

# RSNA *News*



## Taking Care of Your Financial Health Estate Planning for Physicians

### Also Inside:

- Radiologists Debate Advantages of Maintaining Musculoskeletal Ultrasound Market
- *Radiology, RadioGraphics* Top Choices for Manuscript Submissions, Authors Say
- National Standards Urged for Handling Pregnancy During Residency
- Obesity Limits Image Quality, Diagnosis and Treatment
- RSNA Grant Leads to Innovative Treatment for Liver Cancer

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**RSNA News**

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IN MEMORIAM:

## Lauriston S. Taylor, Sc.D.

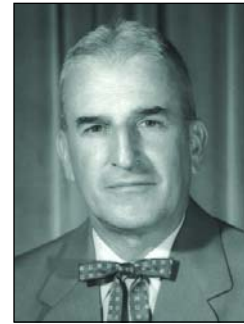
**A** PIONEER IN THE FIELD of radiation protection and measurements has died at the age of 102.

**Lauriston S. Taylor, Sc.D.**, had a rich and varied career during which he founded the U.S. Advisory Committee on X-Ray and Radium Protection in Congress—now known as the National Council on Radiation Protection and Measurements (NCRP).

His interest in radiation safety may have started when he was in grammar school. During a visit to Thomas Edison in his laboratory, Edi-

son gave him a cold-cathode x-ray tube. Taylor's father, a metallurgist, wouldn't allow him to experiment with it because he had already heard about the dangers of x-ray exposure.

Over his lifetime, Dr. Taylor was an active volunteer in more than three dozen organizations. He had been an RSNA member since 1928 and earned the Society's Gold Medal in 1954. Dr. Taylor earned many other awards over his lifetime, including the Distinguished Service Award from the Executive Office of the President.



Lauriston S. Taylor, Sc.D.

### Palmer Earns Honorary Degree

**Philip Palmer, M.D.**, from Davis, Calif., received a "Degree of Doctor of Medicine, Honoris Causa" from the Romanian Society of Radiology and Medical Imaging during its September congress.

Dr. Palmer first traveled to Romania in 1990 on behalf of the European Office of the World Health Organization. His 46-page Palmer Report was used to revise and modernize medical imaging, radiation therapy and radiology education in Romania after the fall of Communism.

After his return visit to the country, Dr. Palmer said he was surprised by the progress made so far: "The changes are not only in healthcare. In 1990, there were empty shops, lines of very hungry people trying to find bread and any other food. Now the cities and villages, as well as shops of all sorts, are thriving and music and the arts are flourishing. There is, no doubt, a lot more to do but what has been done so far is remarkable."



Philip Palmer, M.D. (right), with his wife and Nicholae-Tudor Racoveanu, M.D., of Germany.



AAWR past-presidents at RSNA 2004 (seated from left) **Melissa Rosado de Christenson, M.D.**, **Carol Rumack, M.D.**, **Karen Reuter, M.D.** (standing from left) **Kimberly Applegate, M.D., M.S.**, **Gretchen Gooding, M.D.**, **Teresita Angtuaco, M.D.**, **Katarzyna Macura, M.D., Ph.D.**, 2005 president, **Ewa Kuligowska, M.D.**, **Katherine Shaffer, M.D.**, **Patricia Randall, M.D.**, and **Ines Boechat, M.D.**

### 2004 AAWR Awards

The American Association for Women Radiologists (AAWR) presented its 2004 awards during RSNA 2004:

- **Melissa Rosado de Christenson, M.D.**, from Columbus, Ohio, received the Marie Sklodowska-Curie Award for outstanding contributions to the field of radiology.
- **Patricia A. Randall, M.D.**, from Syracuse, N.Y., received the Alice Ettinger Award for lifetime achievement in radiology and contributions to AAWR.
- **Gretchen E. Green, M.D.**, from New Haven, Conn., received the Lucy Frank Squire Award, a distinguished resident award in diagnostic radiology.
- **Mary Koshy, M.D.**, from Atlanta, received the Eleanor Montague Award, a distinguished resident award in radiation oncology.
- **Alexander Margulis, M.D.**, and **Helen Carty, M.B.B.Ch.**, were named AAWR honorary members.
- **Helen Carty, M.B.B.Ch.**, and **Malgorzata Szczerbo-Trojanowska, M.D.**, received the AAWR Presidential Award.

**Mendelsohn Retires as *Clinical Care Research* Editor-in-Chief**

John Mendelsohn, M.D., from Houston, founding editor of *Clinical Cancer Research*, has retired after 10 years with the journal. William Hait, M.D., Ph.D., who has been co-deputy editor, is the new editor-in-chief.

In the December 15 issue, his last as editor, Dr. Mendelsohn urged researchers, regulators and government agencies to consider new ways to conduct and assess translational cancer research and speed bench-to-bedside advances.



John Mendelsohn, M.D.

**OmniCorder Elects Davis as Director**

Michael A. Davis, M.D., D.Sc., is the new director and chair of the executive committee for OmniCorder Technologies, Inc., of East Setauket, N.Y.

Most recently, Dr. Davis was a director at E-Z-EM, Inc. He also served as a visiting professor of radiology at Harvard Medical School and a visiting scientist in radiology at Massachusetts General Hospital.

ANNOUNCEMENTS



**RSNA Research & Education Foundation Board of Trustees**

The 2005 Board of Trustees for the RSNA Research & Education Foundation gathered for the first time at RSNA 2004. They are (front row, from left): R. Gilbert Jost, M.D.; Anne G. Osborn, M.D.; Peggy J. Fritzsche, M.D., Secretary; Beverly B. Huckman; R. Nick Bryan, M.D., Ph.D., Chairman; and Robert R. Hattery, M.D. (back row, from left) C. Leon Partain, M.D., Ph.D.; Brian C. Lentle, M.D.; David H. Hussey, M.D., Treasurer; Jack E. Price; Stephen R. Thomas, Ph.D.; and James H. Thrall, M.D.



### Radiology Executive Directors Summit

RSNA Executive Director Dave Fellers, C.A.E., hosted a breakfast meeting for international radiology association executives at RSNA 2004. The 27 executive directors discussed issues impacting each society, including education, research, staffing and new radiology society progress. Those pictured are: (from left) Ed Nagy (Academy of Radiology Research), Jane Tiemann (International Society for Magnetic Resonance in Medicine), Peter Baiert (European Congress of Radiology), Otha W. Linton, M.S.J. (International Society of Radiology), Richard Lauzon, Ph.D., C.A.E. (Canadian Association of Medical Radiation Technologists), Brigitte Lindlbauer (European Society for Gastrointestinal & Abdominal Radiology), Normand Laberge (Canadian Association of Radiologists), Pamela A. Smith (American Osteopathic College of Radiology), David Schauer, Sc.D., C.H.P. (National Council on Radiation Protection and Measurements), Fellers, Catherine Prop (Societe Francaise de Radiologie), and Jorge Bisten, M.D. (Sociedad Mexicana de Radiologia e Imagen and Inter-American College of Radiology).

### Two *RadioGraphics* Editorial Board Members Retire

Two members of the *RadioGraphics* editorial board have retired after many years of dedicated service.

Raymond B. Dyer, M.D., was in charge of the genitourinary imaging section for 10 years. Betty J. Manaster, M.D., Ph.D., was in charge of the musculoskeletal radiology section for eight years.

Dr. Dyer is a professor of radiology at Wake Forest University School of Medicine in Winston-Salem, N.C. Dr. Manaster is the vice-chairman and practice director at the University of Colorado Health Sciences Center (UCHSC), the residency director at UCHSC and a full-time professor.



Raymond B. Dyer, M.D.



Betty J. Manaster, M.D., Ph.D.

### Enhanced Biomedical Informatics Research Network

THE NATIONAL CENTER for Research Resources (NCRR), a component of the National Institutes of Health (NIH), will provide \$32.8 million in additional funding to enhance its Biomedical Informatics Research Network (BIRN).

BIRN is an NIH initiative involving a consortium of 15 universities and 22 research groups that fosters collaborations in biomedical science by utilizing information technology innovations. BIRN's initial three test bed projects focus on brain imaging of human neurological disorders and associated animal models.

"Information technology offers tremendous potential to advance our ability to diagnose and treat disease," said NCRR Director Judith L. Vaitukaitis, M.D. "BIRN's powerful and flexible approaches to data integration are designed to accommodate the dynamic nature of scientific inquiry and to allow novel discoveries that incorporate knowledge across scale and even across species. With this additional investment in the BIRN consortium, we hope to provide researchers with networked analytical tools that will greatly advance our knowledge of neurological disorders such as depression, schizophrenia and Alzheimer's disease."

For more information, go to [www.nbirn.net](http://www.nbirn.net).

### Medical Imaging Company News:

- **Johnson & Johnson** has agreed to buy **Guidant Corp.** for \$25.4 billion in cash and stock.

- **VitalWorks, Inc.** has completed the sale of its medical division to **Cerner Corp.** In addition, VitalWorks will now be called **AMICAS, Inc.** and will be headquartered in Boston.

# RSNA Board of Directors Report

ON FRIDAY, December 3, 2004, the 2005 RSNA Board of Directors convened for the first time and welcomed the newest Board member, George S. Bisset III, M.D., as its Liaison-designate for Education.

During the meeting, held at the conclusion of RSNA 2004 in Chicago, the Board reviewed the 2004 annual meeting, continued to plan for the 2005 annual meeting and prepared for its January retreat.

## RSNA Scientific Assembly & Annual Meeting

RSNA 2004 was bigger and more exciting than ever. Total registration was more than 60,000, the highest attendance since 1997. The technical exhibition set two records—one for square footage (455,050 sq. ft.) and the other for the number of exhibitors (690). Final audited attendance figures are on page 23.

## RSNA 2005

The pace of change with respect to medical imaging technology continues

to accelerate. More and more people attend the RSNA meeting each year because it is the one place where it is possible to sense and keep pace with the dramatic changes in our specialty.

This is accomplished through the dedication of

many member volunteers, who make sure that the scientific and educational content, as well as the logistics of the

meeting, are state of the art.

In 2005, a fourth case-based review course will be offered. In addition to neuroradiology, interventional radiology and pediatric radiology, a daylong course will be offered in radiation oncology. The following is a preview of some of the content at RSNA 2005:

- Opening Session will be “Multi-detector CT: Beyond 16 Slice—Too Much of a Good Thing?” The speakers will present the pros and cons.
- Annual Oration in Diagnostic Radiology, by William R. Brody, M.D., Ph.D., from Baltimore, will be on interdisciplinary relationships.
- Annual Oration in Radiation Oncology, by Clifford Chao, M.D., of Houston, will be on radiology and radiation treatment.
- Categorical course in diagnostic radiology will be “Advances in Breast Diagnosis and Intervention.”
- Categorical course in diagnostic physics will be “Multidimensional Image Processing, Analysis, and Display.”
- Breast imaging will be the hot topic category for education exhibits.
- Oncologic interventional sessions, such as tumor ablation, will be added to the program. These sessions will include instructional lectures and proffered abstracts.

Additional announcements about RSNA 2005 will be made throughout the year in *RSNA News*.

## Technology

Nearly 2,200 meeting attendees participated in a pilot using radiofrequency



**R. Gilbert Jost, M.D.**  
Chairman, 2005 RSNA Board of Directors

identification (RFID) to track attendance at case-based review courses. Consenting participants had an RFID chip implanted in their badge so that

*In 2005 RSNA will begin to provide general self-assessment modules (SAMs) to help members assess their knowledge in various general categories or subspecialty areas.*

sensors in meeting room doorways could record their entry and exit. The data are now being analyzed so that RSNA can better serve the needs of its members and annual meeting attendees.

Early feedback shows annual meeting attendees appreciated the additional WiFi areas at McCormick

Place. Discussions will be held early this year to determine if the WiFi areas can be expanded at RSNA 2005.

Electronic presentation of scientific posters and education exhibits at RSNA 2004 is undergoing evaluation in order to determine the most effective forms of presentation for RSNA 2005. RSNA 2004 featured 379 posters and exhibits in electronic format.

**RSNA2005**

Connecting for Lifelong Learning



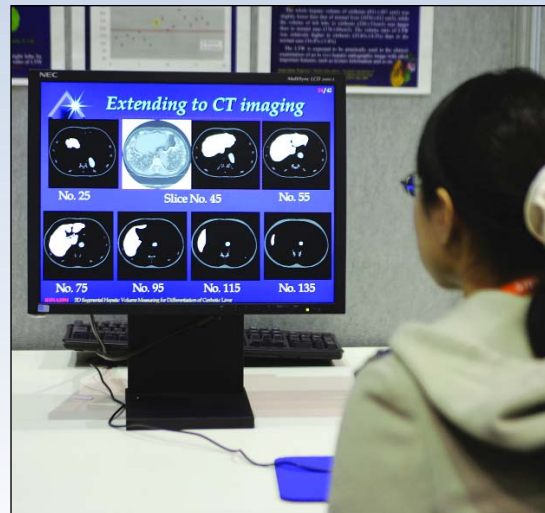
91st Scientific Assembly and Annual Meeting

November 27 – December 2, 2005

McCormick Place, Chicago



A fourth case-based review course—one in radiation oncology—will be offered at RSNA 2005.



Electronic presentation of scientific posters and education exhibits is undergoing evaluation to determine the most effective presentation format.

### MOC and SAMs

As maintenance of certification (MOC) becomes increasingly important for our members, they will rely more heavily on RSNA for help in lifelong learning and periodic self-assessment.

Subspecialty content codes added in 2004 made it easier for RSNA members to find the science and educational materials offered in their areas of interest. The codes are consistent with the American Board of Radiology's (ABR) MOC classification system.

In 2005 RSNA will begin to provide general self-assessment modules (SAMs) to help members assess their

knowledge in various general categories or subspecialty areas. By self-identifying their strengths and weaknesses, members can further customize their professional development plans to meet MOC requirements. RSNA has been working with other organizations to develop SAMs.

RSNA has also established a Technical Assistance Center to provide other organizations with the infrastructure to develop and maintain SAMs.

### Other Board Action

- C. Leon Partain, M.D., Ph.D., will represent RSNA at the Institute of

Electrical and Electronics Engineers (IEEE) Biotechnology Workshop in March.

- RSNA will sponsor a session at ICR 2006 in Cape Town, South Africa.

### R. GILBERT JOST, M.D.

CHAIRMAN, 2005 RSNA BOARD OF DIRECTORS

*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 March.*

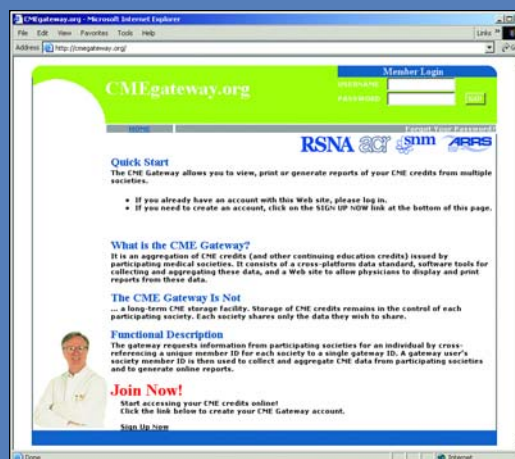
### Radiology CME Gateway

FOR MORE THAN a year, RSNA has worked with radiology organizations, including the American College of Radiology, Society of Nuclear Medicine and American Roentgen Ray Society, to develop a CME gateway ([CMEgateway.org](http://CMEgateway.org)).

The gateway provides members with a single point from which they can access all of the CME credits they have earned through the participating organizations. They can also print a

compilation of their CME or individual certificates from each organization. A visual tutorial is on page 25.

In addition, updates are under way on the RSNA CME repository ([rsna.org/cme](http://rsna.org/cme)). In the future, members will be able to create records of their maintenance of certification (MOC) activity. These records can be used to gauge progress toward meeting MOC requirements.



# National Standards Urged for Handling Pregnancy During Residency

**M**ISCONCEPTIONS regarding the safety of pregnancy in the context of occupational exposures in radiology residency exist and may be steering female medical students away from the field, according to a scientific paper presentation at RSNA 2004.

Researchers from Boston University (BU) Medical Center surveyed radiology residency program directors in the United States. They found that only half of the respondents said that their department had written policies addressing the unique concerns of pregnant radiology residents. They also found that a majority of respondents would support national standardized guidelines.

"Pregnancy in residency today has the ability to evoke significant anxiety among program directors," said

Meghan Blake, M.D., a second-year radiology resident at BU Medical Center.

"Trainees fear that asking for special treatment will undermine their position at work and will lead to resentment on the part of fellow residents—male or female—who believe somehow, they'll be asked to pick up the slack."

Dr. Blake reported that in U.S. medical schools, about half of the students are female but women comprise only 23 percent of radiology residents nationwide. The team postulated that women considering radiology as a specialty were put off by concerns over potentially harmful levels of radiation which could affect their fetus, should

they become pregnant.

Dr. Blake's team set out to discover how radiology residency programs address these concerns and determine if any programs had guidelines governing these situations.

Questionnaires were sent to the 187-member Association of Program Directors in Radiology (APDR). There were 55 responses.

"We were surprised by the variability in responses," Dr. Blake said.

Approximately half the respondents had a written policy for pregnant residents, although two-thirds reported concerns about the issue. Most programs did instruct residents in methods to reduce radiation exposure and provided radiation counseling for pregnant residents as necessary. However, the study

*Pregnancy in residency today has the ability to evoke significant anxiety among program directors.*

**Meghan Blake, M.D.**

found the information was often informal and not made readily available for candidates interviewing for radiology residency positions.

Dr. Blake found a general consensus that interventional rotations

should be restricted, but appropriate limits for general fluoroscopy rotations were less clear.

"Some respondents felt strongly that fluoroscopy rotations should be cut altogether. Other indicated that fluoroscopy could be performed safely, given that appropriate protections were taken," she said.

Even when guidelines were available, the research team found concerns remain among female residents.

"Radiation biology is an uncertain



**Meghan Blake, M.D.**  
Boston University Medical Center

science. Everything is extrapolated from high-dose exposures. Regulatory bodies are aware that the assumption of no threshold for ill-effects may be flawed, yet understandably, they would prefer to err on the side of caution," explained Dr. Blake. "For the individual woman, conservative exposure limits may offer little reassurance. On a purely emotional basis, the fear of causing a congenital deformity or cancer can be overwhelming."

## National Policy

A majority (76 percent) of the radiology residency program directors who responded to the survey said they would welcome a national standardized policy regarding pregnancy issues. The American Association for Women Radiologists (AAWR) and APDR plan to jointly develop guidelines to address the needs of pregnant residents in radiology departments.

*Continued on page 13*



# Radiologists Debate Advantages of Maintaining Musculoskeletal Ultrasound Market

**R**ADIOLOGISTS currently dominate the market in ultrasound (US) imaging for the evaluation and diagnosis of musculoskeletal injuries and other musculoskeletal conditions, but various specialists, including primary care physicians, rheumatologists and podiatrists, are using musculoskeletal US more and more in their practices. As a result, the market share for radiologists is eroding.

In a plenary session at RSNA 2004 moderated by Marnix T. van Holsbeeck, M.D., chief of musculoskeletal ultrasound at Henry Ford Hospital in Detroit, five physicians debated the question, "Musculoskeletal Ultrasound: Do We Want to Keep It or Do We Want to Give It Away?" and explored the advantages and disadvantages of using musculoskeletal US in radiologic and clinical practice.

## Advantages of Ultrasound

Ultrasound has many practical advantages over MR imaging in the evaluation of musculoskeletal conditions, according to Levon N. Nazarian, M.D., professor of radiology at Thomas Jefferson University in Philadelphia. Those advantages include lower cost, better availability, portability, better acceptance by patients and no contraindications to its use. Ultrasound also has certain imaging advantages over MR imaging, such as real-time capability and better spatial resolution.

"It's quite evident from the litera-

ture and my experience that ultrasound is a cost-effective tool for problem-solving and guiding intervention. For many indications, it should be the first-line imaging modality, such as for rotator cuff tears," Dr. Nazarian commented.

## A Clinician's Perspective

John McShane, M.D., a clinician and director of the sports medicine fellowship program at Thomas Jefferson University, said that musculoskeletal US is an extremely valuable tool for clinicians, especially for the diagnosis of soft-tissue injuries and to guide injections in joints.

"To make the most of musculoskeletal ultrasound, clinicians need

an understanding of anatomy and musculoskeletal pathology and the ability to physically examine the patient in order to direct the scan, unlike MR

*Because of the uniqueness of ultrasound, we are truly respected as consultants for all bone and joint imaging.*

Marnix T. van Holsbeeck, M.D.

imaging which does not require the ability to examine the patient," Dr. McShane said. "With ultrasound, you ask the patient where it hurts. This patient interaction enhances the effectiveness of the ultrasound."

The advantages of ultrasound for clinicians include its dynamic nature, the fact that it can be incorporated into the patient's physical exam and its

*Continued on next page*



(from left to right:) Marnix T. van Holsbeeck, M.D., Jon A. Jacobson, M.D., Levon N. Nazarian, M.D., Bruce Forster, M.D., Joseph H. Introcaso, M.D., and John McShane, M.D.

*Continued from previous page*

accuracy, which is equal to or better than MR imaging for many things, he said.

Among the disadvantages of US for radiologists are that the scans are difficult to interpret just from static images and it can be time consuming, he added. There are also issues of access to radiologists and interest in performing musculoskeletal US because of low reimbursement levels.

### **Advantages of MR Imaging**

Bruce Forster, M.D., associate professor of radiology at the University of British Columbia, Vancouver, defended the use of MR imaging over US in musculoskeletal imaging, saying MR imaging is more cost-effective than US in some situations, such as knee injuries, because you can avoid arthroscopy. He added that MR imaging offers a “one-stop shop” for the evaluation of multiple musculoskeletal injuries occurring in the same patient at the same time.

“Patients have complex injuries,” he explained. “They often have more than just a tendon problem.”

Other advantages of MR imaging are that it is less operator-dependent than US in the diagnosis of musculoskeletal conditions, and it provides a more graphic display of images and an extended field of view which allows a better understanding of the patient’s pathology, Dr. Forster noted. In addition, the physical exam may be inaccurate and an MR exam may uncover an unsuspected condition.

“There is no question that musculoskeletal ultrasound has its strengths, but I believe MR will remain the primary musculoskeletal assessment technique, other than radiography,” he concluded.

### **Using Both Modalities**

Jon A. Jacobson, M.D., associate professor of radiology at the University of Michigan in Ann Arbor, discussed the

complementary roles of US and MR imaging and when to perform each type of study.

Radiologists should consider using US to assess soft tissue adjacent to hardware such as metal screws, peripheral nerves, tendon subluxation and muscle hernias, Dr. Jacobson said.

“Both US and MR imaging are useful for evaluating focal tendon abnormalities,” he added, “but radiologists should consider using MR imaging if the patient has diffuse joint pain. With regard to the shoulder, US should be considered if the patient has suspected rotator cuff pathology and is over 40 years old; and MR arthrography if the patient is under age 40 and has shoulder pain.”

For the evaluation of fluid collections, US may be most appropriate if the collection is superficial, but MR imaging or CT could be used for deep-seated collections, he said.

### **Economic Aspects**

Joseph H. Introcaso, M.D., a radiologist in private practice at Lutheran General Hospital in Park Ridge, Ill., cited data from the Centers for Medicare and Medicaid Services (CMS) showing that while the overall Medicare market for musculoskeletal ultrasound has increased over the last five years at a rate of eight percent per year, radiologists’ share of that market has declined from 68 percent in 2000 to 59 percent in 2003.

“The biggest market-share gainers are podiatry, general practice and internal medicine,” Dr. Introcaso said.

The cost of ultrasound equipment is no longer much of a barrier to entry into the market, but knowledge is probably the biggest barrier to entry, he commented. “Many clinicians are not comfortable looking at ultrasound images. It is also more difficult for technologists to learn how to do musculoskeletal examinations compared with renal ultrasound or gallbladder ultrasound.”

A shortage of ultrasound technologists currently exists and there are many underserved areas around the country, Dr. Introcaso said. He concluded musculoskeletal US represents a market with good growth potential for radiologists, acceptable reimbursement levels and sufficient barriers to market entry by other specialists to protect the market for radiologists.

While some radiologists have said that they prefer using musculoskeletal MR imaging over ultrasound because of the long learning curve and the amount of physician time required to perform US, Dr. Nazarian responded that MR imaging also requires a long learning curve and physicians can train sonographers to do the scanning. He said he believes the real reason radiologists prefer to use musculoskeletal MR imaging is that reimbursement for MR studies is higher than that for US.

### **Conclusion**

So, the question remains—Should radiologists keep musculoskeletal ultrasound or should they give it away?

“If we would give it away, we would see the rest of our practice erode as well,” said Dr. van Holsbeeck. “Musculoskeletal ultrasound increases throughput in the orthopedic practices we serve. Because of the respect we gained by letting the surgeons do more and better surgery, we help guarantee referrals for CT and MR imaging in our departments. The growth in the other cross-sectional modalities follows the growth of ultrasound. Because of the uniqueness of ultrasound, we are truly respected as consultants for all bone and joint imaging.” □

# Obesity Limits Image Quality, Diagnosis and Treatment

**W**HEN PHYSICIANS at Massachusetts General Hospital (MGH) in Boston started to perform an increasing number of gastric bypass surgeries, they noticed a problem—radiologists couldn't assess obese patients due to limitations in radiology equipment.

That got Raul Uppot, M.D., thinking about the ability of radiology departments to provide quality diagnostic images of obese patients and make accurate diagnoses. During a scientific paper presentation at RSNA 2004, Dr. Uppot presented the findings of a 15-year retrospective study of radiologic exams at MGH. He earned an RSNA Research Trainee Prize for the research.

Dr. Uppot and his co-authors reviewed all five-million radiology studies performed between 1989 and 2003. They found that about 7,500 (0.15 percent) were marked, "limited by body habitus," meaning limited in quality due to the patient being overweight.

The researchers found that the percentage of the "limited" reports rose from 0.10 percent in 1989 to 0.19 percent in 2003, strongly correlating to the increase in obesity cases reported in

Massachusetts during that approximate time period. In 1991, the state reported a nine percent obesity rate; in 2001, the number percentage rose to 16 percent.

The average age of the patient was 57.1 years. Female patients accounted for 62 percent. Ultrasound exams and chest x-rays were the radiology tests most limited by obesity.

Dr. Uppot said there is a relationship between the material that ultra-

sound waves have to penetrate, in this case body fat, and the degree of degradation of the resultant sonographic image. He said two possible solutions are to use a lower frequency transducer (lower frequency sound waves travel better over greater distances) or to position the organ of interest as close as possible to the transducer.

For x-rays, there is inadequate penetration through layers of fat. To solve this problem, Dr. Uppot suggested using a grid or increasing the radiation dose setting, adjusting the window and level settings or changing the speed of the film system.

As for CT and MR imaging, Dr. Uppot said it's all or nothing: "Either the patient fits on the equipment or not. At our hospital, a patient cannot weigh more than 425 pounds to go on the CT table or 325 pounds for the MR table."

*Manufacturers need to think about design changes and technological advancements to obtain better quality images for larger patients.*

**Raul Uppot, M.D.**

In patients who can fit in the scanner gantry but still are at risk for potentially suboptimal image quality, one solution is to increase the dose of radiation. Another potential resolution is to buy a scanner with a larger gantry. "Manufacturers

need to think about design changes and technological advancements to obtain better quality images for larger patients," he said. The Centers for



**Raul Uppot, M.D., received a 2004 Research Trainee Prize at RSNA 2004 from C. Craig Blackmore, M.D., M.P.H.**

Disease Control and Prevention reports nearly one third of the American population is obese.

## **Economic Impact: Underestimating the Cost**

Dr. Uppot calculated the direct costs of incomplete radiologic exams at MGH at \$100,000 for 2003. That figure is more than triple the 1995 cost of \$28,000. "This is just the cost for the radiologic exams," he said. "These figures don't include further diagnostic testing costs, the cost of a longer hospital stay, the cost of missed diagnoses by doctors and the psychological cost to the patient."

To view the abstract for Dr. Uppot's research, go to [rsna2004.rsna.org](http://rsna2004.rsna.org), click on Meeting Program in the left-hand column and then click Search at the top of the page. The direct link is [rsna2004.rsna.org/rsna2004/V2004/conference/event\\_display.cfm?em\\_id=4406020](http://rsna2004.rsna.org/rsna2004/V2004/conference/event_display.cfm?em_id=4406020). □

*This story was adapted from an article that appeared in the RSNA 2004 Daily Bulletin.*

# Radiology, RadioGraphics Top Choices for Manuscript Submissions, Authors Say

**R**SNA'S TWO peer-reviewed journals continue to evolve in synchrony with technology and author expectations, according to recently conducted surveys.

Authors who had submitted manuscripts to *Radiology* and *RadioGraphics* between 2001 and 2003—whether or not the manuscripts were accepted—were questioned about the experience. The goal was to get a better understanding of the needs of authors so that the editors and editorial boards could improve the processes of manuscript submission, review and copyediting.

“In both the author survey and the recent readership survey, the overwhelming majority of respondents said that *Radiology* is the best scientific journal of our specialty with its exceptional ability to balance quality and timeliness,” said Hedvig Hricak, M.D., Ph.D., RSNA Board liaison for publications and communications. “Respondents also believe that *RadioGraphics* is the best educational journal of our specialty and will help them maintain their certification through CME activities.”

An independent analysis by Stratton Publishing & Marketing Inc. concurred. “Overall, the comments are quite positive, reflecting a strong respect for *Radiology*'s high editorial standards and stature in the field, all of which help to encourage and sustain a high submittal rate,” the report stated. “The data provide excellent feedback on who submits, what they think of the submittal/review/copyediting process, their perception of *Radiology*, and how they think the process can be improved—all of which should be

reviewed and considered carefully by editors and reviewers to make refinements and improvements to the review process to encourage more quality submissions.”

## **Radiology Results**

A 40-item questionnaire was mailed in March 2004 to 3,030 *Radiology* authors, of whom 1,441 (47.5 percent) returned completed documents. Among the highlights:

- Nearly three-quarters (72.5 percent) of authors said they submitted their best work to *Radiology*, citing the journal's good reputation, large circulation (more than 41,000 printed and online), high-quality format and the journal's continuous publishing feature by which manuscripts may be published online six to seven weeks before they appear in print.
- For 88.7 percent of the respondents, the journal's impact factor is either important or very important. The impact factor measures how frequently the average article has been cited in a particular period. At 4.8, *Radiology* has the highest impact factor among 80 imaging journals. In



(left) *RadioGraphics* Editor William W. Olmsted, M.D., and *Radiology* Editor Anthony V. Proto, M.D.

2003, *Radiology* was cited 35,486 times—the highest number for all radiology, nuclear medicine and medical imaging journals.

- Almost all the respondents (94.8 percent) found the Publication Information for Authors (PIA) section either helpful or very helpful in preparing their manuscripts for submission.
- About 80 percent of the authors said that reviewer comments were helpful or very helpful as they prepared their revisions.

- Nearly three-quarters of respondents (71 percent) were taking advantage of the new image license agreement that allows authors of articles published in *Radiology* and *RadioGraphics* to reuse the images without requesting permission from RSNA.

### Changes in the Peer-Review Process

*Radiology* Editor Anthony V. Proto, M.D., said that while the survey produced no surprises, he's gratified that so many authors send their best work to *Radiology*. "I am very proud that *Radiology* is held in such high regard," he said. "I'm always looking for ways to make the process better and more efficient. We've incorporated several changes over the past couple of years that have done just that."

One change involves combining two types of requested revisions. In 2001, Dr. Proto implemented a statistical review process for each manuscript. At first, statistical review was completed after the first revision. Now, authors can complete the statistical and non-statistical revisions at the same time.

"In addition, we now only send the reviewer comments for which we want an author's response. That makes it easier on everyone," explained Dr. Proto. "We've also added office staff to improve manuscript processing and I get outstanding help from our deputy editors."

Online manuscript submission and improved copyeditor-author communications via the portable document file (PDF) system have also helped to improve the process. "Our average time to first decision is about 39 days—about one-third the time it takes some other prestigious, non-imaging journals to respond," said Dr. Proto.

### RadioGraphics Results

The author survey also turned up no real surprises for RSNA's education journal. In March 2004, a 30-item questionnaire was sent to 456 authors; 257 authors (56.4 percent) responded.

"The survey validated my expecta-

tions," said *RadioGraphics* Editor William W. Olmsted, M.D. "Conclusions of importance to me were that 89 percent of authors felt copyediting partially or definitely improved manuscripts and 96 percent found the PIA pages either helpful or very helpful. We constantly try to aid and support authors in making the transition from education exhibit to *RadioGraphics* manuscript via clear instructions for manuscript preparation excellent copyediting."

### Other findings:

- More than 87 percent of authors found the reviewer comments helpful.
- Ninety-two percent of authors indicated that *RadioGraphics* has been their first choice for submitting manuscripts. (Note: *RadioGraphics* solicits its submissions.)
- About half of respondents said that when *RadioGraphics* was not their first choice for submission, it was because the material was more appropriate for a subspecialty journal.

Like *Radiology*, *RadioGraphics* increasingly relies upon the speed and efficiency of electronic communication.

"There are three ways we handle manuscripts electronically," explained Dr. Olmsted. "For most manuscripts, we now ask the authors to send their images and text to us on CD, along with one hard copy of the manuscript. We no longer ask for multiple hard copies or expensive photoprints. Manuscripts are then sent to *RadioGraphics* reviewers on CD. For our international reviewers, RSNA has created a secure Web site on which manuscripts can be quickly and efficiently reviewed. Our authors receive their galleys as PDF documents attached to e-mails, which has substantially reduced delivery costs and turnaround time."

The current manuscript turnaround time at *RadioGraphics* is about 40 days. Then add five weeks for revisions

and another week to final disposition.

"We're about where we want to be with respect to the review and revision process," said Dr. Olmsted. "The journal's continuing major goal is to publish the highest quality in radiology education and CME and to distribute this excellent material to RSNA members and radiologists worldwide."

### Future Directions

*Radiology's* ability to publish on the Internet several weeks ahead of the printed journal has made the submission-to-publication process much more efficient.

Dr. Proto said he thinks publishing online six or more weeks ahead of the printed journal could be the norm for the future. In fact, *Radiology* posted the first journal article submitted from the International Space Station on November 8, 2004. Due to the fast-tracking process, the article was published

online 12 weeks in advance of the printed February 2005 issue.

"I see the journals continuing to be reader friendly—responding to the concerns of readers and authors while always excelling in scientific rigor," said

*[We] welcome change and have the vision to expand into new areas of medical imaging, such as molecular imaging and nanotechnology.*

Hedvig Hricak, M.D., Ph.D.

Dr. Hricak. "In addition, *Radiology* will maintain a balance between high-end science and immediate clinical relevance. The journal editorial office and the RSNA Board welcome change and have the vision to expand into new areas of medical imaging, such as molecular imaging and nanotechnology." □

On the Web  
**Radiology**  
 rsna.org/radiologyjnl  
**RadioGraphics**  
 rsna.org/radiographics

# Taking Care of Your Financial Health

## Estate Planning for Physicians

PART 1 OF 3

**W**HEN IT COMES to making sure their financial future is sound, physicians are procrastinators, “We don’t take the time to think about our financial health,” says Robert E. Campbell, M.D., an RSNA past-president and contributing editor for *RSNA News*. ¶ To help members ensure their financial health and the financial health of their loved ones, *RSNA News* will publish a three-part series on estate planning. ¶ In this part, two experts provide advice on ways to use qualified plans such as pension plans, profit sharing, a 401(k) or individual retirement accounts (IRA) for estate planning.

### Death and Taxes

Brian T. Whitlock, J.D., C.P.A., says physicians must consider family needs, taxes and the likelihood of a medical malpractice claim when it comes to figuring out an estate plan. Whitlock is the partner-in-charge of the Wealth Transfer Services Group at Blackman, Kallick, Bartelstein, L.L.P., in Chicago. He is also the chairman of the Illinois C.P.A. Society.

Whitlock says that an income tax deduction is claimed when money is contributed to a qualified plan. As a result, income tax is deferred but will be due when distributions are paid to the individual or the beneficiary. The income tax liability does not disappear with death. If the qualified plan(s) had assets of more than \$1.5 million, estate taxes—sometimes called death taxes—will also be charged on the amount in excess of the \$1.5 million. The asset figure will rise to \$2 million in January 2006.

Whitlock says any assets left to a spouse are not subject to estate taxes if the spouse is a citizen of the U.S. This is called the unlimited marital deduction. Whitlock says the citizenship of the deceased person

doesn’t matter, just the citizenship of the beneficiary (spouse). While there is no death tax, there are income taxes that must be paid on money deposited into a qualified plan on a pre-tax basis.

For individuals age 35 years or older, Federal law requires a spouse to be named as a beneficiary on a pension plan. The surviving spouse will then have greater tax-saving powers because he or she can roll the money into an IRA so that no death taxes are paid. If the estate had more than \$1.5 million in assets, estate taxes must be paid when the surviving spouse dies. These estate taxes range from 41 percent to 48 percent.

### Asset Protection for Individuals

Whitlock says physicians who are concerned about malpractice claims can accumulate money in a qualified plan and it will be free from claims of creditors in a malpractice suit. He says

stocks and bonds could be taken, but not the assets in a qualified plan. “How you invest your money is influenced by potential malpractice claims,” Whitlock says.

If money from a

qualified plan is left to a person’s children, Whitlock says the children could pay up to 70 percent in income and estate taxes. Qualified plan money left to grandchildren could be taxed at up

*A qualified plan is a contract. It supersedes a will.*

**Brian T. Whitlock, J.D., C.P.A.**

to 90 percent. Rather than leaving them money from a qualified plan, he recommends leaving children and grandchildren a home, stocks and/or bonds.

Charitable organizations don’t face the same tax burdens as children and grandchildren. “If you leave money from a qualified plan to a charity, that charity won’t pay taxes,” Whitlock says. “On a qualified plan, you can designate a specific dollar amount or a percentage for charity.”

Whitlock emphasizes the importance of naming a beneficiary. “A qualified plan is a contract. It supersedes a will,” he says. “Name your beneficiary, but remember the tax laws when doing so.”

### Asset Protection for Members of Private Practice Groups

For members of radiology or radiation oncology groups, Alan L. Cates, J.D., recommends deferring current earnings through plans such as a 401(k) or a simple IRA. “You can take a portion of your earnings each year on a tax-favored basis for retirement,” he says.

### Web Sites for Retirement and Estate Planning Information

**American Bar Association**  
[www.abanet.org/rppt/public/home.html](http://www.abanet.org/rppt/public/home.html)

**U.S. Social Security Administration**  
[www.ssa.gov/r&m1.htm](http://www.ssa.gov/r&m1.htm)

**National Association of Financial & Estate Planning**  
[www.nafep.com](http://www.nafep.com)

“The options range from simple to complex, depending upon the needs and ages of the members of the group. You can set up an age-weighted component to allow older practitioners to catch up on retirement savings.”

Cates, the 2004 president of the Chattanooga Bar Association and a shareholder with the firm of Shumacker, Witt, Gaither & Whitaker in Chattanooga, Tenn., says another choice is a profit-sharing plan that gives members the right, but not the requirement, to contribute. “This option is good in years when the group doesn’t take in as much income,” Cates says.

In today’s market, Cates says people are generally taking a more cautious approach to their portfolios. “A lot of physicians have seen friends retire, then be forced to go back to work due to the falling market,” he says.

When the owner of an account dies, the money is paid to the designated beneficiary—typically the surviving spouse. Cates says the beneficiary can take a lump sum distribution or distributions based on life expectancy.

These qualified plans also are subjected to hefty taxes when left to a person other than the spouse. Again, charitable contributions are a tax-saving option.

### Gifts to Charitable Organizations

When designating a portion of an estate to a charitable organization or



organizations, you can designate benefits in specific dollar amounts or percentages. The RSNA Research & Education Foundation is a charitable organization that can be designated as a beneficiary.

For more information about contributing to the Foundation, contact Deborah Kroll at (630) 368-3742 or at [dkroll@rsna.org](mailto:dkroll@rsna.org). Donors should seek the advice of an attorney or other professional tax advisor to determine how any particular type and size of gift would work in their particular circumstances. □



*Next month: Wills and Trusts*

### Amount of Assets Exempt from Estate Tax

As a result of the Economic Growth and Taxpayer Relief Reconciliation Act of 2001, the following lists the amount of assets exempt from estate tax and the maximum tax rate.

Year of Death	Exempt Amount	Maximum Tax Rate
2004	\$1,500,000	48%
2005	1,500,000	47%
2006	2,000,000	46%
2007	2,000,000	45%
2008	2,000,000	45%
2009	3,500,000	45%
2010	Unlimited	0%
2011*	1,000,000	55%

\*This amount and rate could be in effect if Congress does not make the act permanent.

*Multiple Sources*

## National Standards Urged for Handling Pregnancy During Residency

*Continued from page 6*

“One of AAWR’s missions is to identify and address gender-unique issues. Among those issues is radiation protection during residency training,” said 2005 AAWR President Katarzyna J. Macura, M.D., Ph.D., an assistant professor in the Russell H. Morgan Department of Radiology and Radiological Science at Johns Hopkins Med-

ical Institutions in Baltimore.

Dr. Macura said that AAWR is also working with the American College of Radiology to research why fewer female medical students are choosing radiology as a specialty. “One of the reasons emerging is concern with radiation exposure,” she said.

To view the abstract for Dr. Blake’s research, go to [rsna2004.rsna.org](http://rsna2004.rsna.org), click

on Meeting Program in the left-hand column and then click Search at the top of the page. The direct link is [rsna2004.rsna.org/rsna2004/V2004/conference/event\\_display.cfm?em\\_id=4407397](http://rsna2004.rsna.org/rsna2004/V2004/conference/event_display.cfm?em_id=4407397). □

*This story was adapted from an article that appeared in the RSNA 2004 Daily Bulletin.*

# Program and Grant Announcements

## NEW!

### Methods in Clinical Cancer Research

**T**HIS LIMITED-ATTENDANCE workshop provides the essentials of effective clinical trial design. Sponsored by the American Society of Clinical Oncology and the American Association for Cancer Research, the workshop is designed for clinical fellows and junior faculty clinical researchers in all subspecialties including radiology and radiation and surgical oncology. The workshop will be held July 30-August 5 at the Vail Marriott Mountain Resort in Vail, Colorado. Up to 31.5 CME credits are available.

For more information, go to [www.aacr.org/4300m.asp](http://www.aacr.org/4300m.asp).

### Planning for the Filmless Transition

RSNA and the Society for Computer Applications in Radiology (SCAR) are sponsoring this one-day course June 1, immediately prior to the SCAR annual meet-

ing at the Orlando World Center Marriott in Florida. For more information or to register, call (703) 757-0054 or go to [www.scarnet.org](http://www.scarnet.org).

### Business Strategies for Radiology Leaders

RSNA is sponsoring this three-day course designed for radiologists in leadership positions in academic and private practice. The course, directed by Lawrence R. Muroff, M.D., is also for radiology business man-

agers. It will be held July 29-31 at the Hotel Inter-Continental in Chicago.

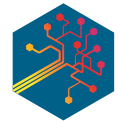
For more information, contact the RSNA Education Center at (800) 381-6660 x 3747 or at [ed-ctr@rsna.org](mailto:ed-ctr@rsna.org).

### BIROW 3

Register online for the third Biomedical Imaging Research Opportunities Workshop (BIROW 3), March 11-12 in Bethesda, Md.

The goal of the workshop is to identify and explore new opportunities for basic science research and engineering developments in biomedical imaging, as well as related diagnosis and therapy. This year's topics include:

- Cell Trafficking
- Informatics Solutions in Imaging
- Guiding Therapy by Multimodality Imaging
- Medical Imaging Technology: From Concept to Clinic

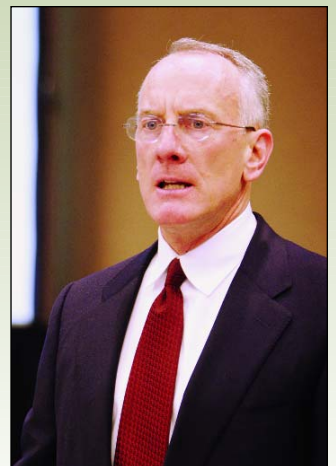


**Biomedical  
Imaging  
Research  
Opportunities  
WORKSHOP 3**

AMA PRA category 1 continuing medical education (CME) credits are available and an application for medical physics continuing education credits (MPCEC) has been submitted. For program information or to register, go to [www.birow.org](http://www.birow.org).

BIROW 3 is sponsored by RSNA, Academy of Radiology Research, American Association of Physicists in Medicine, American Institute for Medical and Biological Engineering, and Biomedical Engineering Society.

## National Tax & Investment Seminars at RSNA 2004



More than 140 people attended each of the two financial seminars offered immediately prior to RSNA 2004 in Chicago. (left) J. Michael Moody, M.B.A., presented "Effective Real Estate Investment Strategies." Barry Rubenstein, J.D., L.L.M., led "Protecting Assets from Creditor Claims, Including Malpractice Claims." More information is available on their Web site, [www.financial-healthcare.com](http://www.financial-healthcare.com).



# Radiology in Public Focus

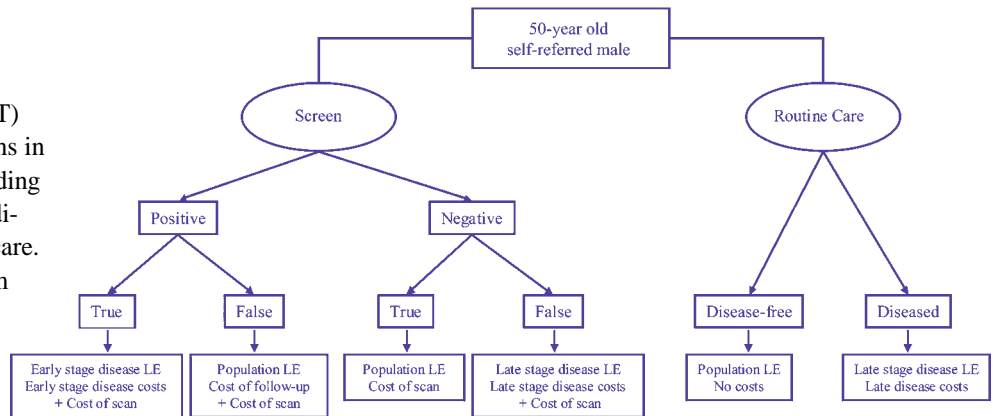
Press releases have been sent to the medical news media for the following articles appearing in the February issue of *Radiology* ([rsna.org/radiologyjnl](http://rsna.org/radiologyjnl)):

## Cost-Effectiveness of Whole-Body CT Screening

**O**NE-TIME whole-body CT (WBCT) screening provides minimal gains in life expectancy (six days) while adding an additional cost of \$2,513 per individual, when compared to routine care.

Molly T. Beinfeld, M.P.H., from Massachusetts General Hospital in Boston, and colleagues performed their analysis using a hypothetical cohort of 500,000 50-year-old asymptomatic, self-referred men.

They found that in this population, one-time screening with WBCT would cost an additional \$151,000 per life-year saved and that WBCT is more expensive—on a cost per life-year basis—than the majority of healthcare



**Schematic of the decision-analytic model with life expectancy (LE) and cost outcomes used in the cost-effectiveness analysis.**

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interventions currently funded in the United States.

“Serious considerations of the costs and benefits of this technology should

ensue before it is more widely used,” they write.

(*Radiology* 2005;234:415-422)

## Indirect CT Venography with CT Pulmonary Angiography: Increase in Thromboembolic Disease Detection

**A**DDING INDIRECT CT venography (CTV) to CT pulmonary angiography (CTPA) can increase the detection rate of thromboembolic disease by 20 percent.

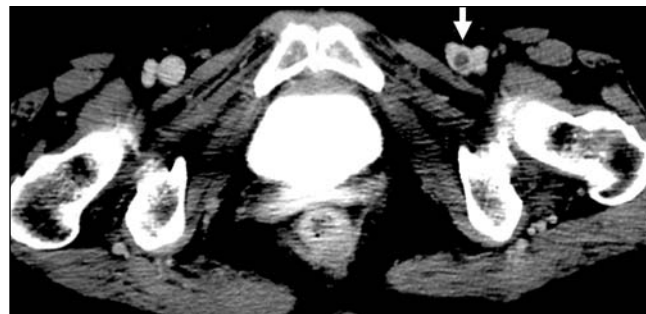
Matthew D. Cham, M.D., and colleagues from New York-Weill Medical Center studied 1,590 consecutive patients undergoing CTPA for the suspicion of pulmonary embolism (PE). Two minutes after completion of CTPA, they performed contiguous indirect CTV from the iliac crest to the popliteal fossa.

The researchers detected PE in 243 patients (15 percent) by CTPA, while

deep vein thrombus (DVT) was detected in 148 patients (nine percent) by indirect CTV. Among the patients who had DVT, 100 had PE on CTPA.

They write: “In this study, we found that combined CTPA-indirect CTV increases thromboembolic disease detection by 20 percent compared to CTPA alone.

This result is similar to our previous findings, where the detection rate of thromboembolic disease was increased by 18 percent using indirect CTV in 541 patients. Our current results lend further support to the con-



**Indirect CT venogram of the left common femoral vein shows a deep venous thrombus (arrow).**

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sistent diagnostic yield that can be expected from indirect CTV examination.”

(*Radiology* 2005;234:591-594)



RSNA press releases are available at [www.rsna.org/media](http://www.rsna.org/media).



# Journal Highlights

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

## State of the Art: Digital Mammography

**A**DVANCED APPLICATIONS available with digital mammography hold great promise for the improved early diagnosis of breast cancer. Three digital mammography systems have completed FDA approval, while a fourth is under review.

In this "State of the Art" article in the February issue of *Radiology* ([rsna.org/radiologyjnl](http://rsna.org/radiologyjnl)), Etta D. Pisano, M.D., from the University of North Carolina, and Martin J. Yaffe, Ph.D., from the University

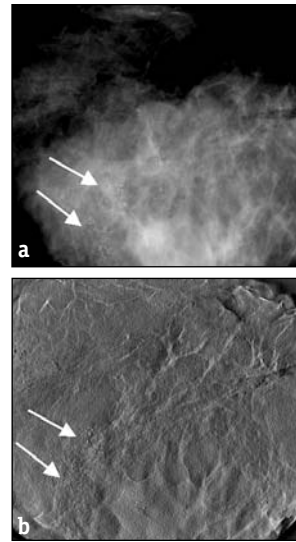
of Toronto:

- Review the technology for digital mammography
- Present data from clinical trials that support the use of digital mammography technology

### Radiology

- Describe several potentially useful applications that can be developed with digital mammography

The article also includes "Essentials" or highlighted points to help busy readers recognize important information at a glance.



**Images illustrate tomosynthesis.**

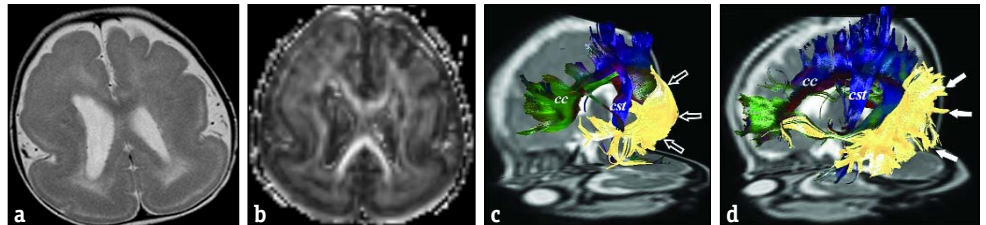
(a) Conventional radiograph of tissue specimen containing microcalcifications (arrows). (b) Reconstruction of tomosynthetic images in two planes separated by 3 mm illustrate 3D distribution of calcifications (arrows).

Images courtesy of L. Niklason, Ph.D., GE Medical Systems. (*Radiology* 2005;234:353-62) © 2005 RSNA. All rights reserved. Printed with permission.

## Diffusion-Tensor MR Imaging and Fiber Tractography in Developmental CNS Anomalies: A New Method of Describing Aberrant Fiber Connections

**D**IFFUSION-TENSOR MR imaging (DTI) and fiber tractography (FT) are recently introduced techniques that can demonstrate the orientation of white matter fibers as well as the integrity in vivo; however, their clinical application is still under investigation.

In a review article in the January-February issue of *RadioGraphics* ([rsna.org/radiographics](http://rsna.org/radiographics)), Seung-Koo Lee, M.D., from Yonsei University College of Medicine in Seoul, Korea, and colleagues examine developmental central nervous system (CNS) anomalies with DTI and FT and then compare the findings with those obtained by using conventional MR imaging. They also investigate the clinical usefulness of DTI and FT in describing the aberrant fiber connections to provide a better understanding of the pathogenetic mechanisms of congenital diseases.



**Heterotopia in an 18-month-old girl with delayed development.**

(a) Axial T2-weighted MR image shows thick band heterotopia, the so-called double cortex. (b) Axial FA map shows that heterotopic gray matter has high anisotropy, a finding suggestive of its radial orientation and of arrested neuronal migration. (c) FT image shows failure of the normal connection between the deep white matter and the cortex and absence of cortico-cortical connections (arrows). (d) FT image obtained in a normal child shows normal subcortical U-fibers (arrows) and fiber connectivity between the deep white matter and the cortex.

(*RadioGraphics* 2005;53-65) © 2005 RSNA. All rights reserved. Printed with permission.

Discussion includes:

- Imaging protocol
- Abnormalities of the corpus callosum
- Malformations of cortical development
- Cerebral palsy
- Posterior fossa malformations
- Technical considerations
- Conclusions

### RadioGraphics

The authors write: "This study obtained additional or unique findings in CNS developmental disease by using DTI-FT. ... Future studies will be focused on determining the meaning of the aberrant fiber connections and their relationship with the clinical manifestations of the CNS anomalies."

# Working For You

**T**HE RSNA Executive Group is the backbone of the RSNA staff. Under the leadership of Executive Director Dave Fellers, C.A.E., RSNA has four assistant executive directors (AEDs), each in charge of a distinct area, and a director of Board affairs.

The AEDs provide senior-level advice to the executive director on the day-to-day operations of RSNA, as well as work with their respective Board members and the Board chairman to carry out RSNA activities, programs and services.

*Working  
for you*  
**EXECUTIVE  
GROUP**



(from left) Steven T. Drew, assistant executive director for the scientific assembly and informatics; Dave Fellers, C.A.E., executive director; Linda B. Bresolin, Ph.D., M.B.A., C.A.E., assistant executive director for research and education; Barbara Jarr, director of board affairs; Roberta E. Arnold, M.A., M.H.P.E., assistant executive director for publications and communications; and Mark G. Watson, C.P.A., assistant executive director for finance and administration.



(from left) Eduardo José Mortani Barbosa Júnior, M.D., Públio César Cavalcante Viana, M.D., Roberto Sasdelli Neto, M.D., Ana Carolina, M.D., Marco da Cunha Pinho, M.D., and Conrado Furtado de Albuquerque Cavalcanti, M.D., preceptor.

## Radiology Residents from Brazil Become RSNA Members

FIFTY-ONE RADIOLOGISTS in Brazil are now enjoying the benefits of RSNA membership, including free online journal subscriptions. Under the direction

of Program Director Luiz Karpovas, M.D., Preceptor Roberto Sasdelli Neto, M.D., worked with residents to fill out membership applications. Some were

able to attend RSNA 2004.

The new RSNA members are among 342 members from Brazil.

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

# Product News

## NEW PRODUCT

### New Series of Mobile Workstations

Insight Sciences ([www.insightsciences.com](http://www.insightsciences.com)) has released the MW™ series of mobile workstations that combines the power of a desktop system with the portability of a notebook.

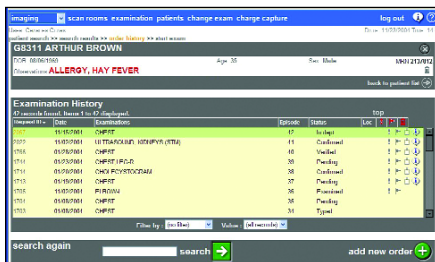
Featuring exceptional processing speed, enhanced 3D graphics and optional pre-bundled FDA approved software, the MW workstations run up to four times faster than most systems currently used in radiology and PET centers. The optional FDA approved software packages are DICOM compatible and include, 3D-DOCTOR, which can be used for diagnosis.

The systems are designed to meet the complex visual and computational demands of general radiology, PET, MRI, SPECT, fMRI, teleradiology, medical physics and drug development.

## NEW PRODUCT

### Web-based RIS/PACS Solution

Guardian Healthcare Systems ([www.guardianhealthcare.com](http://www.guardianhealthcare.com)) has introduced an integrated, Web-based solution for radiology information systems (RIS) and picture



archiving communication systems (PACS).

FlowPoint lets healthcare enterprises combine all of a patient's medical radiology data and images into one digital record,

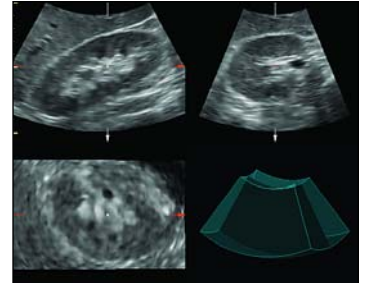
enabling more accurate diagnoses and circumventing medical errors that may occur due to insufficient patient health data. FlowPoint also has multi-lingual capabilities making it ideal for diverse environments.

“The demand for radiology services is soaring in the United States, which means hospitals and other healthcare facilities need a highly efficient, fully integrated solution to manage their rapidly growing need for radiologic image distribution and archiving,” said Rich Borelli, vice-president of Guardian Healthcare Systems. “Guardian FlowPoint creates a comprehensive radiology patient record that integrates images, voice, and data.”

## NEW PRODUCT

### New Generation of Volume Ultrasound

GE Healthcare ([www.gehealthcare.com](http://www.gehealthcare.com)) has introduced LOGIQ 9, the world's first system capable of complete volume ultrasound for general imaging. The new LOGIQ 9 allows clinicians to acquire, optimize and analyze volumetric data to redefine their workflow—modeling the scan-and-read workflow of MR and CT—to improve productivity and increase diagnostic confidence.



“As a modality, ultrasound has historically been challenged by the long acquisition times, user-variability and complex workflow compared to other imaging modalities such as MR and CT,” said Omar Ishrak, president and CEO of GE Healthcare's ultrasound business. “Today, volume ultrasound delivers advancements in image acquisition and automation technologies to significantly speed patient exams and report turnaround times.”

With LOGIQ 9, clinicians can acquire and construct volumetric images at speeds up to 30 volumes per second, enabling the scan of an entire organ, such as a kidney, within seconds.

## NEW PRODUCT

### Updated iSite PACS

Stentor has released version 3.3 of its iSite PACS.

The updated version adds improved clinical features and functionality, including remote reading/caching of exams for teleradiology; exam memos for improved collaboration between physicians; image processing filters to aid physician interpretation and diagnosis; a localizer tool for improved diagnosis and image navigation; updated key images tools; and a CD manager for easy image distribution and management.

“With the introduction of iSite PACS version 3.3, we have continued to build upon the iSite architecture to offer customers a powerful and flexible PACS platform that enables hospitals to select and adapt the best tools for its specific clinical environment,” said Rob Terheggen, product manager at Stentor.



# R&E Foundation Grant Leads to Innovative Treatment for Liver Cancer

**P**ATIENTS WITH advanced liver cancer have reason for renewed hope thanks to a 2000 RSNA Research & Education Foundation Research Seed Grant and the groundbreaking work of its recipient, Jean-François Geschwind, M.D., an associate professor of radiology, oncology and surgery at the Johns Hopkins School of Medicine and director of Interventional Radiology at Johns Hopkins Hospital.

What began as a burning question about a medical oddity led this interventional radiologist on a path of discovery that is buying precious time for patients waiting for life-saving liver transplants.

Originally from Paris, France, Dr. Geschwind pursued his undergraduate studies at the University of Paris and at the University of Pennsylvania before receiving his medical degree in 1991 from the Boston University School of Medicine. He completed residency training at the University of California in San Francisco (UCSF) and fellowship at Johns Hopkins where he joined the staff in 1998. He was promoted to associate professor in 2002 and named director of cardiovascular and interventional radiology the same year.

During his radiology residency at UCSF, Dr. Geschwind conducted MR imaging research under the mentorship of Charles Higgins, M.D. This research experience gave him the foundation to explore the role of MR imaging in patients with advanced liver cancer.

Then, as a fellow in interventional radiology at Johns Hopkins, he discovered something curious in patients with liver cancer receiving loco-regional therapy.

“We found early on that despite the fact that these patients were doing better and surviving, their tumors were not changing in size. If anything they were growing,” said Dr. Geschwind. “I thought that a more sophisticated MR imaging technique such as diffusion would allow us to get the answer.”

Dr. Geschwind’s initial research, which employed animal liver tumor models, won him the Gary J. Becker

*If we are lagging behind in imaging research, radiologists will not be credible. As a result, patients and physicians will not look at us with the same degree of respect.*

**Jean-François Geschwind, M.D.**

Young Investigator’s Award from the Society of Cardiovascular and Interventional Radiology, now the Society of Interventional Radiology (SIR).

Then in 2001, the RSNA Research Seed Grant allowed him to carry his work into the clinical setting and assess tumor response using diffusion MR imaging on patients

who had undergone chemoembolization, a therapy in which chemotherapeutic drugs are injected directly via the artery into tumors. His research was presented at several RSNA annual meetings and was published in the *American Journal of Roentgenology* in September 2003.



**Jean-François Geschwind, M.D.**  
Johns Hopkins School of Medicine

Diffusion MR imaging is the first imaging method available that can adequately determine the extent of necrotic versus viable liver tumor following embolotherapy or chemoembolotherapy, said Dr. Geschwind. It has been extremely valuable in determining prognosis for patients and for influencing decisions regarding their subsequent therapy.

“His research is innovative, clinically important and addresses an area of high priority,” said Elias A. Zerhouni, M.D., director of the National Institutes of Health and former chairman of the Radiology Department at Johns Hopkins who recommended Dr. Geschwind for the RSNA grant.

The RSNA Research Seed Grant was a first for Dr. Geschwind, who credits the experience with teaching him the true rigors of research. “It’s one thing to write a grant. It’s another to make sure the research gets done,” said Dr. Geschwind. “It has given me the necessary confidence to pursue this kind of

*Continued on page 24*



# 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 **December 1–22, 2004.**

For more information on Foundation activities, a quarterly newsletter, *Foundation X-aminer*, is available online at [www.rsna.org/research/foundation/newsletters/x-aminer/x-aminer.pdf](http://www.rsna.org/research/foundation/newsletters/x-aminer/x-aminer.pdf).

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# News about RSNA 2005

## Attendance at RSNA 2004 Exceeds 60,000

**T**HE OFFICIAL total registration for RSNA 2004 was 60,338, which is slightly more than RSNA 2003 and RSNA 2002 and the highest total since 1997. Total attendance includes healthcare professionals, exhibitor personnel, members of the medical media, spouses/guests, RSNA staff and contractors.

	RSNA 1997	RSNA 2001	RSNA 2002	RSNA 2003	RSNA 2004
Total Attendance	60,881	53,033	59,538	59,268	60,338
Healthcare Professionals	26,614	20,788	24,241	25,178	26,202
Exhibitor Personnel	28,037	27,165	29,258	27,560	27,664

## Submit Abstracts for RSNA 2005

Abstract submission is under way for RSNA 2005. Abstracts are required for scientific papers, scientific posters, education exhibits, *infoRAD* exhibits and radiology informatics.

**The deadline to submit an abstract for consideration is April 15, 2005.**

To submit an abstract, go to [rsna.org/abstracts](http://rsna.org/abstracts).

For more information about the abstract submission process, contact RSNA at (877) RSNA-ABS [776-2227] within the United States or (630) 590-7774 outside of the United States.

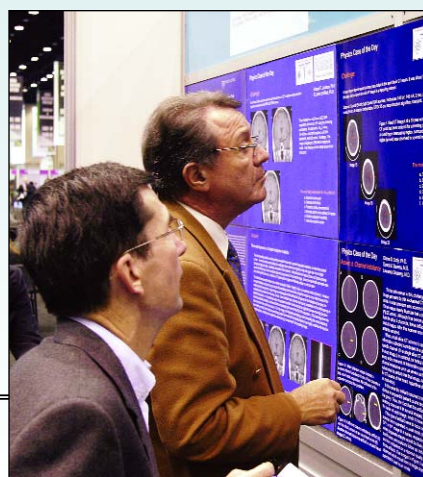
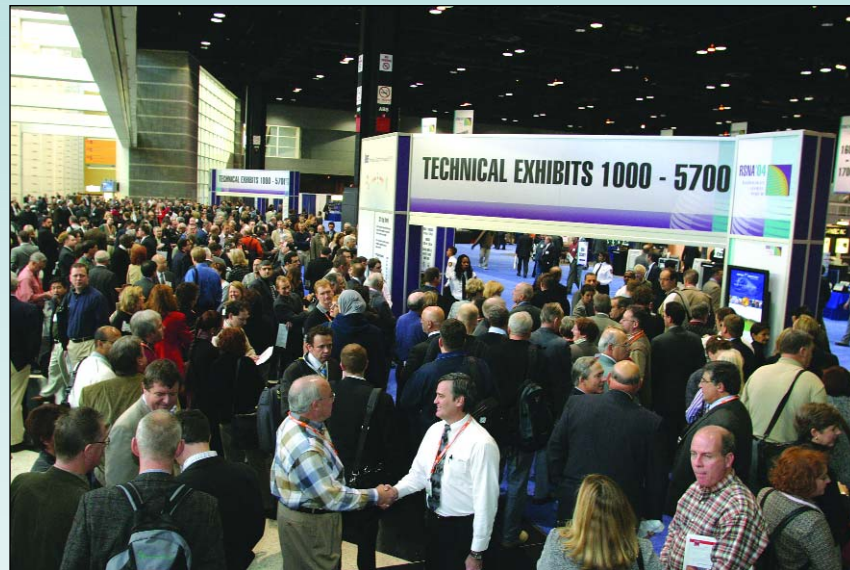
## RSNA 2004

### By the Numbers...

Total attendance	60,338
Total exhibitors	<b>NEW RECORD!</b> 690
<i>infoRAD</i> exhibitors	195
First-time exhibitors	134
Total onsite membership applications	162
Resident applications	105
Online journal activations	695
Electronic Posters and Exhibits	379
Data downloads from <i>rsna 2004.rsna.org</i> , including the <i>RSNA Meeting Program</i>	2,808
Donations at the R&E Pavilion	\$22,800

### Important Dates for RSNA 2005

<b>April 15</b>	Deadline for abstract submission
<b>April 25</b>	Registration opens for RSNA and AAPM members
<b>May 23</b>	General registration opens
<b>June 20</b>	Course enrollment opens
<b>Nov. 11</b>	Final advance registration deadline
<b>Nov. 27–Dec. 2</b>	RSNA 91st Scientific Assembly and Annual Meeting



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November 27 – December 2, 2005  
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# RSNA 2005 Exhibitor News

## Exhibitor Prospectus

The RSNA 2005 Exhibitor Prospectus will be mailed in late March. To achieve the maximum available space and assignment points, your completed application must be received at RSNA Headquarters by April 11, 2005. The first-round space assignment deadline is May 5.

For more information, contact RSNA Technical Exhibits at (800) 381-6660 x7851 or [exhibits@rsna.org](mailto:exhibits@rsna.org).

## Exhibitor Meeting

RSNA 2004 exhibitors are invited to attend the RSNA 2005 Exhibitor Planning Meeting on February 22 at Rosewood Restaurant and Banquets near O'Hare International Airport. The meeting is intended to review RSNA 2004 and plan for RSNA 2005. More information will be sent to each exhibitor's official contact in mid-January.

## Important Exhibitor Dates for RSNA 2005

<b>February 22</b>	Exhibitor Planning Meeting
<b>March 30</b>	Exhibitor Prospectus mails
<b>May 5</b>	First-round space assignment deadline
<b>June 28</b>	Exhibitor Planning/Booth Assignment Meeting
<b>July 5</b>	Technical Exhibitor Service Kit available online
<b>Nov. 27–Dec. 2</b>	RSNA 91st Scientific Assembly and Annual Meeting

■ For more information, contact RSNA Technical Exhibits at (800) 381-6660 x7851 or e-mail: [exhibits@rsna.org](mailto:exhibits@rsna.org).



## RSNA2005

Connecting for Lifelong Learning

**91st Scientific Assembly and Annual Meeting**

**November 27 – December 2, 2005**

**McCormick Place, Chicago**

## R&E Foundation Grant Leads to Innovative Treatment for Liver Cancer

*Continued from page 19*

work, which can be overwhelming and somewhat intimidating for a clinician.”

“Dr. Geschwind is a remarkable investigator,” said Jonathan Lewin, M.D., current chair of the Radiology Department at Johns Hopkins. “He is one of a very few interventional radiologists that is approaching not only the treatment of disease but also looking to understand the biological and pathological underpinnings of disease.”

### Leadership in Imaging Research

Dr. Geschwind views leadership in research as particularly important as the landscape of radiology continues to expand beyond diagnostics to include image-based treatments.

“It is critically important that those of us in interventional radiology strive to be outstanding clinicians and researchers because it's a way to estab-

lish our turf,” said Dr. Geschwind. “If we are lagging behind in imaging research, radiologists will not be credible. As a result, patients and physicians will not look at us with the same degree of respect.”

There has been explosive growth and interest in minimally invasive image-guided therapeutic techniques, and oncology seems to be emerging as a primary area within interventional radiology, according to Dr. Geschwind, who cites tremendous research potential in three areas: new drugs, new drug delivery systems and imaging technology.

“This is really our expertise. With needles and catheters we can reach virtually any part of the body so we can deliver drugs more effectively and with great accuracy directly to the tumor target,” said Dr. Geschwind. “There have been huge recent technological advances in the field of MR imaging

with faster systems and even better sequences. With the advent of flat-panel detectors in angiography, new valuable tools are suddenly available allowing us to expand our capabilities in the field.”

With a new grant from NIH nearly in hand, Dr. Geschwind is looking forward to devoting more time to research and the mentoring of other physician researchers.

Dr. Geschwind has authored more than 140 published manuscripts and has received numerous national and international awards and grants for his research in the field of cardiac MR imaging and liver cancer. He continues to lecture throughout the world and is active in numerous national organizations including RSNA, SIR, American Roentgen Ray Society, American Association for Cancer Research, and American Society of Clinical Oncology. □

# RSNA.org

## CME Gateway

**T**HE CME Gateway is a collaborative effort of RSNA, American College of Radiology, Society of Nuclear Medicine and American Roentgen Ray Society. The CME Gateway allows you to view, print or generate reports of your CME credits from these organizations from a single access point.

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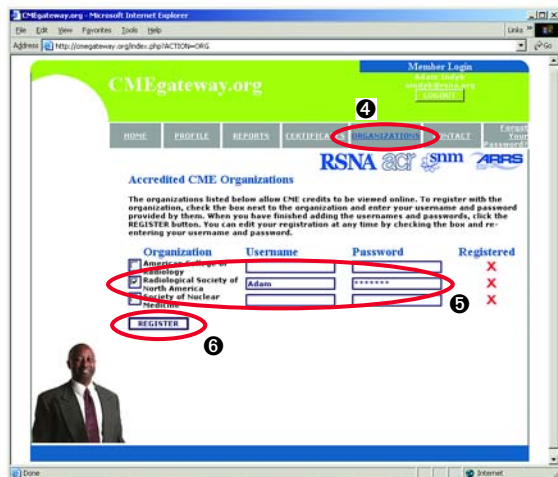
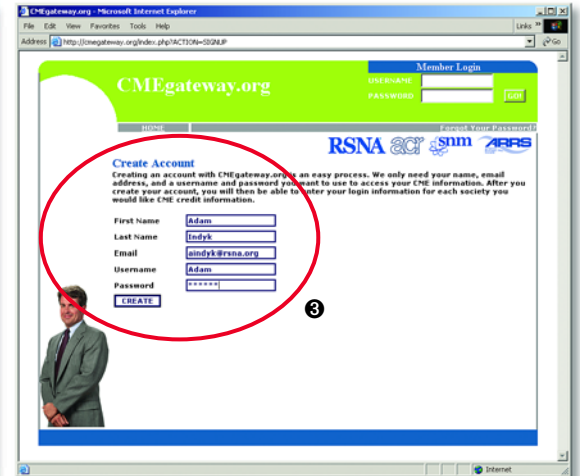
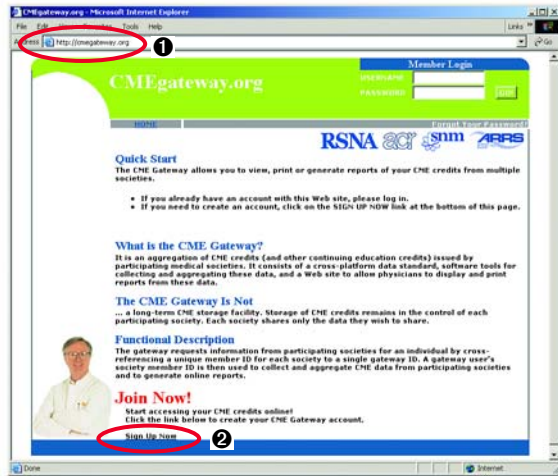
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# Medical Meetings

## March – May 2005

### FEBRUARY 27–MARCH 4

Society of Gastrointestinal Radiologists (SGR) and Society of Uroradiology (SUR), Abdominal Radiology Course 2005, Hyatt Regency Hill Country Resort, San Antonio • [www.sgr.org](http://www.sgr.org)

### MARCH 4–8

European Congress of Radiology (ECR), ECR 2005, Austria Center, Vienna, Austria • [www.ecr.org](http://www.ecr.org)

### MARCH 11–12

Biomedical Imaging Research Opportunities Workshop 3 (BIROW 3), Hyatt Regency Bethesda, Md. • [www.birow.org](http://www.birow.org)

### MARCH 21–25

Society of Computed Body Tomography & Magnetic Resonance (SCBT/MR), 28th Annual Meeting, Loews Miami Beach Hotel, South Beach, Fla. • [www.scbtmr.org](http://www.scbtmr.org)

### MARCH 31–APRIL 5

Society of Interventional Radiology (SIR), 30th Annual Scientific Meeting, New Orleans • [www.sirweb.org](http://www.sirweb.org)

### APRIL 7–8

6th National Forum on Biomedical Imaging in Oncology, Bethesda Hyatt Regency Hotel, Bethesda, Md. • [cancer.gov/dctd/forum](http://cancer.gov/dctd/forum)

### APRIL 9–14

American College of Radiology (ACR), Annual Meeting and Chapter Leader Conference, Hilton Washington, Washington, D.C. • [www.acr.org](http://www.acr.org)

### APRIL 19–22

10th International Conference on Occupational Respiratory Diseases (10th ICORD), Occupational Respiratory Hazards in the 21st Century: Best Practices for Prevention and Control, Beijing, China • [www.ICORD2005.com](http://www.ICORD2005.com)

### APRIL 21–24

Sociedade Paulista de Radiologia e Diagnóstico por Imagem (SPR), 35th São Paulo Radiology Meeting, ITM Convention Center, São Paulo, Brazil • [www.spr.org.br](http://www.spr.org.br)

### APRIL 28–30

European Society of Gastrointestinal and Abdominal Radiology (ESGAR), 3rd Hands-on Workshop: CT-Colonography, Brugge, Belgium • [www.esgar.org](http://www.esgar.org)

### MAY 3–7

Society for Pediatric Radiology (SPR), 48th Annual Meeting, Sheraton New Orleans, New Orleans • [meeting.pedrad.org](http://meeting.pedrad.org)

### MAY 4–7

Association of University Radiologists (AUR), 53rd Annual Meeting, Fairmont Queen Elizabeth Hotel, Montreal, Quebec • [www.aur.org](http://www.aur.org)

### MAY 11–14

Japanese Society of Angiography & Interventional Radiology, 34th Annual Meeting and 9th International Symposium on Interventional Radiology & New Vascular Imaging, Awaji Yumebutai International Conference Center, Hyogo, Japan • [www.isir-jsair2005.jp](http://www.isir-jsair2005.jp)

### MAY 15–20

American Roentgen Ray Society (ARRS), 105th Annual Meeting, New Orleans Hilton Riverside Hotel and Towers, New Orleans • [www.rrs.org](http://www.rrs.org)

### MAY 21–27

American Society of Neuroradiology (ASNR), 43rd Annual Meeting, Metro Toronto Convention Centre Toronto, Ontario • [www.asnr.org](http://www.asnr.org)

### MAY 25–28

56th Nordic Radiological Congress, 17th Nordic Congress of Radiographers, 33rd Annual Meeting of Nordic Society of Neuroradiology, Radisson SAS Scandinavia Hotel, Oslo, Norway • [www.congrex.no/radio2005](http://www.congrex.no/radio2005)

### MAY 25–28

Society of Breast Imaging (SBI), 7th Postgraduate Course, Vancouver Convention and Exhibition Centre, Vancouver, British Columbia • [www.sbi-online.org](http://www.sbi-online.org)

### JULY 29–31

**Business Strategies for Radiology Leaders, RSNA, Hotel Inter-Continental, Chicago**  
• [www.rsna.org/education/offering/index.html](http://www.rsna.org/education/offering/index.html)

### NOVEMBER 27–DECEMBER 2

**RSNA 2005, 91st Scientific Assembly and Annual Meeting, McCormick Place, Chicago** • [rsna2005.rsna.org](http://rsna2005.rsna.org)

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