dr. Macura says radiologists can

Continued on next page

Teaching Files

CTisus	CTisus.com
Wheeless’ ortho text	ortho-u.net
RadQuiz	RadQuiz.com
Basics of MRI	www.cis.rit.edu/htbooks/mri
RSNA’s Education Portal	www.rsna.org/education/etoc.html

Literature Searches

MEDLINE	medline.cos.com
PubMed	www.ncbi.nlm.nih.gov/PubMed

Radiologic Organizations

RSNA	www.rsna.org
National Institutes of Health	www.nih.gov
RSNA provides links to 90 radiologic organizations at	www.rsna.org/orgs/index.html

Search Engines

Google	www.google.com
Yahoo	www.yahoo.com

Making the Most of the Internet

Continued from previous page

also access the National Institutes of Health (www.nih.gov) for funding opportunities and guidance, resources for diagnostic support in evaluation of difficult cases and online anatomic atlases for reference, and institutional databases and PACS for teleradiology consultations and electronic sign-off for radiology reports.

Internet Security

Dr. Macura advises her colleagues to always remember that the Internet is a public place. "Make sure you are using secure sites while performing financial transactions and protect your identity

information by providing sensitive data only to trusted sources," she emphasizes. "Remember, system administrators and operators can read e-mail messages at local sites. Many companies consider individual's e-mail corporate property, and are entitled to do so under the 1986 Electronic Communications Privacy Act. When we use e-mail, we have less right to privacy than when we send physical documents via 'snail mail.'"

Dr. Seymour believes using the Internet allows radiologists to become more efficient in their chosen profession. "Almost every radiologist has, or should have, Internet access at their immediate disposal if questions arise

that may alter interpretation," she says. "It makes us better physicians."

Dr. Macura concludes, "The Internet plays such an integral part of every aspect of life—from information exchange in a written form, e-mail and digital telephony, through news, shopping, travel, banking, daily clinical practice, to research and education." □

Editor's Note: The October issue of *RSNA News* will include an article on the various search tools available through *RSNA's* online journals.

RSNA Presents New Image-guided Therapies to NY Media

Continued from page 11

Operating Room of the Future

After learning about the image-guided therapeutic techniques revolutionizing today's healthcare, reporters also saw a glimpse of the operating room of the future.

Bradford J. Wood, M.D., from the National Institutes of Health (NIH) Clinical Center in Bethesda, Md., showed photographs and illustrations of the tools currently being used and systems under development that will revolutionize patient care. These include robotics, global positioning systems and next-generation image displays.

"Traditionally, imaging and surgery have been separate. In this case, what interventional radiology is moving towards in the coming years is bringing the operating room to imaging, rather than the converse," said Dr. Wood.

Currently the NIH Clinical Center is using magnetic tracking during tumor ablation. In late August or early September a robotic prototype will be used for most needle biopsies and tumor ablations. "For the first robot prototype, for the first one that we used with the first software, I walked into the clinic, clicked on a screen for the skin-entry point and then clicked on a

one millimeter target that was 20 centimeters deep in the liver at a double-oblique angle," he explained. "This would be difficult for any human to hit in 20 tries, much less one. The robotic prototype hit the target precisely the first time. This is exquisite technology."

Expanded information on some of these presentations will be included in future editions of *RSNA News*. □

Editor's Note: For more information on the *RSNA Image-guided Therapies media briefing*, including press releases, photos and the *Power-Point presentations*, go to www.rsna.org/media/briefings/2003.

PDA's Offer Mobility to Busy Radiologists

Continued from page 13

radiology often involves recording specific imaging findings in a database," Dr. Flanders explains. "One or more investigators can carry the entire database on their PDA and add data when it's convenient. In addition, password-protected PDA-entered data are more 'secure' than traditional paper data entry forms. All of the data are kept up

to date by regularly synchronizing the PDA data with the desktop computer."

For the future, the authors predict increasing focus on handheld portable offices: "The combination of high-bandwidth, inexpensive and secure wireless networking protocols and high-resolution, flat-panel touch-screen (tablet) computers has the potential to keep a radiologist perpetually 'con-

nected' to the office. The introduction of tablet PCs with high-resolution displays and high-speed, reliable and secure wireless networking would suggest that the portable radiologist office is one step closer to reality." □

Editor's Note: *RSNA* members and subscribers can read the full text of the *RadioGraphics* article at radiographics.rsna.org.

Chicago Has Something for Everyone During RSNA 2003

WHETHER YOU'RE AN RSNA MEMBER or an accompanying family member to RSNA 2003, Chicago's calendar of events for the first week in December is loaded with a diverse selection of art, music and activities. There's something for everyone in the family.

MUSEUMS:

Art Institute of Chicago

In addition to the spectacular permanent collection, two complementary special exhibitions will be on display at the Art Institute in December. The highly acclaimed *Manet and the Sea* exhibition contains approximately 100 works including paintings, watercolors and sketchbooks from 60 collections. A concurrent exhibition, *Regarding the Seas and Skies: Photographic Seascapes* by Gustave LeGray, Hiroshi Sugimoto and DoDo Jin Ming, includes approximately 50 images.

Museum visitors may also want to view the special exhibitions, *Intimate Encounters: Paul Gauguin and the South Pacific* and *Graphic Modernism: Selections from the Collection of Francey and Dr. Martin L. Gecht*.

- 111 S. Michigan Ave.
 Tickets: (312) 930-4040
 Membership: (312) 575-8000
www.artic.edu
www.ticketmaster.com

■ See RSNA's *Tours and Events* brochure for a guided tour of the Art Institute



Edouard Manet's oil painting, "On the Beach at Boulogne" from 1873, is on display at the Art Institute of Chicago from October 20, 2003, until January 19, 2004.

The Detroit Institute of Arts, Bequest of Robert H. Tannahill



Paul Gauguin's "Aha Oe Feii?" or "What! Are You Jealous?" is an 1894 watercolor transfer selectively heightened with brush and water-based colors, brown ink and white chalk on ivory Japanese paper. It is on display at the Art Institute of Chicago from November 15, 2003, until January 11, 2004.

Gift of Edward McCormick Blair

Edouard Manet's oil painting, "The Grand Canal, Venice (Blue Venice)" from 1874, is on display at the Art Institute of Chicago from October 20, 2003, until January 19, 2004.

Collections of the Shelburne Museum, Shelburne, Vt.

Terra Museum of American Art

Many modern American artists traveling abroad have successfully captured their new social environment as well as physical landscapes in an exciting exhibition, *Studied*

Abroad: Painted Impressions. The exhibition features approximately 20 small oil paintings by American artists including Robert Henri and Maurice Prendergast. A concurrent

exhibition, *Leaving for the Country: George Bellows at Woodstock*, includes 45 works by Bellows and 20 paintings and drawings by his fellow artists at the summer

retreat of Woodstock, N.Y. The Terra Collection consists of more than 700 important works by American artists with an emphasis on American Impressionism.

- 664 N. Michigan Ave.
 (312) 664-3939
www.terramuseum.org

LAST CHANCE! MUSEUM WILL CLOSE IN FALL 2004.

The Field Museum

Meet Albert Einstein through selected letters, manuscripts, personal possessions, photographs and multimedia displays. The most illustrious scientist of the 20th century, Einstein was a physicist who redefined our understanding of energy, gravity, light and time. Visitors to the Einstein exhibition will view the 1912 draft of the famous $E=mc^2$ equation known as the theory of relativity. The exhibit looks at his scientific achievements as well as his anti-war efforts and humanitarian ideals.

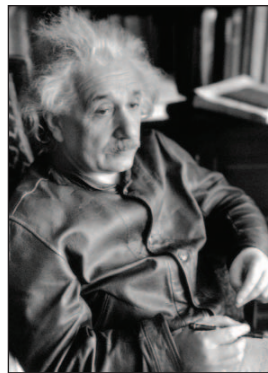
While visiting the Field Museum, say hello to Sue, the largest, most complete and best preserved *Tyrannosaurus rex* fossil ever discovered. It is one of the many noteworthy specimens in the Field's permanent collection. The Field anchors the Museum Campus on South Lake Shore Drive at Soldier Field.

■ 1400 S. Lake Shore Dr.
(312) 922-9410
www.fnmh.org



Complex theories combine with simple pleasures: Einstein rides a bicycle in Santa Barbara, Calif., in 1933. This photograph is part of the exhibition, *Einstein*, at The Field Museum.

Photo courtesy of the Archives, California Institute of Technology



A contemplative Albert Einstein works with his instruments—pen and paper—in Princeton, N.J., in 1938. This photograph is part of the exhibition, *Einstein*, at The Field Museum.

From the Lotte Jacobi Collection University of New Hampshire



PEGGY NOTEBAERT NATURE MUSEUM

An imaginative interactive exhibit transports visitors to Dr. Jane Goodall's world of the chimpanzee in Gombe, Africa. An additional exhibit explores the beauty of plant structures through x-ray photography. Also, be sure to enjoy the beauty of the Judy Istock Butterfly Haven. The permanent exhibits explore how humans impact the environment.

■ 2430 N. Cannon Dr.
(773) 755-5100
www.chias.org

This image, called Optic Exploration: Campanula is part of the exhibit *Between Science and Art: The X-ray Photographs of Judith McMillan* at the Peggy Notebaert Nature Museum.

Judith K. McMillan © 2002

ADLER PLANETARIUM

Shows at the planetarium are scheduled continuously throughout the day. The imaginative *Alien Encounter*, *Journey to Infinity* and *Search for Alien Worlds* will whisk viewers away to other

worlds in distant galaxies. The Adler Planetarium is located on a scenic section of the Museum Campus jutting into Lake Michigan.

■ 1300 S. Lake Shore Dr.
(312) 922-7827
www.adlerplanetarium.org

MUSEUM OF SCIENCE AND INDUSTRY

This museum has something for everyone: a farm, a U-505 submarine, a fairy castle and a coal mine. Visitors may walk through the human heart, watch chicks hatch and throw their voices in the whispering gallery. Aspiring

astronauts may visit the lunar module and the Apollo 8 Command Module.

■ 57th St. and Lake Shore Dr.
(773) 684-1414
www.msichicago.org

CHICAGO HISTORICAL SOCIETY

This urban museum presents the fascinating multicultural heritage of the region in creative, up-to-date exhibits.

■ 1601 N. Clark St.
(312) 642-4600
www.chicagohs.org

LINCOLN PARK CONSERVATORY

A tropical oasis features greenery from around the world.

Smith Museum of Stained Glass Windows

Located on the east end of Navy Pier, this museum houses the nation's largest permanent collection of Tiffany stained glass windows. The museum has more than 150 stained glass works—some dating back to the 1890s—by artists including John LaFarge, Louis Sullivan, Frank Lloyd Wright, Franz Mayer and F.X. Zettler. Admission is free. Free guided tours are also available by appointment.

■ 600 E. Grand Ave.
(312) 595-5024

Seasonal features include a chrysanthemum show in November and a Christmas show in December.

■ 2391 N. Stockton Dr.
(312) 742-7736

GARFIELD PARK CONSERVATORY

View the holiday flower show at the Garfield Park Conservatory, which was built in 1907. The conservatory was designed by architect Jens Jensen and is one the world's largest gardens under glass.

■ 300 N. Central Park Ave.
(312) 746-5100
www.garfield-conservatory.org



This blacktip reef shark is an inhabitant of the Shedd Aquarium's new *Wild Reef* exhibit— one of the most diverse displays of sharks in North America.



This huge Napoleon Wrasse is a fan favorite at the Shedd Aquarium.

Shedd Aquarium

The aquarium is home to aquatic life from around the world. A new *Wild Reef* exhibit opened in April 2003 offering one of the most diverse displays of sharks in North America. You can also visit the seahorses, otters, seals, dolphins,

penguins and whales. The Shedd, a principal part of the Museum Campus, is a tasteful blend of contemporary and 1930s architecture situated on the shore of Lake Michigan.

■ 1200 S. Lake Shore Dr.
(312) 939-2438
www.sheddnet.org

Museum of Contemporary Art

Chicago artist Kerry James Marshall's work focuses on Civil Rights-era social issues. *The One True Thing: Meditations on a Black Aesthetic* exhibition includes painting, photography, sculpture and video that extract images from black cultural tradi-

tion, history and identity. Marshall's grand-scale paintings evoke traditional historical painting.

The MCA's permanent collection represents trends in art after 1945, with a special emphasis in Surrealism (1940s and

1950s), Minimalism (1960s), conceptual art and photography (1960s to the present), installation art and art by local artists. The collection includes paintings, sculpture, photography, video, film and installations.

■ 220 E. Chicago Ave.
(312) 280-2660
www.mcachicago.org

Theater:

THE DEAD

James Joyce's haunting Irish Christmas Eve musical
Court Theatre
5535 S. Ellis Ave.
(773) 753-4472
courtheater.uchicago.edu

AFFLUENZA!

A comedy of manners
Victory Gardens Theater & Training Center
2257 N. Lincoln Ave.
(773) 871-3000
www.victorygardens.org

MAN FROM NEBRASKA

A crisis of faith propels a journey of self discovery
Steppenwolf Theater
1650 N. Halsted St.
(312) 335-1650
www.steppenwolf.org

SECOND CITY

Comedy and improvisation
Mainstage and ETC stage
1616 N. Wells St.
(312) 337-3992
www.secondcity.com

Family Performances:

CAMELOT

Drury Lane Theatre
Oakbrook Terrace
November 30 and December 4
100 Drury Lane, Oakbrook, Ill.
(630) 530-0111
www.ticketmaster.com

A CHRISTMAS CAROL

Goodman Theatre
170 N. Dearborn St.
(312) 443-3800
www.goodman-theatre.org

DISNEY PRESENTS THE LION KING

Cadillac Palace Theater
151 W. Randolph St.
(312) 902-1400
www.ticketmaster.com



THE PRODUCERS

Ford Center for the Performing Arts
November 30
24 W. Randolph
(312) 902-1400
www.ticketmaster.com

TUBES

by Blue Man Group
Performance Art Meets Music
Briar Street Theatre
3133 N. Halsted
(773) 348-4000
www.blue-man.com
www.ticketmaster.com

Symphony and Opera

Lyric Opera of Chicago

SIEGFRIED

December 3

Siegfried slays the dragon and rescues Brunnhilde from her ring of fire in the second opera of Wagner's famous Ring Cycle.

By Richard Wagner

Conductor: Sir Andrew Davis
with Jane Eaglen, James Morris, John Treleaven and Mark Lundberg

■ 20 N Wacker Dr
(312) 332-2244 x5600
www.lyricopera.org

FAUST

December 5

Goethe's famous story of a man's demise after trading his soul for eternal youth, vitality and passion.

By Charles Gounod

Conductor: Mark Elder
with Samuel Ramey, Erin Marie Wall, Marcus Haddock and Patricia Racette
Tickets go on sale in August

Chicago Symphony Orchestra

December 2

John Williams, conductor

Concert music; music for film

December 4 and 5

Pierre Boulez, conductor

Bartok - Divertimento for String Orchestra

Ligeti - Chamber Concerto

Messiaen - L'Ascension

Ravel - Une barque sur l'océan

Ravel - Alborada del gracioso

■ 220 S. Michigan Ave.
(888) 294-3550
www.chicagosymphony.org

RSNA Tours & Events

RSNA is sponsoring a series of tours and events during RSNA 2003.

A *Tours & Events* Brochure is available at www.rsna.org/register.

This year, a new tour company will feature different offerings from previous years. Those who participated in tours at RSNA 2001 and RSNA 2002 will automatically receive a brochure.



AMERICAN GIRL PLACE

Shoppers at American Girl Place may choose among the beautiful dolls and catch Circle of Friends: An American Girls Musical in the theater. Lunch, tea and dinner are served at The Café. Reservations are recommended.

■ 111 E. Chicago Ave.
(877) 247-5223
www.americangirl.com

CHICAGO CHILDREN'S MUSEUM

Chicago Children's Museum is where play and learning connect. More than 12 interactive exhibits and daily programs offer hours of creative play for toddlers to 10-year-olds and parents too. The hands-on exhibits are creatively focused on art, science and humanities. Holiday 2003 brings an interactive exhibit based on the pioneering children's television program, "Can You Tell Me How to Get to Sesame Street?" Additionally, children may enter a recreation of a Saharan dinosaur expedition and learn about being a team member.



The annual Gingerbread Fantasy Factory exhibit will be open for holiday visitors. Children of all ages can pretend to make, bake and decorate gingerbread goodies.

■ 700 E. Grand Ave.
(on Navy Pier)
(312) 527-1000
www.chicildrensmuseum.org

NAVY PIER IMAX THEATRE

Visit the Navy Pier IMAX theatre to see the "Matrix: Revolutions," the third installment of the Matrix trilogy, and "Santa vs. the Snowman 3D," a family holiday film.

■ 700 E. Grand Ave.
(312) 595-5629

LINCOLN PARK ZOO

The Lincoln Park Zoo is the oldest zoological garden in the country, as well as one of the most modern. Casting a festive glow on the zoo grounds, the ZooLights Festival is a nightly event during the holiday season.

■ 2200 N. Cannon Dr.
(312) 742-2000
www.lpzoo.com



CHICAGO
CONVENTION AND TOURISM BUREAU

Working For You

Comprehensive Radiology Calendars

RSNA Link includes a series of calendars to help keep members informed about upcoming medical meetings and CME activities, as well as important RSNA dates and activities. The calendars are at www.rsna.org/calendars/index.html.

In addition, the back cover of each issue of *RSNA News* includes a listing of upcoming medical meetings.

CME Credits for Europeans Attending RSNA 2003

CME credit at RSNA 2003 will be recognized by the European Accreditation Council for CME (EACCME). This will be on an hour-by-hour basis. RSNA works closely with the American Medical Association and has met the requirements by which it can award category 1 credits to international attendees that will be accepted by the EACCME.

CE Credits for RTs

RSNA has also been working with the American Society of Radiologic Technologists to offer the RSNA scientific program for Category A continuing education (CE) credits. Radiologic technologists and others requiring technologist CE credit should indicate their need for CE credit at the time of registration. A check-off box is available on the Advance Registration and Housing Form.

SERVICE TO MEMBERS:

As Managing Director for Research and Education Administration, I manage the administrative support for cross-cutting programs of the Society's Division of Research and Education. I am responsible for providing administrative support for the RSNA Research & Education Foundation, which includes working with the Chairman of the R&E Board of Trustees on all meeting agenda materials and managing matters relating to the governance of the Foundation.

I oversee the implementation of activities for the Foundation's Program Committee and Public Relations Committee. The Program Committee has overall responsibility for developing and recommending new and revised Foundation programs. The Public Relations Committee is responsible for all public relations initiatives. Implementation of these initiatives involves collaborative efforts with other RSNA departments, especially Marketing & Communications and Meetings Services.

I also assist the Assistant Executive Director for Research and Education, Linda Bresolin, Ph.D., M.B.A., C.A.E., with staff



WORKING FOR YOU PROFILE

NAME:
Susan Thomas, M.A.

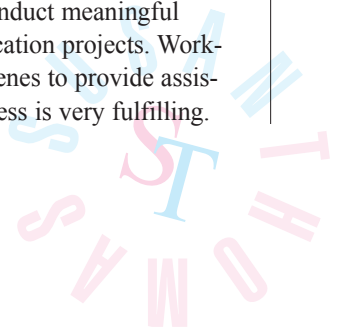
POSITION:
Managing Director,
Research and
Education

WITH RSNA SINCE:
July 1997

support for the newly formed Academic Council, formed to foster coordination among organizations involved in meeting the needs of academic radiologists.

WORK PHILOSOPHY:

My work philosophy is to focus on the mission of the Society and to carry out the responsibilities of my position to the best of my ability in a way that helps our members achieve that mission. I admire the RSNA dedication to research and education. I especially appreciate the commitment of the past and current leaders of the Society and of the R&E Foundation to encourage and support young investigators in their efforts to conduct meaningful research and education projects. Working behind the scenes to provide assistance in this process is very fulfilling.



If you have a colleague who would like to become an RSNA member, you can download an application at www.rsna.org/about/membership/memberapps.html, or contact the RSNA Membership and Subscription Department at (877) RSNA-MEM [776-2636] (U.S. and Canada), (630) 571-7873 or membersh@rsna.org.

HIPAA in Perspective: What it Means in Real Life Radiology

RSNA is sponsoring a one-day course on October 11, 2003, in Oak Brook, Ill., during which radiology professionals will learn about issues relevant to implementing the privacy and security rules of the Health Insurance Portability and Accountability Act (HIPAA).

Session topics include security standards, regulatory and legal risks, hot topics and late breaking news related to HIPAA.

Registration fees are \$199 for RSNA members and \$235 for non-members.

For more information, contact the RSNA Education Center at (800) 381-6660 x3747 or ed-ctr@rsna.org.

NEW!

Effective Investment Strategies

RSNA will sponsor a one-day course, presented by National Tax & Investment Seminars, prior to RSNA 2003. The course will be held Saturday, November 29, 2003, from 8:30 a.m. – 4:00 p.m., at McCormick Place in Chicago.

Objective and unbiased, this course shows investors how to become more efficient with their money by making informed investment decisions. Unlike financial planner or stockbroker provided courses, there is absolutely no sales pitch.

Due to last year's enthusiastic response, the course has been expanded to six hours.

Topics to be discussed will include:

- Online Trading: Appreciate Its Benefits but Watch for the Pitfalls
- Why Money Managers Don't Want You to Know About Index Funds
- Strategies to Protect Profits and Lower Risk in Volatile Markets

- Selecting Mutual Funds Suited to Your Needs – Not Wall Street's
- Day Trading: If It's Investing, Why Isn't It Called Day Investing
- Exchange Traded Funds: Are They Really Superior to Stock Index Funds?
- Funding the High Cost of Your Children's College Education

Each attendee will receive a copy of the Effective Investment Strategies textbook. Written specifically for this course, the textbook is an invaluable post-seminar resource.

Registration is \$169 for RSNA members, \$99 for members-in-training and \$189 per course for non-members. This seminar does not qualify for AMA category 1 credit. For more information, contact the RSNA Education Center at (800) 381-6660 x3747 or ed-ctr@rsna.org.

JOURNALS

Radiology in Public Focus

Press releases have been sent to the medical news media for the following scientific articles appearing in the August issue of *Radiology* (radiology.rsnaajnl.org):

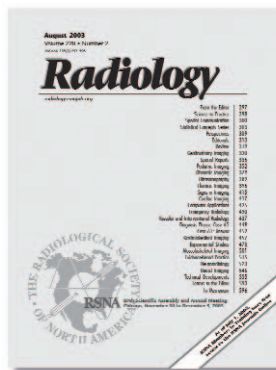
"Self-referred Whole-Body CT Imaging: Current Implications for Health Care Consumers"

AN ANALYSIS OF IMAGING CENTERS ACCEPTING self-referral finds the centers are located across the United States, typically in areas populated by well-educated, health-conscious consumers who can assume high out-of-pocket costs.

Judy Illes, Ph.D., and colleagues from the Stanford University Medical Center in California, also found that heart and lung scans were the most frequently offered service; half offered total body screening.

The researchers write, "Guidelines developed from within the profession and further research are needed to assure that benefits of these services outweigh risks to individuals and the health-care system."

(*Radiology* 2003; 228:346-351)



RSNA press releases are available at www2.rsna.org/pr/pr1.cfm.

"A Rational Approach to Dose Reduction in Pediatric CT"

JOHAN M. BOONE, PH.D., AND COLLEAGUES from the University of California, Davis Medical Center, Research Imaging Center in Sacramento, have developed tables to help reduce the radiation dose to children undergoing computed tomography, without loss of image quality.

They write, "Due to the exponential relationship between patient thickness and x-ray attenuation not only is dose reduction possible in pediatric CT, but very large dose reductions are possible for the smallest of children."

For specific study details, see the full-text article online at radiology.rsnaajnl.org/cgi/content/full/228/2/352.
(*Radiology* 2003; 228:352-360)

Vanguard Company Spotlight

Berlex Laboratories, Inc.



Berlex Laboratories, Inc., is celebrating its 15th anniversary of introducing the world's

first MR imaging contrast agent by becoming a new RSNA Vanguard Company.

Berlex has pledged \$1,050,000 to the RSNA Research & Education Foundation to establish an endowment for the Berlex Laboratories, Inc./RSNA Research Scholar Grant and the Berlex Laboratories, Inc./RSNA Research Seed Grant. The grants begin in 2004 and will be awarded every other year on an alternating schedule for the next 15 years.

"Fostering creativity and innovation in research advances the field of radiology patient care," says Eckhard Puchert, Ph.D., director of marketing for radiology at Berlex. "As an ongoing supporter of research and education, Berlex hopes to encourage novel and original thinking that brings future breakthroughs to our field."

The Berlex commitment to medical imaging began 70

years ago when parent company, Schering AG, Germany, introduced the first injectable contrast medium. Over the years, Berlex products have helped to revolutionize imaging technology. In 1988, Magnevist® (gadopentetate

dimeglumine) became the world's first intravenous contrast agent for use with MR imaging and is still considered the gold standard. Berlex also introduced the first liver-specific MR imaging agent, Feridex I.V.® (ferumoxides



Shown here at RSNA 2002, Berlex Laboratories, Inc., becomes the 18th RSNA Vanguard Company supporting radiologic research and education with a commitment of more than \$1 million.

injectable solution) and Ultravist® (iopromide) injection, a nonionic monomeric iodinated contrast agent. Currently, new applications for Magnevist and additional organ-specific contrast agents are being developed to meet the evolving needs of radiology.

Committed to developing novel diagnostics and therapeutics that address unmet medical needs, Berlex also develops and markets pharmaceuticals in the areas of female healthcare, dermatology, oncology and therapeutics for life-threatening and disabling diseases. Berlex has business operations in the United States in New Jersey, California, New Hampshire and Washington.

As an ongoing supporter of research and education, Berlex hopes to encourage novel and original thinking that brings future breakthroughs to our field.

—Eckhard Puchert, Ph.D.

The Berlex Laboratories, Inc./RSNA Research Scholar award provides support to young faculty members early in their academic careers by freeing at least one-half of their time to gain experience in research. This grant is available to faculty members in North American institutions who are within five years of their initial faculty appointment.

Recipients of the Berlex Laboratories, Inc./RSNA Research Seed Grant get the research time to test hypotheses and define research objectives before applying for major grant funding. □

- For more information on the RSNA Research & Education Foundation Grant programs, contact Scott Walter at (630) 571-7816 or at walter@rsna.org.
- For more information about becoming an RSNA Research & Education Foundation Vanguard Company, contact Deborah Kroll at (630) 368-3742 or at dkroll@rsna.org.



Research & Education Foundation Donors

THE BOARD OF TRUSTEES of the RSNA Research & Education Foundation and its recipients of research and educational grant support gratefully acknowledge the contributions made to the Foundation between **May 30** and **June 27, 2003**.

VANGUARD GROUP

Canon USA

Canon

\$10,000

A Vanguard Company since 1999

Varian Medical Systems

VARIAN
medical systems

\$25,000

A Vanguard Company since 2001

EXHIBITOR'S CIRCLE

Outpatient Imaging Affiliates, LLC

OiA

OUTPATIENT IMAGING AFFILIATES, LLC

\$2,500

RUBY (\$5,000 - \$9,999)

Peggy J. Fritzsche, M.D. & Anton N. Hasso, M.D.

PLATINUM

(\$1,000 - \$4,999)

Nancy & John AufderHeide, M.D.
Theresa C. McLoud, M.D.
Diana & Robert G. Parker, M.D.

GOLD (\$500 - \$999)

Jean M. Weigert, M.D.

SILVER (\$200 - \$499)

Peter V. Claussen III, M.D.
Richard C. Khu, M.D.
Hiroshi Natori, M.D., Ph.D.
Mary Jane O'Neill, M.D.
Philip C. Pieters, M.D.

David F. Powell, M.D.
Robert W. Seaman, M.D.

BRONZE (\$1 - \$199)

Joseph Bonn, M.D.
Jerry R. Croteau, M.D.
Bolivia T. Davis, M.D.
Nobushige Hayashi, M.D., Ph.D.
Sri Inggriani, M.D.
Rakesh Parbhu, M.D.
Claire E. & Dominick J. Principato, M.D.
Caroline Reinhold, M.D.
Hans G. Ringertz, M.D., Ph.D.
Mark A. Rosen, M.D., Ph.D.
Lloyd B. Schnuck Jr., M.D.

RSNA PRESIDENT'S CIRCLE MEMBERS

\$1,500 per year

Jean & David B. Fraser, M.D.
Peggy J. Fritzsche, M.D. & Anton N. Hasso, M.D.
Louise & Richard G. Lester, M.D.
Judy & William A. Murphy Jr., M.D.
A. Orlando Ortiz, M.D., MBA

COMMEMORATIVE GIFTS

Kim Burroughs, M.D.
In memory of Micah Bangert-Burroughs
Judy & William A. Murphy Jr., M.D.
In honor of Gene J. Triano, M.D. & Jerry R. Croteau, M.D.
William M. Thompson, M.D.
In memory of Charles M. Thompson, M.D.
Radiology Residents, Wake Forest University School of Medicine
In memory of Daisy Harle



Annual Conference and Exhibition of
the Academy of Molecular Imaging

MARCH 28-31
2004

GAYLORD PALMS RESORT AND CONVENTION CENTER

ORLANDO, FLORIDA

CALL FOR ABSTRACTS
submission deadline: **October 27, 2003**

There will be a **\$3,000 cash prize** for the top abstract in each of the following three categories: **clinical, basic science, and drug development.**

Clinical Category (Institute for Clinical PET-ICP)

- Translational Research
- PET (PET/CT) for Oncologic Applications
- PET (PET/CT) for Neurologic Applications
- PET (PET/CT) for Cardiologic Applications
- New PET Technologies and Procedures

Drug Development Category

(Society for Non-Invasive Imaging in Drug Development-SNIDD)

- MRI Studies in Drug Development
- Optical Imaging Studies
- New Drugs
- Animal PET Imaging
- Animal SPECT Imaging
- New Radiotracers/Contrast Agents/Optical Imaging Probes

Basic Science Category (Institute for Molecular Imaging-IMI)

- Detectors, Instrumentation, Systems
- Image Analysis, Quantification, Modeling
- Molecular Imaging Probe Development
- Imaging of Cellular Events
- Imaging Endogenous/Reporter Genes
- Molecular Imaging Assays (with one or more of the following modalities: Optical, PET/SPECT, MRI, CT, Ultrasound or Other)

Young Investigator Category

Five travel scholarships will be awarded to the top abstract submissions by graduate and medical students and postdoctoral fellows. The award includes airfare and lodging during the conference (meeting registration for students is free). Additionally, the top abstract in this category will receive a cash prize of **\$1,000**.

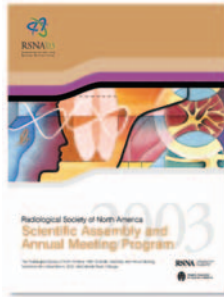
www.ami-imaging.org

News about RSNA 2003

Request Your Copy of the RSNA Program

RSNA members can now take advantage of a valuable membership benefit—choosing to have their one free printed copy of *The Radiological Society of North America Scientific Assembly and Annual Meeting Program* mailed to them in advance of RSNA 2003, or picking up the program at RSNA 2003.

To request your program prior to the annual meeting, go to www.rsna.org/program, then click on your preference.



An electronic version of the *RSNA Program* will be available on *RSNA Link* (www.rsna.org) by the end of October to allow attendees to study it in advance of the meeting and create a customized schedule that will provide maximum individualized coverage of the plenary sessions, scientific papers, scientific posters, education exhibits and technical exhibits.

All requests for an advance mailing of the printed *RSNA Program* must be received by September 1, 2003.

Badge Wallets

For North American attendees who register by **October 31, 2003**, badge wallets, containing their name badge, tickets and attendance vouchers will be mailed to them prior to the Scientific Assembly. Badge wallets will be sent to Non-North American attendees two to three weeks before the meeting if their registration forms are received by **October 10, 2003**.

International registration forms received October 11 – October 31 require badge wallets to be picked up at McCormick Place in the new registration area in the Lakeside Center, Hall E, Level 2.

A **free Metra Train System pass** for the seven days of RSNA 2003 will be placed inside the badge wallet.

Stay at Your Favorite Hotel

To ensure getting the hotel of your choice for RSNA 2003, register as soon as possible. The majority of hotels in the RSNA block still have rooms available.

Registration Fees		
BY 10/31	ONSITE	
\$0	\$100	RSNA Member, AAPM Member
\$0	\$0	Member Presenter
\$0	\$0	RSNA Member-in-Training and RSNA Student Member
\$0	\$0	Non-Member Refresher Course Instructor, Paper Presenter, Poster Presenter, Education or Electronic (<i>infoRAD</i>) Demonstrator
\$110	\$210	Non-Member Resident/Trainee
\$110	\$210	Radiology Support Personnel
\$520	\$620	Non-member Radiologist, Physicist or Physician
\$520	\$620	Hospital Executive, Research and Development Personnel, Medical Service Organization, Healthcare Consultant, Industry Personnel
\$300	\$300	One-day badge registration to view only the Technical Exhibits area.

For more information about registration at RSNA 2003, visit www.rsna.org, call (630) 571-7862 or e-mail reginfo@rsna.org.

Registration Made Easy

There are four easy ways to complete the registration process:

■ Online (24 hours a day)

www.rsna.org/register/

Enter your membership identification number found on the mailing label of your brochure or on the cover of *RSNA News*. The entire process takes only a few minutes. If you request hotel reservations, a hotel room deposit will be charged to your credit card.

■ Fax (24 hours a day)

(800) 521-6017

(847) 940-2386 outside the United States and Canada

■ Phone (Monday – Friday, 8:00 a.m. – 5:00 p.m. CT)

(800) 650-7018

(847) 940-2155 outside the United States and Canada

Please be ready to provide the following information:

- Registration information (name, organization, phone, etc.)
- Fax and e-mail address, if available
- Arrival and departure dates
- Preferred hotels
- Type of hotel room preferred (single, double, etc.)
- Special preferences (smoking, special needs, etc.)
- Credit card information (for hotel deposit)

■ Mail

ExpoExchange/RSNA 2003
108 Wilmot Rd., Ste. 400
Deerfield, IL 60015-0823

Keep a copy of your completed registration form for your records.



RSNA'03

COMMUNICATION FOR
BETTER PATIENT CARE

November 30 – December 5
McCormick Place, Chicago

News about RSNA 2003

Pocket Guide

Another important element of the badge wallet is the RSNA *Pocket Guide*. This pocket-size book has been retooled and reorganized **NEWLY REVISED!** to make it easier and more convenient to use.

The guide includes information to simply travel to and from McCormick Place:

- Shuttle bus schedules, routes and boarding locations
- Taxi fees, loading and unloading areas
- Airport transportation service with times, cost and boarding information
- A complete Metra Train System schedule outlining station locations, times and drop-off destinations

- Parking lot locations, hours and fees

The guide also offers a complete overview of the RSNA Scientific Assembly and Annual Meeting including:

- A complete A-Z listing of everything available to attendees
- Room assignments for the scientific sessions, refresher courses and plenary sessions
- Floor plans of each building and each floor of McCormick Place



Shuttle Bus Service

A new shuttle bus contractor, combined with the dedicated express bus lane, will make the ride to and from McCormick Place easier and more convenient than ever before. Children under the age of 16 will be allowed to ride on the RSNA shuttle buses; however, they still will not be allowed to attend the meeting. Onsite childcare will be available for children ages six months to 12 years through ACCENT on Children's Arrangements, Inc. Application forms are available on the Internet at www.rsna.org/rsna/advance_registration/.

Important Dates for RSNA 2003

Oct. 10	Registration deadline for Non-North American participants to have badge wallet mailed
Oct. 31	Final advance registration deadline
Nov. 30–Dec. 5	RSNA 89th Scientific Assembly and Annual Meeting

RSNA 2003 Exhibitor News

Free Promotional Tools for Exhibitors

Technical Exhibitors at RSNA 2003 can take advantage of the free promotional tools available to make potential customers aware of their presence at the annual meeting. Exhibitors may access the password-protected site at www.rsna.org/rsna/te/servicekit.

Postcards and flyers are available that can be customized with a company's logo, message and exhibit location. Downloadable images are also available for the creation of other customized promotional materials.

Traditionally about 24,000 radiology professionals attend the RSNA Annual Meeting each year. To ensure

your company gets maximum exposure, take advantage of the many promotional and advertising opportunities available.

Advertising vehicles include:

- RSNA Journals — *Radiology* and *RadioGraphics*
- *Buyer's Guide*
- *Pocket Guide*
- *Daily Bulletin*
- *RSNA News*
- *RSNA Link* (www.rsna.org)
- Coupon Book
- Motion Billboard

For more information, contact Jim Drew at (630) 571-7819 or e-mail: jdrew@rsna.org.

New Exhibitors

RSNA 2003 will welcome 43 first-time exhibitors.

Exhibit Space Summary

(as of July 28, 2003)

By McCormick Place Building

TOTAL	431,450 sq. ft.
South	285,250 sq. ft.
North	146,200 sq. ft.

By Exhibit Type

Technical	575
infoRAD	1
Hands-on Computer Workshops	5
Headquarters Office Space	18
Publishers Row	23
Mobile Computing	4
Mobile Units	4

RSNA 2003 Exhibitor News

McCormick Place to Add West Building

By RSNA 2007, McCormick Place will have a new “west wing.” Work begins on the West Building this year. The \$850 million expansion will include approximately 500,000 square feet of exhibition space and approximately 200,000 square feet of meeting space. Currently, the McCormick Place complex includes 2.2 million square feet of exhibit space and 360,000 square feet of meeting room space.

“This expansion is not simply about being the biggest convention center, it is a long-term investment that will provide economic benefits to the city and the state for many years to come,” said Leticia Peralta Davis, chief executive officer of the Metropolitan Pier and Exposition Authority.



These illustrations show the interior and exterior of the new West Building at McCormick Place to be completed in 2007.



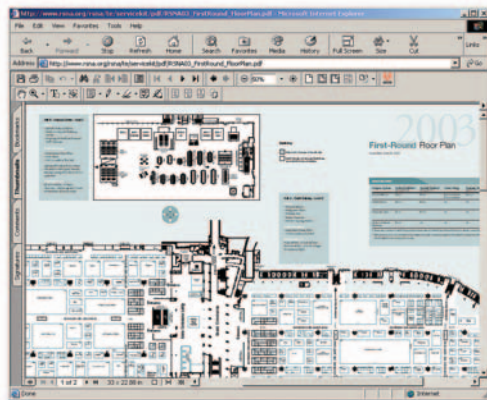
Electronic Technical Exhibitors Service Kit

RSNA technical exhibitors now use a password-protected area of *RSNA Link* to view and download materials in the annual meeting Technical Exhibitors Service Kit.

Last year, these documents were available on CD-ROM. Prior to RSNA 2002, technical exhibitors received print copies of RSNA contracts, guidelines, rules and regulations, and request forms in a large kit.

RSNA has also posted graphics (such as photo-

graphs and logos) for technical exhibitors who need tools to promote their presence at McCormick Place. Technical exhibitors can also view a preliminary floor plan online.



Important Exhibitor Dates for RSNA 2003

- Aug. 15** Deadline for final space payment
 - Sept. 5** Deadline for submission of Free-Form/Peninsula/Mobile exhibit plans
 - Sept. 22** Target Floor Plan assignments released
- Block housing deposits and rooming lists due

NEW
Oct. 15 Deadline for submission to *Daily Bulletin's* New Products Section

Oct. 17 Deadline for EAC request form

NEW
Oct. 31 Exhibitor badge deadline

Nov. 30– RSNA 89th Scientific Assembly and
Dec. 5 Annual Meeting

NEW Technical Exhibit Hours

Sun., Nov. 30–Wed., Dec. 3 10:00 a.m.–5:00 p.m.
Thurs., Dec. 4 10:00 a.m.–2:00 p.m.

■ For up-to-date information about technical exhibits at RSNA 2003, go to www.rsna.org/rsna/te/index.html.

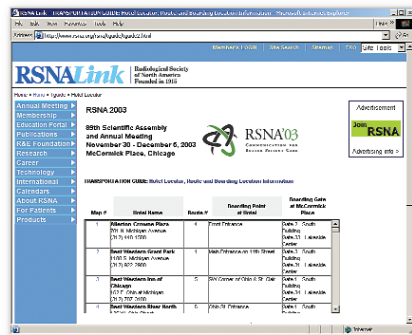
www.rsna.org

RSNA 2003 Transportation Guide

This year's Transportation Guide for the RSNA Scientific Assembly and Annual Meeting has been posted in the Annual

Meeting section of *RSNA Link* (www.rsna.org/rsna/tguide/).

It includes shuttle bus hours of operation, pickup locations at hotels, and dropoff and boarding locations at McCormick Place, as well as information about airport transportation, Metra schedules and parking.



More than 200 *RSNA Link Onsite* terminals are available at the RSNA annual meeting for attendees to create customized schedules, check meeting information and send and receive e-mail.



Video Clips on RadiologyInfo™

The RSNA/ACR public information Web site, *RadiologyInfo.org*, now features a series of video clips to help educate consumers about various radiologic technologies and procedures. These upbeat video clips were originally created for broadcast in a family entertainment environment. The clips include:

- Angiography
- Computed Tomography
- Imaging the Brain
- Magnetic Resonance Imaging
- Nuclear Medicine

- Radiation Therapy
- Radiology 101
- The X-ray Files
- Ultrasound

To view the video clips, go to www.radiologyinfo.org/video/real-clips.htm.

The following procedures were also posted recently on *RadiologyInfo.org*:

- Chemoembolization
- Thrombolysis
- Bone Densitometry (DEXA)
- Pediatric CT

Connections Your online links to RSNA

RSNA Link
www.rsna.org
Radiology Online
radiology.rsnaajnl.org
Radiology Manuscript Central
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RSNA 2003 Scientific Program Request
www.rsna.org/program

Medical Meetings

September – December 2003

SEPTEMBER 7-11

Imaging in 2020 III, Conference on Molecular Imaging, Jackson Lake Lodge, Jackson Hole, Wyo. • www.imagingin2020.com

SEPTEMBER 13-16

North American Society for Cardiac Imaging, 31st Annual Meeting and Scientific Session, Hotel Adolphus, Dallas • www.nasci.org

SEPTEMBER 13-17

Society of Chairmen of Academic Radiology Departments (SCARD), Fairmont Waterfront, Vancouver, British Columbia, Canada • www.scardonline.org

SEPTEMBER 17-20

International Skeletal Society, ISS San Francisco 2003, The Fairmont Hotel, San Francisco • www.internationalskeletalsociety.com

SEPTEMBER 18-21

Royal Australia New Zealand Congress of Radiology (RANZCR), 54th Annual Scientific Meeting, Brisbane, Australia • www.ranzcr.edu.au/open/asm2003/index.htm

SEPTEMBER 19-21

American College of Radiology Imaging Network (ACRIN), Semi-Annual Meeting, Ritz Carlton Pentagon City, Arlington, Va. • www.acrin.org

SEPTEMBER 20-24

Cardiovascular & Interventional Radiological Society of Europe (CIRSE), Annual Meeting, Antalya, Turkey • www.cirse.org

SEPTEMBER 21-27

Academy of Molecular Imaging, International Conference 2003, Madrid, Spain • www.ami-imaging.org/conference2003

OCTOBER 1-5

American Society of Head and Neck Radiology (ASHNR), 37th Annual Meeting, Marriott Rancho Las Palmas Resort, Rancho Mirage, Calif. • www.ashnr.org

OCTOBER 1-4

Canadian Association of Radiologists (CAR), 66th Annual Scientific Meeting, World Trade and Convention Centre, Halifax, Nova Scotia, Canada • www.car.ca

OCTOBER 11

HIPAA in Perspective: What it Means in Real Life Radiology, RSNA, Oak Brook, Ill. • www.rsna.org (800) 381-6660 x3747 or ed-ctr@rsna.org

OCTOBER 17-19

Society of Radiologists in Ultrasound (SRU), 13th Annual Meeting, Fairmont Hotel, Chicago • www.sru.org

OCTOBER 18-19

Hong Kong College of Radiologists, 11th Annual Scientific Meeting, Hong Kong Academy of Medicine, Aberdeen, Hong Kong • www.hkcr.org

OCTOBER 19-22

Society of Radiation Oncology Administrators (SROA), 20th Annual Meeting, Salt Lake City • www.sroa.org

OCTOBER 19-23

American Society for Therapeutic Radiology & Oncology (ASTRO), 45th Annual Meeting, Salt Palace Convention Center, Salt Lake City • www.astro.org

OCTOBER 19-25

2003 IEEE Nuclear Science Symposium, Medical Imaging Conference and 13th International Workshop on Room-Temperature Semiconductor X- and Gamma-ray Detectors, Doubletree Hotel Portland, Oregon • www.nss-mic.org/2003

OCTOBER 21-25

American Osteopathic College of Radiology (AOCR), Annual Convention, Loews Miami Beach Hotel, South Beach, Fla. • www.aocr.org

OCTOBER 22-23

American Society of Emergency Radiology (ASER), 14th Annual Meeting, Alexis Park Resort, Las Vegas • www.erad.org

OCTOBER 24-26

Society of Computed Body Tomography & Magnetic Resonance (SCBT/MR), New Opportunities in Imaging, Marriott Long Wharf Hotel, Boston • www.scbtmr.org

NOVEMBER 7-12

American Association of Medical Colleges (AAMC), Annual Meeting, Hilton Washington & Towers and Omni Shoreham Hotel, Washington, D.C. • www.aamc.org

NOVEMBER 29

Effective Investment Strategies (prior to RSNA 2003), McCormick Place, Chicago • (800) 381-6660 x7715 or ed-ctr@rsna.org

NOVEMBER 30–DECEMBER 5

RSNA 2003, 89th Scientific Assembly and Annual Meeting, McCormick Place, Chicago • www.rsna.org

DECEMBER 6-11

American Medical Association (AMA), Interim Meeting, Hilton Hawaiian Village, Honolulu • www.ama-assn.org