

# RSNA *News*



Image courtesy of Siemens

## Patient Size a Weighty Problem for Radiologists

### Also Inside:

- Several Small Steps Can Reduce Radiation Dose from Survey Scans
- Surveys Reveal Why More Women are Not Choosing Radiology as a Specialty
- Radiology Plays Important Role in Overall Patient Safety
- RSNA Research Scholarship Called Career “Turning Point”

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# Outstanding Researcher and Educator Awards

At RSNA 2005, the Society honored two individuals for their commitment to education or research. 🏆 The 2005 RSNA Outstanding Educator award was presented to **Jannette Collins, M.D., M.Ed.** The 2005 RSNA Outstanding Researcher was **Dixon M. Moody, M.D.**



Jannette Collins, M.D., M.Ed.



Dixon M. Moody, M.D.

**T**HE RSNA Outstanding Educator award was established to recognize and honor one individual who has made original and significant contributions to the field of radiology or radiologic sciences throughout a career of teaching and education.

Dr. Collins is a nationally recognized leader in radiology education who, for more than a decade, has been actively and enthusiastically involved in developing curricula for radiology residents and medical students in the area of cardiothoracic imaging. She has developed innovative methods to evaluate radiology residents, faculty and educational programs and is a leader in the development of self-assessment materials used by radiologists participating in the maintenance of certification process.

She is currently a professor in the Departments of Radiology and Medicine at the University of Wisconsin. She earned her bachelor of science in elementary education at Montana State University, her master of education at the University of Cincinnati and her medical degree from the Medical College of Ohio.

Dr. Collins completed a fellowship in chest radiology at Yale University and a fellowship in medical education research with the Association of American Medical Colleges. She has served as the radiology program director and the assistant dean of graduate medical education at the University of Wisconsin.

She authored the textbook, *Chest Radiology: The Essentials*, in addition to 150 articles and book chapters. She is the editor-in-chief of *Seminars in Roentgenology*, is a member of the Accreditation Council for Graduate Medical Education Radiology Residency Review Committee, and is the president of the Association of University Radiologists and president-elect of the Association of Program Directors in Radiology.



**T**HE RSNA Outstanding Researcher award was established to recognize and honor an individual who has made original and significant contributions to the field of radiology or radiologic sciences throughout a career of research.

Dr. Moody is a neuroradiologist whose extensive research has significantly and fundamentally impacted our understanding of a wide variety of human diseases affecting the entire range of human life—from infants to the elderly.

He has described the classic signs for the radiologic diagnosis of venous and cerebral thrombosis. He has developed the powerful new technique of microvascular radiography that merges traditional histopathology with radiologic methods. He has also turned conventional notions upside down with regard to several important diseases, including brainstem hemorrhage, germinal matrix hemorrhage and Alzheimer disease. He recently discovered an anomaly of the brain microvasculature, called string vessels, in patients with Alzheimer dementia.

Dr. Moody's detective work in discovering and characterizing the source of microemboli during cardiopulmonary bypass surgery has resulted in a radical change in cardiovascular anesthesia techniques worldwide.

He earned his medical degree at the University of Texas Southwestern Medical Center at Dallas and completed his internship and residency at Stanford University School of Medicine. Dr. Moody is currently a professor and chief of neuroradiology at the Wake Forest University School of Medicine in Winston-Salem, N.C. Research at his laboratory at Wake Forest has been continually funded by the National Institutes of Health (NIH) since 1984 and he has served as the principal investigator on seven separate NIH grants.

## NCI Provides \$26.3 Million for Centers of Cancer Nanotechnology

**A**S PART OF a five-year initiative for nanotechnology in cancer research, the National Cancer Institute (NCI) has announced awards totaling \$26.3 million that will help establish seven Centers of Cancer

Nanotechnology Excellence (CCNEs). CCNEs are multi-institutional hubs that will focus on integrating nanotechnology into basic and applied cancer research and provide new solutions for the diagnosis and treatment of cancer.

“Through the applications of nanotechnology, we will increase the rate of progress towards eliminating the suffering and death due to cancer,” said NCI Director Andrew von Eschenbach, M.D.

### THE CCNE AWARDEES ARE:

#### Carolina Center of Cancer Nanotechnology Excellence

*University of North Carolina*

Focus: Fabrication of “smart” or targeted nanoparticles and other nanodevices for cancer therapy and imaging.

#### Center of Nanotechnology for Treatment, Understanding, and Monitoring of Cancer

*University of California, San Diego*

Focus: Smart, multifunctional, all-in-one platform capable of targeting tumors and delivering payloads of therapeutics.

#### Emory-Georgia Tech Nanotechnology Center for Personalized and Predictive Oncology

*Emory University/Georgia Institute of Technology*

Focus: To innovate and accelerate the development of nanoparticles attached to biological molecules for cancer molecular imaging, molecular profiling and personalized therapy.

#### MIT-Harvard Center of Cancer Nanotechnology Excellence

*Massachusetts Institute of Technology/Harvard University*

Focus: Diversified nanoplat-forms for targeted therapy, diag-

nostics, noninvasive imaging, and molecular sensing.

#### Nanomaterials for Cancer Diagnostics and Therapeutics

*Northwestern University*

Focus: This center plans to design and test nanomaterials and nanodevices to improve cancer prevention, detection, diagnosis and treatment.

#### Nanosystems Biology Cancer Center

*California Institute of Technology*

Focus: Development and validation of tools for early detection and stratification of cancer

through rapid and quantitative measurement of panels of serum and tissue-based biomarkers.

#### Siteman Center of Cancer Nanotechnology Excellence

*Washington University, St. Louis*

Focus: Comprehensive set of projects for the development of nanoparticles for in vivo imaging and drug delivery, with special emphasis on translational medicine.

For more information, go to [ncl.cancer.gov](http://ncl.cancer.gov).

## AAWR Receives Leadership Award

The American Association for Women in Radiology (AAWR) was presented with the 2005 Association of American Medical Colleges (AAMC) Women in Medicine Leadership



Development Award during the AAMC annual meeting in November.

“Women leaders of AAWR have served tirelessly since 1981 to maintain AAWR’s mission of increasing visibility for women in radiology and addressing gender-unique issues, and have pushed persistently uphill against various obstacles with wonderful results that created opportunities for professional growth to many women in radiology,” the nomination letter reported.

An article in the October issue of *Radiology* provides a historical perspective on AAWR. To view the article, “American Association for Women Radiologists: Its Birth and 25 Years Later,” by Ann M. Lewicki, M.D., M.P.H., go to [radiology.rsna.org/cgi/content/full/237/1/19?eaf](http://radiology.rsna.org/cgi/content/full/237/1/19?eaf).



**AAMC honored AAWR with its 2005 Women in Medicine Leadership Development Award in November. (from left) Carol M. Rumack, M.D. (AAWR inaugural president), Katarzyna J. Macura, M.D., Ph.D. (2005 AAWR president), and Ann M. Lewicki, M.D., M.P.H. (founding member of AAWR and AAWR historian).**

### Medical Imaging Company News:

- **Hologic, Inc.** has acquired **Fischer Imaging Corporation's** mammography intellectual property for a cash purchase price of \$32 million.
- **Alliance Imaging** has acquired **Pet Scans of America Corp.** in a \$44 million cash for the stock exchange.

## Millionth Free Journal Article on HighWire Press

In October, the millionth scholarly journal article was made available for free on HighWire Press ([highwire.stanford.edu](http://highwire.stanford.edu)), a division of the Stanford University Libraries and Academic Information Resources.

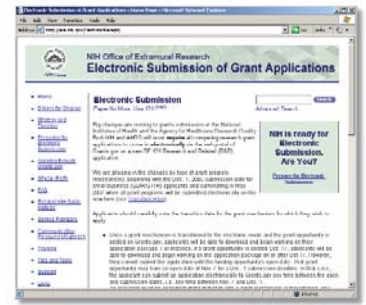
HighWire is the largest online archive of free, full-text, peer-reviewed research literature. HighWire hosts RSNA's two peer-reviewed journals, *Radiology* and *RadioGraphics*.

The million-article milestone was reached when more than 10,000 articles from the *Journal of the American Medical Association* and nine *Archives* journals were made freely available to registered guests.

## NIH, AHRQ Require Electronic Submission of Grant Applications

The National Institutes of Health (NIH) and the Agency for Healthcare Research Quality (AHRQ) are beginning to phase in a new requirement that all competing research grant applications be submitted electronically via the Web portal of [Grants.gov](http://Grants.gov) on a new SF 424 Research and Related (R&R) application.

For more information, go to [era.nih.gov/ElectronicReceipt](http://era.nih.gov/ElectronicReceipt).



## PEOPLE IN THE NEWS

### ASHNR Gold Medal Awarded to Mancuso

Anthony A. Mancuso, M.D., was awarded the gold medal of the American Society of Head and Neck Radiology



**Anthony A. Mancuso, M.D.**

at the University of Florida College of Medicine in Gainesville. Among his many accomplishments and contributions to radiology are his papers and books addressing squamous cell carcinoma of the head and neck.

ology (ASHNR) during the ASHNR annual meeting in September.

Dr. Mancuso is the chairman of the Department of Radiology

### Grist Appointed Radiology Chair at UW

Thomas Grist, M.D., is the new chair of the Department of Radiology at the University of Wisconsin (UW) Medical School.



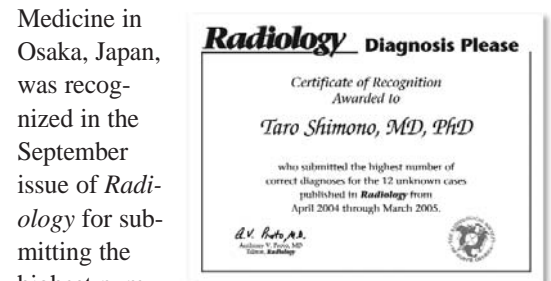
**Thomas Grist, M.D.**

Dr. Grist has been involved in the development of MR imaging technology for 20 years as a biomedical engineer and physician. He holds 12 patents for MR inventions and is internationally recognized for the development and clinical application of MR techniques used to evaluate cardiac and vascular disorders.

A member of the UW Medical School faculty since 1991, Dr. Grist is also the Robert Turell Professor in Imaging Science.

### Shimono Receives Radiology Certificate

Taro Shimono, M.D., Ph.D., an assistant professor in the Department of Radiology at Kinki University School of Medicine in Osaka, Japan, was recognized in the September issue of *Radiology* for submitting the highest number of correct answers in the 7th annual Diagnosis Please exercise (cases 73–84).



“Diagnosis Please is the most educational and challenging resource to check my skills,” Dr. Shimono said when he learned of his success.

Each month, *Radiology* publishes a new case, along with a patient history and medical images. Diagnosis submissions are accepted by e-mail. To view the current Diagnosis Please case, go to [RSNA.org/radiologyjnl](http://RSNA.org/radiologyjnl), click on the current journal and click on Diagnosis Please in the table of contents.

## AAWR Presents 2005 Awards

**T**HE American Association for Women Radiologists (AAWR) presented its 2005 awards during the RSNA annual meeting in Chicago. The recipients are:

- **Ritsuko Komaki, M.D.**, Houston – Marie Sklodowska-Curie Award
- **Janet Strife, M.D.**, Cincinnati – Alice Ettinger Distinguished Achievement Award
- **Avanti Ambekar, M.D.**, San Francisco – Lucy Frank Squire Distinguished Resident Award in Diagnostic Radiology
- **Reshma Jagsi, M.D., D.Phil.**, Boston – Eleanor Montague Distinguished Resident Award in Radiation Oncology
- **Thomas S. Harle, M.D.**, Winston-Salem, N.C. – AAWR President's Award



Ritsuko Komaki, M.D.



Janet Strife, M.D.



Avanti Ambekar, M.D.



Reshma Jagsi, M.D.,  
D.Phil.



Thomas S. Harle, M.D.



Harry L. Weitz, M.D., at his residency graduation (above, on the right) and at his recognition banquet (right).



### Weitz Honored for Longtime Commitment to Radiology

Sixty-seven years after **Harry L. Weitz, M.D.**, became the first radiologist in northern Michigan, the Michigan State Medical Society, the Michigan Radiological Society, Wayne State University School of Medicine, and the local county medical society honored him for his lifetime achievement in radiology.

"In 1938, some of my physician colleagues had never used an x-ray," he said. "Back then, everything was done by hand in a darkroom. Radiol-

ogy was an exciting field. No two cases were the same."

He became an RSNA member in 1953 and retired in 1978, but he is still well connected to the field. His son Charles J. Weitz, M.D., is a radiologist in Traverse City, Mich., his grandson and three nephews are radiologists, another grandson is in medical school, and a granddaughter is applying to medical school.

Dr. Weitz turned 96 in October.

### Kawamura Heads ARDMS

**Diane M. Kawamura, Ph.D., R.T.(R), R.D.M.S.**, is the new board chair of the American Registry for Diagnostic Medical Sonography (ARDMS).

She said some of her priorities will be to simplify the prerequisites process, while maintaining current standards, working on the expansion of practice examinations, and exploring new and meaningful ways to assess continuing competencies for registrants.

### HSS Expands Radiology Department

The Hospital for Special Surgery in New York City has added three radiologists to its Department of Radiology and Imaging. They are:

- **Sherri Birchansky, M.D.**, formerly a private practice radiologist in Miami
- **Eric Bogner, M.D.**, a recent musculoskeletal imaging fellow at the Medical College of Virginia
- **Gregory Saboeiro, M.D.**, formerly a private practice radiologist in St. Louis

# Radiology Plays Important Role in Overall Patient Safety

**R**ADIOLOGISTS can help prevent medical errors and help improve patient safety, according to experts who spoke at RSNA 2005 during a special focus session.

“As we increasingly rely on information technology, the proper design and integration of computer systems can prevent our natural human limitations from precipitating harm to patients,” said Curtis P. Langlotz, M.D., Ph.D., moderator of the session, “Medical Errors and Patient Safety in Radiology.”

“Safety is a team effort and radiology needs to partner with the rest of the organization to improve safety,” said David W. Bates, M.D., chief of the division of general medicine at Brigham and Women’s Hospital and medical director of clinical and quality analysis for Partner’s Healthcare Systems in Boston.

“Improvement involves combining technical solutions with improvement in safety culture,” Dr. Bates said. “Everybody has to be dedicated to improve the safety of care. Putting in place new technical solutions will not make a difference without the safety culture.”

Ramin Khorasani, M.D., vice-chairman of radiology, director of the Center for Evidence-Based Imaging and director for medical imaging information technology (IT) at Brigham and

Women’s, said that appropriate planning and forethought need to be employed when adding IT systems to an existing radiology department or clinic.

“Significant resources are needed to



**Curtis P. Langlotz, M.D., Ph.D.**  
University of Pennsylvania in Philadelphia.

manage the change into new electronic and digital environments,” he said. “Purchasing IT by itself is unlikely to bring significant results without investing in the resources to deal with the process and then communicating the

*Human errors are inevitable. We must view errors primarily as a failure to provide a work environment that automatically detects and corrects human errors before they harm patients.*

**Curtis P. Langlotz, M.D., Ph.D.**

process to all those involved. These issues have to be addressed for technology to succeed.”

## **The Role of Radiology**

In the interest of patient safety, healthcare professionals should focus on improving their ability to do

the right thing in the right way, the group agreed. In radiology this means that the correct test is given to the correct patient and abnormal findings are communicated to referring physicians in

a timely manner.

Dr. Khorasani said that doing the right things right also requires understanding patient clinical profiles. “In many instances, radiologists need to have the patient’s medical history—medication allergies, IV contrast allergies, medical conditions, cardiac and renal status, and the reason for the current test. This not only improves medical safety, but it also can help produce higher quality radiology reports,” he said.

Dr. Bates recommended implementing a system to ensure that referring physicians are aware of abnormal test results so that follow-up testing can be scheduled. He said that critical results need to be communicated immediately to responsible providers. This may require a separate, speedier system from the conventional one.

“All organizations have some tools

*Continued on next page*



**David W. Bates, M.D. (left), and Ramin Khorasani, M.D., from Brigham and Women's Hospital participated in a special focus session on patient safety in radiology at RSNA 2005.**

*Continued from previous page*

in place for this, but critical results and abnormal findings can fall through the cracks," Dr. Bates added.

"Merely interpreting an abnormal test does not make it known in the system," explained Dr. Khorasani. "We need to get from a blob of text to a flag that says this patient needs something. In most radiology departments flagging patients is a manual process. For instance, I typically page the referring physician and wait for a call back. I think this is an area where technology can help increase medical safety."

Dr. Khorasani suggested that other areas of radiology could benefit from a coding system such as the Breast Imaging Reporting and Data System (BI-RADS®). Using BI-RADS, a single button click identifies findings in a variety of ways. For instance, "abnormal exam requiring follow up" or "worrisome for malignancy" can be coded with a key-stroke. "BI-RADS has closed the loop on identifying abnormal mammograms and notifying the referring physician and auditing," he said.

A smaller but equally important issue is proper patient identification, which is receiving attention in all areas of patient safety. Image labeling also should be addressed. "It's easy to flip certain radiographs, so it is essential to make sure that the correct side is labeled," said Dr. Bates. "All radiology

departments should work on identification and labeling."

#### **What Can Be Done**

Most institutions have policies and procedures to deal with these issues. Dr. Bates said that, typically, these systems are not truly adequate to provide high levels of reliability.

"We have to put in systems that are better," said Dr. Bates. "For example, it is important for all organizations to have tools to identify which physician is associated with which patient. Most organizations don't do this very well. Organizations should ensure that abnormal results get appropriate follow up. That responsibility doesn't have to sit within radiology, but radiology needs to have systems in place to make sure all the important results get communicated to the key person."

Dr. Bates suggested a bar coding system that, in addition to patient identification, could be useful to ensure the safe delivery of medications and to connect laboratory tests and results to the correct patient.

"Some systems are more difficult to implement than others," he explained. "Bar coding requires a substantial investment. Making sure a good database is available to physicians is not hard, but it does take initiative. Ensuring that all the abnormal radiology results get follow up is also not that

difficult, but again, it takes initiative and effort."

Dr. Khorasani said it is critical to make sure imaging information—reports and images—are available in real time at the point of care for referring physicians who are making clinical decisions. He notes that many institutions now have electronic access to radiology information.

While Dr. Bates cautioned that older systems require updates, he said older systems can be useful if the right solutions are installed around them.

"No human being can perform a task perfectly every time—not even a well-trained, disciplined radiologist," said Dr. Langlotz, an associate professor of radiology and chief of health services research at the University of Pennsylvania in Philadelphia. "Human errors are inevitable. We must view errors primarily as a failure to provide a work environment that automatically detects and corrects human errors before they harm patients. The objective study of errors provides an opportunity to improve our information systems and our work processes to prevent future errors. The aviation industry is one good model for this approach." □

■ To view the abstract for the RSNA 2005 special focus session, go to [rsna2005.rsna.org/rsna2005/V2005/conference/event\\_display.cfm?em\\_id=4404461](http://rsna2005.rsna.org/rsna2005/V2005/conference/event_display.cfm?em_id=4404461).



# Several Small Steps Can Reduce Radiation Dose from Survey Scans

IT MAY BE just a small reduction in the amount of radiation exposure to a patient, but Dianna D. Cody, Ph.D., says every little bit helps.

Dr. Cody and her colleagues have found that minor changes in technique parameters and positioning make a difference in the radiation dose used in survey scans, also known as scout, topogram or pilot scans.

The findings appear in the August 2005 issue of the *American Journal of Roentgenology*.

The radiation dose from a survey scan can be equivalent to more than four chest x-rays, said Dr. Cody, chief of the radiologic physics section in the Department of Imaging Physics at the University of Texas M.D. Anderson Cancer Center in Houston. That may not sound like a lot when you know that an adult abdominal CT has a radiation dose equivalent of 100 to 200 chest x-rays, “But in the spirit of ALARA (as low as reasonably achievable), we thought it was time to look at the amount of radiation in a survey scan and see what we could do to lower it,” she explained.

Dr. Cody said this is particularly important when imaging children and young women.

For the study, Dr. Cody, Jennifer C. O’Daniel, and Donna M. Stevens reviewed the radiation doses from 21 scanners. This included 11 models from three vendors. “We were lucky enough to have a variety of equipment for this research right here at M.D. Anderson so that we didn’t have to go elsewhere,” she said.

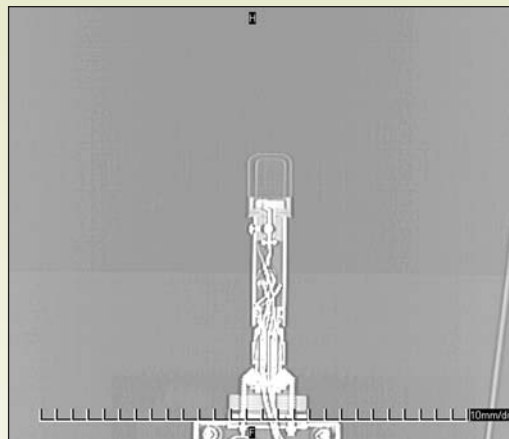
## Small Changes

The researchers found some CT scanners were set with defaults that are not



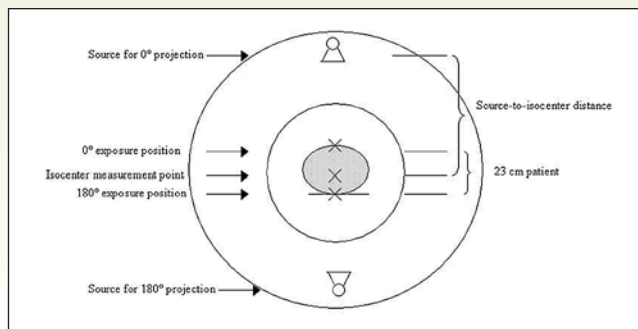
**Ion chamber in-air at isocenter for survey CT scan radiation measurement.**

Inverse-square correction factors were applied to determine entrance exposure for 22.5-cm-diameter patient.



**Typical survey CT scan of ion chamber.**

Chamber is in center of scanning region.



(bottom)  
**Diagram of hypothetical 22.5-cm-patient setup.** Measurements were obtained at isocenter and source-to-isocenter distance was known. Inverse-square correction factors were used to determine anteroposterior (0°) and posteroanterior (180°) entrance exposures for a hypothetical 22.5-cm adult patient and a hypothetical 14-cm pediatric patient to compare study results to typical adult chest radiograph entrance exposure (16 mR or 4.1 x 10<sup>-6</sup> C/kg).

Images courtesy of Dianna D. Cody, Ph.D. (*AJR* 2005;185:509-515) Printed with permission.

well thought out. The entrance exposures of the default survey CT scans ranged from 3.2 to 74.7 mR, which is equivalent to approximately 0.2 to 4.7 chest radiographs.

They also found that radiation

exposure can be reduced by changing the position of the x-ray tube. “Typically, the x-ray tube is above the patient. A scan is done from anterior to posterior,” she explained.

*Continued on page 25*

# Patient Size a Weighty Problem for Radiologists

**M**ORE THAN A YEAR after Raul Uppot, M.D., presented a study at RSNA 2004 on how obesity affects the quality of medical imaging, the issue is still a hot topic.

“This is not only a clinical issue for radiologists, it is also a psychological issue for obese patients,” said Dr. Uppot, who is an assistant radiologist at Massachusetts General Hospital (MGH) and a radiology instructor at Harvard University Medical School. “On a greater scale, obesity is a growing public health and economic issue.”

He has received a lot of telephone calls in the past year regarding the issues associated with imaging obese patients. He has talked with frustrated obese patients and their families about difficulties in managing their medical problems. He has talked with weary technologists who have to deal with these issues on a daily basis and want solutions. He has talked with the manufacturers of MR, CT and ultrasound equipment who are developing technological and design changes. He has even talked with the media about obesity as a public health issue in medical imaging and with venture capitalists who see a growing market that is underserved.

## Special Focus Session at RSNA 2005

During a special focus session at RSNA 2005, “Obesity: The Impact On Radiology,” experts in abdominal imaging and bariatric surgery discussed the impact of obesity on general radiologic imaging, the surgical options for obese patients, the anatomy and imaging of gastric bypass surgery, and how to recognize and treat surgical complications of bariatric surgery.

Peter Mueller, M.D., division



**Raul Uppot, M.D.**  
Massachusetts General Hospital and  
Harvard University Medical School



**Walter Pories, M.D.**  
Brody School of Medicine,  
East Carolina University

head of abdominal imaging and interventional radiology at MGH and a professor of Radiology at Harvard Medical School, was the moderator of the session.

“Obesity surgery is the fastest growing area of elective surgery in the abdomen,” explained Dr. Mueller. “All radiologists, not only in academia but also in the private sector, should have a working knowledge of this type of surgery and potential problems that these patients may have.”

Participants included Dr. Uppot; Walter Pories, M.D., chief of the Metabolic Institute and professor of surgery, biochemistry and exercise and sport science at the Brody School of Medicine at East Carolina University; and Mary Turner, M.D., a diagnostic radiologist at the Medical College of Virginia.

Dr. Uppot said research from MGH supports the claims of radiologists and technicians about the problems they have imaging obese patients.

Researchers conducted a 15-year retrospective study of radiologic exams at MGH. They found 0.15 percent of the five million radiology studies at

*In my hospital, I would estimate 10 to 15 percent of all images of obese patients are limited by body habitus.*

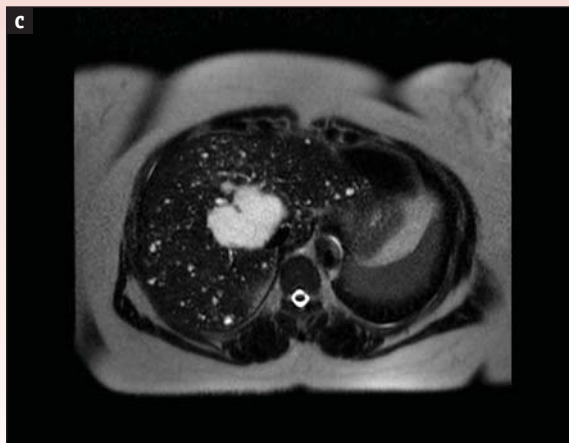
**Walter Pories, M.D.**

MGH included the disclaimer, “limited by body habitus.” The results do not include patients whose exams were cancelled because they could not fit on the table.

“Our study shows objectively that radiologists are having difficulty imaging obese patients and reading those images. Clearly, this is not a problem just at our hospital,” Dr. Uppot said.

Dr. Pories agreed. He even went so far as to say he thinks the percentages at MGH may be too low.

“In my hospital, I would estimate



The new MAGNETOM Espree from Siemens has a 550-pound weight limit. The images shown here are from the Espree.

(a) Image of joint stress in a 320-pound patient.

Courtesy Turville Bay MRI and Radiation Oncology and Siemens

(b) Image of a 5'4", 450-pound patient with lower back pain.

Courtesy United Medical Park / Allen Memorial Hospital and Siemens

(c) Image of a Liver Hemangioma in a 5'1", 200-pound patient

Courtesy Turville Bay MRI and Radiation Oncology and Siemens

(d) Image of a 560-pound patient with acute pancreatitis.

Courtesy Laurel Highlands Advanced Imaging and Siemens

10 to 15 percent of all images of obese patients are limited by body habitus," Dr. Pories said. "If I have a patient who weighs more than 500 pounds, I'm not going to bother to give him a CT scan. The equipment wouldn't be able to safely hold his weight."

That decision-making process means the patient is never even counted among patients trying to get an imaging study.

During the focus session, Dr. Pories provided an overview on obesity surgery and explained how doctors use radiologic images to find post-surgical complications, such as leaks.

### Impact of Obesity on General Radiologic Imaging

The 15 years of data from MGH showed an increasing number of radiographic studies limited because of patient weight.

During the focus session, Dr. Uppot discussed how each modality (plain radiographs, ultrasound, CT, MR imaging, nuclear medicine and interventional radiology) is affected by obesity. "Each modality has its own difficulties with obesity and therefore possible solutions are unique for each modality," he said.

Obesity is also affecting areas outside of imaging. Dr. Uppot pointed to the need for the hospital to purchase

larger wheelchairs, larger beds and even larger diagnostic imaging machines.

Safety has become an issue. "There are limits to the amount of weight a CT or MR unit can hold," he explained. "At our hospital, a patient cannot weigh more than 425 pounds on a CT table or more than 325 pounds for the MR unit."

Dr. Uppot said manufacturers are developing new equipment to accommodate the overweight population. For example, a new MR unit is being released with a larger body girth and the ability to hold a patient weighing up to 550 pounds, and new CT techniques

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are being developed to do a better job of imaging obese people while limiting the need for increasing the radiation dose.

### Understanding the Surgical Options for Obese Patients

Increasingly, hospitals are seeing more obese patients because of the popularity of gastric bypass surgery. In the past, obese patients went to the hospital only when they were sick.

Today, “healthy” obese patients go to the hospital for gastric bypass surgery and physicians are seeing obese patients pre-operatively, post-operatively and when they suffer complications from bariatric procedures.

A series of reports in the October 19 issue of the *Journal of the American Medical Association (JAMA)* explored factors associated with bariatric surgery.

One article, on the trends in bariatric surgical procedures, found a rising number of procedures performed each year. In 1998, the estimated number of bariatric surgical procedures was 13,365. In 2003, the total was 102,794 with gastric bypass procedures making up 80 percent of all the bariatric surgeries. The numbers also showed a rising trend among women (81 percent to 84 percent), privately insured patients (75 percent to 83 percent), patients from ZIP code areas with highest annual household income (32 percent to 60 percent) and patients aged 50 to 64 years (15 percent to 24 percent).

Another article revealed that the risk of early death from bariatric surgery is substantially higher than previously suggested. That risk increased for older patients and male patients and for those who have the surgery at centers doing fewer cases. The outcomes, however, were significantly better when patients are cared for in ASBS Centers of Excellence, designated by the Amer-



**The MAGNETOM Espree is the first 1.5 Tesla MR imaging unit offering “scan equity” for obese patients. It is the first 70 cm bore in MR and has a 550-pound weight limit. Espree offers at least 10 cm more vertical space than low-field, vertical-field open MR systems.**

Image courtesy of Siemens

ican Society of Bariatric Surgery. In a survey of 106 such centers, the 90-day operative mortality for a series of 33,117 centers was only 0.3 percent or three per thousand.

### What Radiologists Can Do

With no end in sight to the increasing rate of obesity in the United States, the focus session participants urged their healthcare colleagues to become more aware of the situation and factor in a person’s weight when making decisions.

They also made the audience more aware of various aspects of bariatric surgery, such as how it is performed, how a person loses weight after the surgery, expected metabolic changes and post-surgical changes in anatomy as seen on an upper GI study.

Drs. Pories and Mueller also discussed how to manage surgical complications with surgical and minimally invasive interventional techniques. □

■ To view the abstract from the Special Focus Session at RSNA 2005, go to [rsna2005.rsna.org/rsna2005/V2005/conference/event\\_display.cfm?id=66601&p\\_navID=272&em\\_id=4404459](http://rsna2005.rsna.org/rsna2005/V2005/conference/event_display.cfm?id=66601&p_navID=272&em_id=4404459). To view the abstracts from the October 19 issue of *JAMA*, go to [jama.ama-assn.org/content/vol294/issue15/index.dtl](http://jama.ama-assn.org/content/vol294/issue15/index.dtl).

# Surveys Reveal Why More Women are Not Choosing Radiology as a Specialty

LEADERS IN THE field of diagnostic radiology are working to make sure medical students choosing a specialty get a complete, accurate picture of the field. One of their top priorities is to attract more women to the profession.

Over the past decade, the number of female students attending U.S. medical schools has increased, but there has been no corresponding increase in the number of women choosing radiology as a specialty.

An Association of American Medical Colleges (AAMC) survey released in October 2005 found a significant upsurge in medical school enrollment. The 2005–2006 entering class is the largest on record with more than 17,000 first-time enrollees. The total number of medical school applicants rose 4.6 percent to 37,364.

AAMC reports that nearly half (48.5 percent) of medical students are women, but only about one-quarter (24 percent) of diagnostic radiology trainees, residents and fellows are women and only 18 percent of all post-training, professionally active radiologists are women.

In 2003, the American College of Radiology (ACR) surveyed diagnostic radiologists in the United States in an effort to, among other goals, gather important and useful information about the professional and practice characteristics of women radiologists.

“You would think radiology would be attractive to women because there is the perception that it tends to have convenient hours and there’s not nearly as much call as there would be in surgery



**Julia Fielding, M.D.**  
University of North Carolina  
School of Medicine



**Katarzyna Macura, M.D., Ph.D.**  
Johns Hopkins University  
School of Medicine

or another specialty like that,” said Mythreyi Bhargavan, Ph.D., research director for ACR.

Generally, they found that women radiologists are younger than their male counterparts and, in comparison to men radiologists, work fewer hours, perform more breast imaging work, and tend to accept salaried positions in academia rather than work in private practices.

“I am somewhat surprised that more women don’t go into radiology,”

## Top Reasons Why Women are Not Choosing Radiology as a Specialty

- **Lack of direct patient contact** (95 percent)
- **Lack of exposure to radiology** (33 percent)
- **Lack of radiologists as role models** (29 percent)

*Source: Survey released at RSNA 2005 by Julia Fielding, M.D.*

said Rebecca Lewis, M.P.H., a researcher for ACR. “The low number of women in radiology has been a topic of interest within ACR for the past several years. There are data on women radiologists from ACR’s 1995 and 2000 surveys, and our new survey will add new light to the previous data.”

The survey data are in the process of being submitted for publication next year.

## Setting the Tone for the Future

Leaders within the American Association for Women Radiologists (AAWR) say they are determined to make changes so that five years from now, the statistics tell a different story.

“Almost all female radiologists and some male radiologists say they believe more women should enter the field,” said Julia Fielding, M.D., associate pro-

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fessor of radiology at the University of North Carolina School of Medicine in Chapel Hill, and committee chair for medical student outreach with AAWR. "We need the brightest minds from both genders and there are plenty of jobs available."

Dr. Fielding presented the scientific paper, "Choosing a Specialty in Medicine: Medical Students and Radiology" at RSNA 2005 in Chicago.

For the study, Dr. Fielding surveyed 289 medical students at the completion of their third or fourth year radiology clerkships at five university-associated medical schools. Respondents ranked the most important factors in choosing a career.

Both men and women rank direct patient contact and intellectual stimulation as the most important factors influencing career decisions, Dr. Fielding reported. For those who did not consider radiology as a possible career, lack of direct patient contact was the most important factor. For women, competitiveness involved in obtaining a residency position was also important.

"Most medicals students do not get any significant exposure to radiology as a career until late in the third year or early in their fourth year, often after they've made a career choice," she said. "This year I spoke with first-year and second-year students and explained that many radiologists work with patients all the time—particularly interventional radiologists, pediatric radiologists and women's imaging specialists. They were indeed surprised because their perception was of a single person in a dark room—not very compelling."

Dr. Fielding's study squares with the feedback from other recent surveys that identified important factors in specialty choices for female medical students.

A survey of last year's graduating class at the Robert Wood Johnson Medical School in Newark, N.J.,

showed that of the students who did not consider radiology, lack of patient contact was the reason cited by all of the respondents. The researchers, radiology professor Judith Amorosa, M.D., and intern Serena McClam, M.D., found that female students also cited lack of exposure to the specialty (38 percent) and lack of radiologists as role models (25 percent) as additional reasons for not choosing radiology as a specialty.

In May 2005, AAWR held a brainstorming session during the American Roentgen Ray Society annual meeting in New Orleans. Members discussed ways to attract more women to the profession. One of the ideas involves getting more AAWR members actively involved in mentoring students.

AAWR President Katarzyna Macura, M.D., Ph.D., assistant professor of Radiology at Johns Hopkins University School of Medicine, said she thinks it's vital to establish contact with students in their first and second years of medical school.

"When radiology is taught later during the third and fourth year, we have exposure to medical students who have already decided to pursue other specialties. At this time, we kind of lose in the 'competition' of specialties. I think we simply don't want to miss the window of opportunity," she said.

#### Radiation Safety a Factor

Another important issue is radiation safety. Ewa Kuligowska, M.D., a professor of radiology at Boston University School of Medicine and AAWR past-president, heads a committee working with the Association of Program Directors in Radiology to develop a radiation safety policy addressing the concerns of pregnant residents.

At RSNA 2004, Meghan Blake, M.D., a third-year radiology resident at Boston University Medical Center, presented survey results showing that fewer than half the radiology program directors surveyed had a written policy for pregnant residents even though two-thirds reported resident concerns about the subject.

Dr. Macura believes national guidelines are necessary. "The effort will address an issue that has a much broader impact on all women in radiology, and also will help program directors handle questions, manage situa-

*Most medicals students do not get any significant exposure to radiology as a career until late in the third year or early in their fourth year, often after they've made a career choice.*

**Julia Fielding, M.D.**

tions and have answers ready based on a policy which can be applied to all trainees," she said.

The push to answer concerns and familiarize women with the field of radiology makes the specialty itself stronger and more robust, said Dr. Macura.

"By having more women in the specialty, we may see development of new models in terms of structuring the work," she explained. "Having part-time and flexible schedules may be specific needs that women have now, but by answering that need, we may restructure broader concepts of work style. That's good because workload issues are something that both men and women face. I think any solution to having a more collegial and more flexible work environment will be welcome and help radiology at large." □

■ To view the abstract for Dr. Fielding's study, go to [rsna2005.rsna.org/rsna2005/V2005/conference/event\\_display.cfm?em\\_id=4408331](http://rsna2005.rsna.org/rsna2005/V2005/conference/event_display.cfm?em_id=4408331).



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trolled" areas in or near x-ray imaging facilities, and defines the relationship of these "goals" to the NCRP effective dose limits for radiation workers and members of the public. The Report includes a detailed discussion of the recommended shielding design methodology for x-ray imaging facilities, and provides an extensive collection of shielding data and sample shielding calculations for various types of x-ray imaging facilities.

The Report is mainly intended for those individuals who specialize in radiation protection. However, it will also be of interest to architects, hospital administrators, and related professionals concerned with the planning of new facilities that use x-rays for medical imaging. 194 pp.

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This Report provides radiation protection guidance for the use of x-rays in dental practice, including advice on shielding design for dental x-ray facilities. It supersedes NCRP Report No. 35, *Dental X-Ray Protection*, which was issued in March 1970.

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Report follows Report No. 74 with the first set of criteria for medical diagnostic ultrasound exposure—criteria based on thermal mechanisms.

Report No. 113 develops quantitative guidelines based on computed upper limits to the temperature rise produced by ultrasound during medical procedures. From estimates of these upper limits for different acoustical conditions, together with information on the biological consequences of hyperthermia, result in criteria expressed in acoustical parameters. Major sections of the Report cover:

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Details not only commonly referenced structures in the musculoskeletal axis, but also areas between the joints in the extremities. 326 pp.

**Vol. III - Total Body Atlas Body**

Details not only commonly referenced structures in the chest, abdomen and pelvis, but also the brachial plexus, uterus and testes. 213 pp.

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**BOOK**

**Gamuts & Pearls Ortho MRI**

Stephen J. Pomeranz, MD

The third edition of Stephen Pomeranz's *Gamuts* text Ortho volume, completed with contributions from Timothy Jenkins, Judge King, Mark Paluszny and Eric Shields, considerably expands on the orthopedic portion of the second edition and includes many more lists and diagrams, as well as a complete index. Subdivided into shoulder, elbow, hand & wrist, hip & thigh, knee, foot & ankle, musculoskeletal system and protocols & predicaments chapters, there is a wealth of information here for the busy imager at an extremely affordable price. You'll want this volume readily at hand on your reference shelf! 396 pp.

**RSNA Member Price \$85.50**

**BOOK**

**Gamuts & Pearls Neuro MRI**

Stephen J. Pomeranz, MD and Peter J. Smith

The third edition of Stephen Pomeranz's *Gamuts* text Neuro volume was undertaken with Peter Smith. Several lists, diagrams and a full index are just a few highlights to this new addition. Subdivided into brain, spine, head & neck and protocols & predicaments chapters, there is a wealth of information here for the busy imager at an extremely affordable price. You'll want this volume readily at hand on your reference shelf! 396 pp.

**RSNA Member Price \$85.50**

**BOOK**

**The Pocket Arrhythmia Consultant**

Theodore Chow, MD

New! *The Pocket Arrhythmia Consultant* provides an overview of the management of cardiac arrhythmias. This 192-page book is designed to be

a resource for internists, general cardiologists and students. Written by a clinical electrophysiologist, this book provides more detailed coverage of arrhythmia topics than found in internal medicine texts, but focuses more directly on the practical aspects of patient management than comprehensive electrophysiology textbooks. Therefore, this book fills a void between the two extremes, which should be useful for the non-cardiac arrhythmia specialist who cares for patients with arrhythmias. 192 pp.

**RSNA Member Price \$36.00**

**BOOK**

**Teleradiology Step by Step**

John P. Mulloy, MD

This inclusive text written by John P. Mulloy and edited by Stephen J. Pomeranz with contributions by John Carrino, does what many thought undoable—encapsulates the history, development and current state of the art of teleradiology. A wealth of diagrams, tables and figures enhance the author's easy-to-read style and allow you insight into this confusing and often excessively complex subject. Included are a full index, a list of those bizarre acronyms and even current ACR standards and legal and financial issues. 278 pp.

**RSNA Member Price \$67.50**

**BOOK**

**Pitfalls and Variations**

Stephen J. Pomeranz, MD

A best-seller! The majority of the material for this text was carefully selected from more than 5,000 teaching file cases and from everyday practice (including a large number of referrals). The cases are arranged primarily on an anatomic basis by location. Diagrams and summaries are included with certain cases to emphasize key points. 595pp.

**RSNA Member Price \$148.50**

**BOOK**

**MRI of the Foot & Ankle: Pearls, Pitfalls & Pathology**

Richard J. Rolfes, MD, Stephen J. Pomeranz, MD, and Tae W. Kim, MD

Experts Richard J. Rolfes, MD, Stephen J. Pomeranz, MD and Tae W. Kim, MD, have collaborated on selecting hundreds of case-appropriate captioned images. This comprehensive reference is a clinically valuable text for any clinician who works with advanced foot and ankle imaging as a diagnostic tool or academic resource. This 200+ page text is broken down into chapters on ligaments, tendons, fractures, arthropathy, coalitions, osteochondral defects, osteonecrosis, impingement, tarsal tunnel and neural entrapment, achilles, masses, infections, plantar fasciitis and parts & accessories. Fully indexed for ease of use, the hard cover volume is built to assist readily in daily practice and study of this complex and often difficult area. 200+ pp.

**RSNA Member Price \$112.50**

Continued from previous page

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Pery Sprawls, PhD

This book first develops the very important concepts of the physical principles on which MR imaging is based and then builds an understanding of the various methods and techniques that are at the heart of each imaging procedure. Special emphasis placed on image quality and safety concerns. Learn to obtain maximum performance and benefit from the sophisticated MR technology that is available today.

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**BOOK**

**Atlas of Foot and Ankle Sonography**

Ronald S. Adler, PhD, MD, et al

Prepared by two leading experts in musculoskeletal ultrasound and a well-known podiatrist, this atlas is a complete guide to the use of ultrasound in the diagnosis of foot and ankle disorders. More than 160 illustrations display both normal ultrasound anatomy and a variety of common (and some uncommon) pathologic states. 123 pp.

**RSNA Member Price \$69.95**

**BOOK**

**The Complete Guide to Vascular Ultrasound**

Peter H. Arger MD, FAIUM, FACR, et al

This volume is a comprehensive how-to guide to ultrasound evaluation of vascular pathology. The book provides both the technical know-how and the analytical skills needed to obtain the maximum information from examinations and to accurately diagnose a given problem. 176 pp.

**RSNA Member Price \$69.95**

**BOOK**

**The Essential Physics of Medical Imaging, 2nd Edition**

Jerrold T. Bushberg PhD, et al

Developed from the authors' highly successful annual imaging physics review course, this new Second Edition gives readers a clear, fundamental understanding of the theory and applications of physics in radiology, nuclear medicine, and radiobiology. *The Essential Physics of Medical Imaging, Second Edition* provides key coverage of the clinical implications of technical principles—making this book great for board review. 960 pp.

**RSNA Member Price \$99.00**

**BOOK**

**Clinical Imaging, 4th Edition**

Ronald L Eisenberg MD, JD

Dr. Eisenberg's best seller is now in its Fourth Edition—with sharp, new CT and MRI images and expanded coverage of ultrasound. Featuring 3,700 illustrations, this atlas guides readers through the interpretation of radiographic appearances. The emphasis on pattern recognition reflects radiologists' day-to-day needs...and is invaluable for board preparation. Organized by anatomic area, the book has a convenient format that makes information very easy to follow. Tables on the left-hand pages outline conditions and characteristic imaging findings... and offer comments to guide diagnosis. Images on the right-hand pages illustrate the major findings noted in the tables. 1264 pp.

**RSNA Member Price \$179.00**

**BOOK**

**Multidetector Computed Tomography**

Elliot K Fishman, MD

Written by the acknowledged experts, this book guides practitioners through the technical aspects of multidetector computed tomography (MDCT) and its site-specific clinical applications in the chest, gastrointestinal organs, genitourinary tract, vascular system, and musculoskeletal system. More than 1,400 illustrations complement the text. 560 pp.

**RSNA Member Price \$175.00**

**BOOK**

**Orthopedic Imaging, 4th Edition**

Adam Greenspan MD, FACR

Featuring over 1,700 large-size illustrations and unique, effective pedagogy, the Fourth Edition of Dr. Greenspan's best-seller is the ideal teaching text on musculoskeletal imaging for radiologists and orthopedists at every level of training. It covers all orthopedic problems and imaging modalities and offers indispensable guidance on selecting cost-effective imaging techniques. 964 pp.

**RSNA Member Price \$229.00**

**BOOK**

**MRI: The Basics, 2nd Edition**

Ray H Hashemi MD, PhD, et al

Now in its updated Second Edition, this volume is an easy-to-read intro-

duction to the physics behind MR imaging. The subject is presented in a clear, user-friendly, clinically relevant fashion, with large-size, legible equations, over 100 images of cases to illustrate the basic principles described in the text, and questions and answers that are ideal for board review. 368 pp.

**RSNA Member Price \$49.00**

**BOOK**

**Imaging of the Airways Functional and Radiologic Correlations**

David P Naidich MD, et al

Written by recognized authorities on thoracic imaging, this volume is the first to examine all modalities—both noninvasive and invasive—for visualizing the airways. Emphasis is placed on correlating CT images with bronchoscopy, to aid in interpreting CT findings and in performing interventional bronchoscopic procedures. 272 pp.

**RSNA Member Price \$129.00**

**BOOK**

**Digital Mammography**

Etta D Pisano MD, FACR, et al

Written by recognized leaders in digital mammography, this volume is a complete guide to this new technology and its optimal clinical use. Coverage includes descriptions of current and emerging detector technologies and detailed reviews of clinical trials comparing digital mammography to screen-film mammography for both screening and diagnosis. Other chapters examine quality control procedures, discuss archiving and PACS issues, and preview future developments in computer aided detection, image processing, tomosynthesis, digital subtraction mammography, and image display. The book features a comprehensive atlas of digital mammography cases, with appropriate work-up images and pathologic diagnoses for every type of lesion. 238 pp.

**RSNA Member Price \$89.00**

**BOOK**

**Uterine Artery Embolization and Gynecologic Embolotherapy**

James B Spies MD, et al

Written by interventional radiologists and gynecologists, this volume is the first comprehensive reference on uterine artery embolization, a minimally invasive procedure for treating uterine fibroids. The first section provides a thorough understanding of uterine fibroids, pelvic anatomy, gynecologic evaluation of patients with fibroids, and pelvic and uterine imaging. The second section guides practitioners step by step through the embolization procedure, including patient selection and preparation, peri-procedural patient management, technique, choice of embolics, and pitfalls. Chapters discuss therapeutic outcomes, management of complications, and pregnancy after uterine artery embolization. The book also includes chapters on uterine

embolization for obstetrical and gynecologic hemorrhage. 224 pp.

**RSNA Member Price \$99.00**

**BOOK**

**Breast Ultrasound**

A. T Stavros MD, FACR, et al

This volume is a complete and definitive guide to performing and interpreting breast ultrasound examinations. The book explains every aspect of the examination in detail—from equipment selection and examining techniques, to correlations between sonographic and mammographic findings, to precise characterization of sonographic abnormalities. Complementing the text are more than 1,500 illustrations, including ultrasound scans, corresponding mammographic images, and diagrams of key aspects of the examination. 864 pp.

**RSNA Member Price \$179.00**

**BOOK**

**Imaging of the Newborn, Infant, and Young Child, 5th Edition**

Leonard E Swischuk MD

The new edition of this popular textbook of pediatric radiology presents a clear and concise overview of pediatric disease in the neonate, infant, and young child. Organized by organ system, each chapter covers normal anatomy and variations, congenital anomalies, and common disease processes. Many normal films are included as a basis for understanding pathology and recognizing normal variants that are easily confused with abnormal findings. New to the Fifth Edition: an appendix of differential diagnosis/summary tables for quick reference, expanded chapters on the abdomen and head, and material on 3-D imaging and HRCT. 1100 pp.

**RSNA Member Price \$199.00**

**BOOK**

**Thoracic Imaging Pulmonary and Cardiovascular Radiology**

W. R Webb MD, et al

Written by two of the world's most respected specialists in thoracic imaging, this is the most comprehensive text-reference to address imaging of the heart and lungs. Inside you'll discover the expert guidance required for the accurate radiologic assessment and diagnosis of both congenital and acquired cardiovascular and pulmonary diseases. 832 pp.

**RSNA Member Price \$170.00**

# Journal Highlights

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

## CT Colonography: Where Have We Been and Where Are We Going?

**O**VER THE past decade, CT colonography (also known as virtual colonoscopy) has slowly advanced from a research tool to a viable option for colorectal cancer screening.

Substantial controversy remains however, among radiologists, gastroenterologists and other clinicians with regard to the current role of CT colonography in clinical practice.

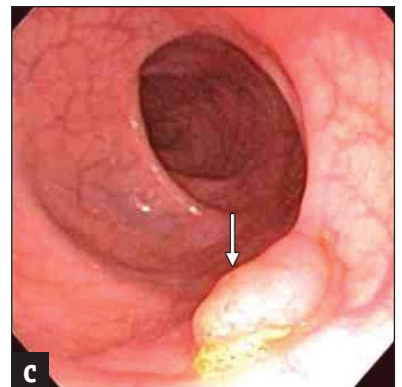
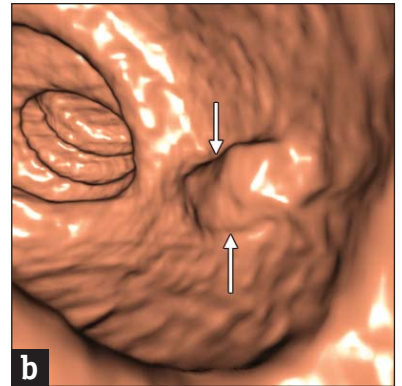
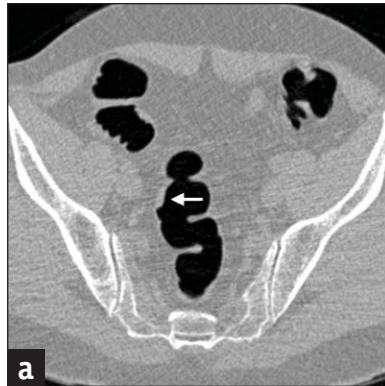
In a special review in the December issue of *Radiology* ([RSNA.org/radiologyjnl](http://RSNA.org/radiologyjnl)), Michael Macari, M.D., from New York University Medical Center,

and Edmund J. Bini, M.D., M.P.H., from the V.A. New York Harbor Healthcare System, discuss:

- Current issues regarding colon cancer
- Established and reimbursed strategies to screen for colon cancer
- Past, current and potential future role of CT colonography

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

### Radiology



### Tubular adenoma with flat morphology in the sigmoid colon in a 64-year-old man.

(a) Transverse CT image shows barely perceptible raised lesion (arrow) in sigmoid colon. Lesion measured 2 mm in height and 12 mm in width. (b) Endoluminal CT colonographic view confirms flat morphology (arrows) of lesion. (c) At conventional colonoscopy, the lesion was interpreted as flat and shows morphology (arrow) similar to that in b. Histologic evaluation demonstrated tubular adenoma.

(*Radiology* 2005;237:819-833) © RSNA, 2005. All rights reserved. Printed with permission.

## Cystic Pancreatic Lesions: A Simple Imaging-based Classification System for Guiding Management

**C**YSTIC LESIONS of the pancreas are increasingly being recognized due to the widespread use of cross-sectional imaging. CT and MR imaging are excellent modalities for the initial detection as well as the characterization of cystic pancreatic lesions.

### RadioGraphics

In an article in the November-December issue of *RadioGraphics* ([RSNA.org/radiographics](http://RSNA.org/radiographics)), Dushyant V. Sahani, M.D., and colleagues from Massachusetts General Hospital in Boston offer an imaging classification system that can help characterize cystic pancreatic

Continued on next page



### Side-branch intraductal papillary mucinous neoplasms manifesting as a unilocular cyst.

(a) Contrast-enhanced CT scan demonstrates a small cyst in the head of the pancreas (arrow). (b) Coronal oblique single-shot fast spin-echo MR cholangiopancreatogram shows communication of the cyst with the main pancreatic duct (arrow), a finding that helped establish the diagnosis.

(*RadioGraphics* 2005;25:1471-1484) © RSNA, 2005. All rights reserved. Printed with permission.

## Media Coverage of Radiology

IN OCTOBER, 87 media outlets carried news stories generated from articles appearing in *Radiology*. These stories reached an estimated 101 million people.

An article on cerebral blood flow and dementia (*Radiology* 2005;236:990-995) was carried on Voice of America radio and in *American Medical News*.

The story continued to receive coverage in regional print publica-

tions, including the *Las Vegas Sun*, *Ann Arbor News* (Mich.), *Marietta Daily Journal* (Ga.), *Albany Herald* (N.Y.), *Desert Sun* (Palm Springs, Calif.), *Daily Record* (Wooster, Ohio), *Star Press* (Muncie, Ind.), *Citizens' Voice* (Wilkes-

Barre, Pa.), *Press-Republican* (Burlington, Vt.) and *The Times* (Trenton, NJ).

Information on incidental findings at virtual colonoscopy (*Radiology* 2005;236:519-526) was covered by *RT Image*.

An article on optical imaging for breast cancer diagnosis (*Radiology* 2005;237:57-66) was carried by United Press International and trade publications, including *Women's Health Weekly* and *Cancer Weekly*. Online coverage included *cancerpage.com*, *myDNA.com*, *womenshealthmatters.com*, *cancerline.com*, *DOTmed.com*, Science Daily and Medical News Today.

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

## Cystic Pancreatic Lesions: A Simple Imaging-based Classification System for Guiding Management

*Continued from page 17*

lesions, narrow the differential diagnosis and make treatment decisions.

Discussion includes:

- Clinical presentation
- Morphologic classification (unilocular cysts, microcystic lesions, macrocystic lesions, cysts with a solid component)
- Use of endoscopic ultrasound and cyst aspiration
- Management of cystic pancreatic lesions

## RSNA MEMBER BENEFITS

# Working For You

### Editorial Fellows Visit Journal and HQ Offices

2005 William R. Eyler Editorial Fellow Deborah Levine, M.D., from Beth Israel Deaconess Medical Center in Boston, completed her fellowship this fall by spending a total of four weeks with RSNA staff in the *Radiology* office in Richmond, Va., the *RadioGraphics* office in

Bethesda, Md., and RSNA Headquarters Office in Oak Brook, Ill.

Earlier this year, Joseph P. Erinjeri, M.D., Ph.D., from the Mallinckrodt Institute of Radiology, completed his 2005 Trainee Editorial Fellowship.

Meanwhile, 2004 RSNA Editorial Fellow Giuseppe

Guglielmi, M.D., used the skills he earned during the fellowship to teach a course on the basics of radiology manuscript preparation and the principles of good clinical trial design. The course was offered three times in 2005 through the Italian Society of Medical Radiology.



Deborah Levine, M.D., meets with members of the RSNA journal production department to learn the steps for pagination and layout of *Radiology* and *RadioGraphics*. (far left) Dr. Levine with Beverly Zuk. (immediate left) Dr. Levine with Lucinda Foulke and Kathy Rosewell.



(from left) *RadioGraphics* Editor William W. Olmsted, M.D., *Radiology* Editor Anthony V. Proto, M.D., Alessandro Del Maschio, M.D., from Milan, and Giuseppe Guglielmi, M.D., from San Giovanni Rotondo, Italy.

# Working For You

## Department of Data Management



**D**ATA PROVIDE the foundation for information.

Valid data drive the development of reliable information. At RSNA, the task of managing data to ensure that membership records are valid and reliable is mainly the responsibility of the Department of Data Management.

The department focuses on three main areas—data entry and quality assurance; survey research design and analysis; and program evaluation design and analysis.

In particular, the Department of Data Management contributes to the overall success of RSNA by:

- Entering and maintaining valid data on RSNA members, including contact information, continuing medical education credits and course registration.
- Developing and administering member surveys in an effort to gather information for the expansion or creation of programs

and member benefits.

- Analyzing participant evaluation of educational programs, including the evaluation of the RSNA annual meeting.

The Department of Data Management reports to RSNA Assistant Executive Director for Research and Education Linda B. Bresolin, Ph.D., M.B.A., C.A.E.

*Working for you*

### DEPARTMENT PROFILE

(from left)

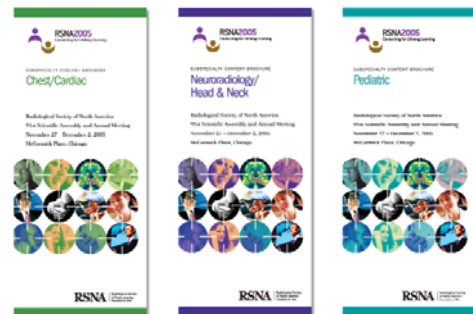
- Karen Husayko**
- Joseph Koudelik**
- Jennifer Husayko, M.A.**
- Francis Kwakwa, M.A.,** Assistant Director
- Betty Rohr,** Director
- Tawanna Barnett**
- Cindy Pan, M.S.**
- Laura Konieczny**
- Brandi Gallagher**
- Christine Piane** (not pictured)
- Suzanne Irwin-Jones**
- Linda Klein**

## Subspecialty Content Brochures

If you would like to review the content from RSNA 2005 by subspecialty, 17 brochures are available in PDF format on [rsna2005.rsna.org](http://rsna2005.rsna.org).

Click on Meeting Program in the left-hand navigation bar, then click on Subspecialty Content Brochures.

The direct link is [rsna2005.rsna.org/rsna2005/V2005/index.cvn?id=70054&p\\_navID=521](http://rsna2005.rsna.org/rsna2005/V2005/index.cvn?id=70054&p_navID=521).



If you have a colleague who would like to become an RSNA member, you can download an application at [RSNA.org/mbrapp](http://RSNA.org/mbrapp) or contact the RSNA Membership and Subscription Department at (1-877) RSNA-MEM [776-2636] (U.S. and Canada), (1-630) 571-7873 or [membership@rsna.org](mailto:membership@rsna.org).

# RSNA Research Scholarship Called Career “Turning Point”

Over the years, the RSNA Research Scholar Grant, awarded through the RSNA Research & Education Foundation, has launched many promising research careers.

For most, the program is their first introduction to grant writing and the rigors and complexities of research. Whether the research leads to successful new techniques or simply disproves the original hypothesis, recipients report that the program provides them with the skills and experience they need to move forward confidently and successfully in their chosen careers.

David F. Kallmes, M.D., an associate professor of radiology and neurosurgery at the Mayo Clinic in Rochester, Minn., is no exception.

“The RSNA Research Scholar Grant was a turning point in my academic career,” said Dr. Kallmes, who completed his RSNA grant nearly eight years ago. “It was my first grant and it was the beginning of a very productive academic career.”

Dr. Kallmes, an expert in neuroendovascular therapy and the biological modification of endovascular embolization devices, earned his undergraduate degree in chemical engineering from Virginia Polytechnic Institute and his medical degree from the University of Massachusetts. He completed a residency in diagnostic radiology at Duke University Medical School and a fellowship in neuroradiology at the University of Virginia where he joined the staff in 1995.

Dr. Kallmes said his research goal in 1997 was to develop an endovascular gene therapy strategy for the treatment of malignant meningiomas.

Meningiomas, which are the most common of intracranial tumors,



David F. Kallmes, M.D., (far right) and his colleagues in the laboratory at the Mayo Clinic. (front row, from left) YongHong Ding, M.D., Daying Dai, M.D., and Leigh Gray, C.C.R.A. (back row, from left) Ramanathan Kadirvel, Ph.D., Mark Danielson, Ph.D., Debra Lewis, Ph.D., and Dr. Kallmes.

account for 20 percent of intracranial neoplasms. At the time of Dr. Kallmes’ research, the primary mode of therapy for meningiomas had been surgical resection; however, depending on the location of the tumor, recurrence rates were as high as 23 percent.

Dr. Kallmes’ plan was to use the latest breakthroughs in technology and gene therapy to infect and kill tumors without harming the healthy surrounding tissue. To be more specific, he used microcatheters to implant VX2 tumors into rabbits and then attempted to transfect the tumors with genetic information using viruses.

Unfortunately, the endothelium proved to be a formidable barrier and despite numerous trials with multiple techniques and variations on dwell time, pressure and profusion, Dr.

Kallmes was unable to transfect the tumors using an endovascular approach.

“There are isolated success stories in gene therapy, but if you look at the degree of the buzz that was generated in 1997, when I wrote the grant, to

what has come to fruition in the field of gene therapy, it’s really quite disappointing,” said Dr. Kallmes, who believes his original idea is still viable. “It’s just not time yet.”

Nevertheless, Dr. Kallmes said the RSNA experience proved extremely valuable to his career and taught him the ins and outs of animal research. In recent years, he has received three grants from the National Institutes of Health (NIH) as principal investigator. He has also worked as co-investigator on numerous other grants for animal



FOUNDATION  
LOOK FORWARD GIVE BACK

and clinical research.

In 2002, Dr. Kallmes moved to the Mayo Clinic and shifted his focus from gene therapy to aneurysm research. Today, he runs a large laboratory where he splits his time between research and patient care.

“David is one of our stars,” said Stephen J. Swensen, M.D., professor and chair of the Department of Radiology at the Mayo Clinic College of Medicine. “In fact, he was recognized for his accomplishments with the 2005 Mayo Clinic Carman Award for Excellence in Research. This is a guy who can run a marathon in a world-class two-and-a-half hours and has a research scholarship record to match.”

On the research side of his career, Dr. Kallmes said he has two lives. “First, I have a lab research life that is focused on saccular aneurysms of the

brain. I have NIH funding to study the physiology of aneurysms using a new model of saccular aneurysms we developed in rabbit models in hopes of gaining useful insight into when and why aneurysms rupture,” he said.

His second research life is an NIH-funded clinical research program looking at the efficacy of vertebroplasty. In addition, Dr. Kallmes has recently taken another crack at gene therapy with a project looking at whether implanting genetically engineered cells into aneurysms will improve healing.

In addition to the RSNA Research Scholar Grant, Dr. Kallmes credits much of his success to those who have mentored him along the way and encouraged him to remain focused and motivated.

He said he now enjoys working with young researchers and passing

along the lessons he has learned.

“Dave was quite possibly the brightest, most inquisitive research trainee I ever mentored,” said Bruce J. Hillman, M.D., a professor of radiology at the University of Virginia. “He literally soaked up knowledge then applied it in novel ways to generate his own research. There was never any doubt that he eventually would become a leader in imaging research as it progressed into the molecular era.”

Dr. Kallmes said he intends to “continue working in this vein, pardon the pun” as long as he continues receiving the necessary grant money to develop new, innovative solutions to today’s healthcare challenges. □

*[My RSNA Research Scholar Grant] was my first grant and it was the beginning of a very productive academic career.*

David F. Kallmes, M.D.

## EDUCATION RESEARCH

# Program and Grant Announcements

## Registration Open for BIROW 4

February 24–25, 2006 • Bethesda North Marriott Hotel & Conference Center, North Bethesda, Md.

**P**OSTER ABSTRACTS are being accepted until December 12, 2005, for the fourth Biomedical Imaging Research Opportunities Workshop (BIROW 4). The goal of the workshop is to identify and explore new opportunities for basic science research and engineering development in biomedical imaging, as well as related diagnosis and therapy.

This year’s topics include:

- Instrumentation for Rodent Research
- Role of Imaging in Drug Development
- Imaging of Chronic Metabolic Disease: Diabetes
- Image-Guided Therapy in the 4th Dimension—Time

AMA PRA category 1 continuing medical education (CME) credits and medical physics continuing education

credits (MPCEC) are available. For program information or to register, go to [www.birow.org](http://www.birow.org).

BIROW 4 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.



For more information on R&E Foundation grants, go to [RSNA.org/Foundation/programs.cfm](http://RSNA.org/Foundation/programs.cfm)

### REMINDER: RSNA Research & Education Grant Deadlines

- Education Grants: January 10
- Research Grants: January 15

For more information, go to [RSNA.org/foundation](http://RSNA.org/foundation) or contact Scott Walter at (1-630) 571-7816 or [swalter@rsna.org](mailto:swalter@rsna.org).



# Research & Education Foundation Donors

THE BOARD OF TRUSTEES of the RSNA Research & Education Foundation and its recipients of research and education grant support gratefully acknowledge the contributions made to the Foundation between **September 29 – November 4, 2005.**

For more information on Foundation activities, go to [RSNA.org/foundation](http://RSNA.org/foundation).

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Bronze level

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## Several Small Steps Can Reduce Radiation Dose from Survey Scans

Continued from page 7

By changing the default scan parameters from 120 kVp to 80 kVp and the tube position from 0° (tube above table) to 180° (tube below table), the entrance exposure for the survey CT scan was reduced to less than that of one chest radiograph for all CT scanners.

“The table becomes a mini-shield and the image quality doesn’t change at all. This new positioning also decreases the radiation dose to the breast, particularly in young women,” Dr. Cody said.

She is now urging all medical facilities to check the default settings to make sure they are as low as possible while maintaining good image quality.

She also recommends that in cases where the survey scan is used only to help radiologic technologists set up landmarks for the full CT scan and the radiologist doesn’t need to look at

image, radiologic technologists should dial down the radiation levels to the absolute minimum.

### Practice What You Preach

During the course of the research, Dr. Cody said some modifications were

*We thought it was time to look at the amount of radiation in a survey scan and see what we could do to lower it.*

**Dianna D. Cody, Ph.D.**

made at M.D. Anderson. “We have implemented changes in our pediatric CT protocols. Normally, radiologists are hesitant about changes, but the new protocol has been in effect for more than a year and we have not heard even one complaint,” she said.

It is important to note that Dr. Cody is not claiming a huge reduction in radiation. “This is just one part of the overall drive to reduce radiation exposure,” she said.

Donald Frush, M.D., chief of pedi-

atric radiology at Duke University Medical Center in Durham, N.C., said the study signifies the importance of looking at all facets of CT scans. “It’s worthwhile to present scientific data that give the opportunity to reduce radiation dose. It shows people in radiology are paying attention to and understanding the need to be economical with respect to radiation dose,” he said.

Dr. Frush said the information from this study should be used in global CT dose reduction strategies. He also warned that people need to understand that dose savings from a modified survey scan would be erased if the CT scan is performed needlessly or if inappropriately high settings, in tube current or peak kilovoltage, are used. □

### Steps to Reduce Radiation Dose from Survey Scans

- Check the default settings, reduce if necessary
- Change the position of the x-ray tube
- Dial down the radiation levels in scans for position only

■ To read the full-text article, “Reducing Radiation Exposure from Survey CT Scans,” go to [www.ajronline.org/cgi/content/full/185/2/509](http://www.ajronline.org/cgi/content/full/185/2/509).

# Product News

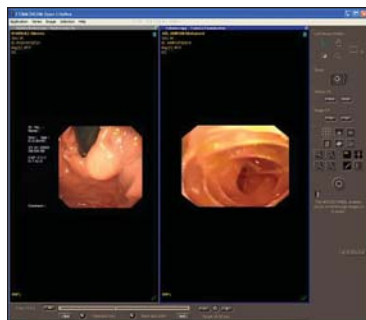
## NEW PRODUCT

### Portable Image Display

**M**CKESSON (*infosolutions.mckesson.com*) is offering the Horizon Rad Station eJacket, a portable image display that enables quick access to exam results using a secure Web browser.

eJacket provides referring

physicians with portable access to diagnostic imaging information for the studies they ordered for their patients. This information includes HIPAA-compliant reports with embedded flagged images, scanned documents, voice clips, or the entire image set.



## FDA CLEARANCE

### PACS Applications

ETIAM (*www.etiam.com*) has received FDA clearance for a comprehensive line of DICOM software components that make it possible to build scalable, departmental PACS solutions.

The applications provide for image management, workflow automation and connectivity. They include the DICOM Izer for capturing and converting still and video images; the DICOM StaR, which provides for departmental storage, intelligent routing and online access to images and video files; and OPEN LiteBox, a multi-modality enterprise DICOM image viewer with powerful navigation, manipulation and reconciliation features.

## NEW PRODUCT

### Image-Guided Radiation Therapy

Philips Medical Systems (*www.philips.medical.com*) has introduced AcQSim3, the only commercially available CT simulation system with absolute marking.

AcQSim3 includes Syntegra image fusion and incorporates CT, MR, PET and SPECT to help provide a more accurate definition of a patient's tumor.

"Philips is committed to providing customers with leading-edge oncology solutions,

including image-guided radiation therapy (IGRT)," said Keith Tipton, general manager of oncology systems for Philips Medical Systems. "To us, IGRT is not just about images taken in the treatment room, but more importantly, it means increased tumor definition and accuracy in simulation and planning on the front end of the process, and therapy monitoring throughout the course of care."

## NEW PRODUCT

### CT Injector Reporting Information System

E-Z-EM, Inc. (*www.ezem.com*) has launched IRiSCT™ Injector Reporting Information System, a new concept in CT suite management.

IRiSCT is a patent-pending software package that automates the data collection process for all critical functions of EmpowerCT® and Empower CTA® injectors. IRiSCT also links all Empower injectors in a department across the hospital's existing data network, including those in remote locations, creating an integrated data management system that radiology administrators can access from the convenience of their offices.



"IRiSCT transforms the CT injector into an intelligent appliance, and integrates the device into the image and information management systems now reshaping radiology. With IRiSCT, one of the last remaining data sources in the CT suite will now be integrated into the radiology management workflow environment," said Anthony A. Lombardo, president and CEO of E-Z-EM.

# News about RSNA 2006

## Submit Abstracts for RSNA 2006

It's not too early to think about submitting an abstract for RSNA 2006. The online abstract submission system will be activated in January. The deadline is April 15, 2006.

Abstracts are required for scientific papers, scientific posters, education exhibits and *infoRAD* exhibits.

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

The online system is easy to use and makes it more efficient for the Scientific Program Committee to evaluate submissions.

For more information about the abstract submission process, contact RSNA at (1-877) 776-2227 within the United States or (1-630) 590-7774 outside of the United States.

## RSNA 2005 – Scientific Abstracts Accepted by Country

### North America

|               |     |
|---------------|-----|
| Canada        | 54  |
| United States | 778 |
| ASTRO*        | 127 |

### International

|                  |     |                |     |
|------------------|-----|----------------|-----|
| Argentina        | 2   | Ireland        | 14  |
| Australia        | 4   | Israel         | 20  |
| Austria          | 17  | Italy          | 120 |
| Belgium          | 20  | Japan          | 165 |
| Brazil           | 15  | Netherlands    | 47  |
| China            | 124 | Norway         | 3   |
| Croatia          | 1   | Poland         | 6   |
| Czech Republic   | 1   | Portugal       | 1   |
| Denmark          | 1   | Qatar          | 3   |
| Egypt            | 9   | Russia         | 4   |
| Finland          | 2   | South Korea    | 111 |
| France           | 57  | Spain          | 18  |
| Georgia, Rep. of | 1   | Sri Lanka      | 3   |
| Germany          | 231 | Sweden         | 8   |
| Greece           | 10  | Switzerland    | 18  |
| Hong Kong        | 1   | Taiwan ROC     | 3   |
| Hungary          | 1   | Turkey         | 13  |
| India            | 3   | Ukraine        | 4   |
|                  |     | United Kingdom | 63  |

Total North America . . . 959

Total International . . . . . 1,124

\*Abstracts transferred from the American Society for Therapeutic Radiology and Oncology

TOTAL . . . . . 2,083



RSNA 2005 offered more than 1,200 education exhibits, including computer exhibits in five subspecialties. (above) Attendees review the award-winning education exhibit, CT in Art Work Appraisal, at RSNA 2004.



**RSNA** | **2006**  
Strengthening  
Professionalism

## What Does the Logo Symbolize?

THE RSNA 2006 logo depicts two people firmly grasping the staff of Aesculapius.

In Greek mythology, Aesculapius was a Greek healer and a famous physician. He was the most important among the Greek gods and heroes who were associated with health and curing disease. The staff of Aesculapius, with a coiled serpent, became the traditional symbol of medicine.

Today it represents the modern medical profession and is a symbol of health and wisdom.

For RSNA 2006, the staff continues to represent health and wisdom, along with the belief that if physicians and healthcare workers unite, the profession will be stronger and patient care will be of even higher quality.

## Important Dates for RSNA 2006

|                            |  |
|----------------------------|--|
| <b>April 15</b>            | Deadline for abstract submission                 |
| <b>April 24</b>            | RSNA/AAPM member registration and housing opens  |
| <b>May 22</b>              | Non-member registration and housing opens        |
| <b>June 19</b>             | Refresher course enrollment opens                |
| <b>Nov. 10</b>             | Final advance registration deadline              |
| <b>Nov. 26–<br/>Dec. 1</b> | RSNA 92nd Scientific Assembly and Annual Meeting |

# RSNA 2006 Exhibitor News

## Exhibitor Survey

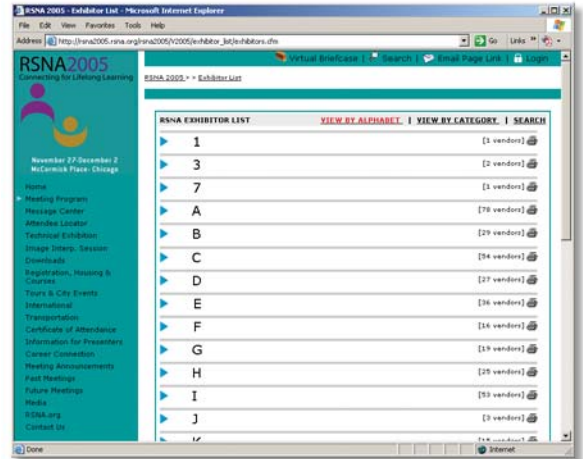
RSNA 2005 exhibitors should have received their Exhibitor Survey. Please complete this survey and return it to RSNA. Exhibitor feedback is very important for the continued success of the annual meeting and improving the experience for all those attending the meeting.

## Exhibitor Meeting

All RSNA 2005 exhibitors are invited to attend the RSNA 2006 Exhibitor Planning Meeting on February 28 at Rosewood Restaurants and Banquets near O'Hare International Airport. The meeting is intended to review RSNA 2005 and plan for RSNA 2006. More information will be sent to each exhibitor's official contact in mid-January.

## Important Exhibitor Dates for RSNA 2006

|                       |  |
|-----------------------|--|
| <b>Feb. 28</b>        | Exhibitor Planning Meeting                       |
| <b>April 13</b>       | Exhibitor Prospectus Mails                       |
| <b>June 27</b>        | Exhibitor Planning/Booth Assignment Meeting      |
| <b>July 5</b>         | Technical Exhibitor Service Kit Available Online |
| <b>Nov. 26–Dec. 1</b> | RSNA 92nd Scientific Assembly and Annual Meeting |



## Online Exhibitor List

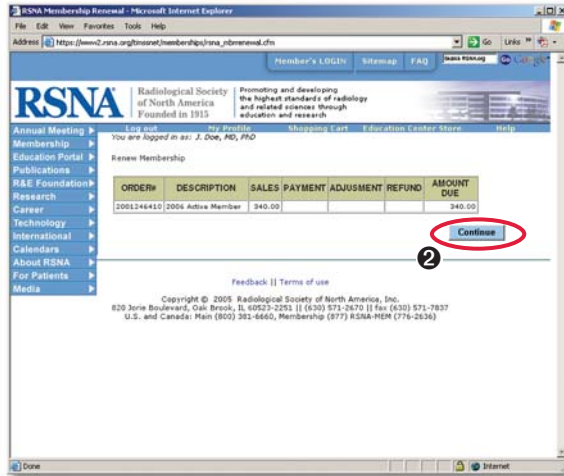
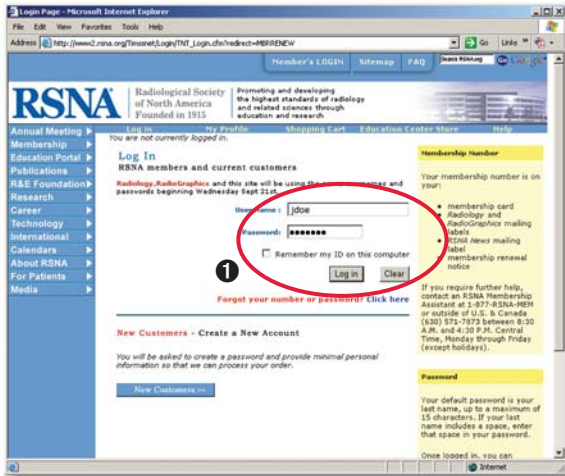
**D**ETAILED information about the technical exhibitors at RSNA 2005 will be available online until September 2006.

Go to [rsna2005.rsna.org](http://rsna2005.rsna.org) and click on Exhibitor List on the right-hand side of the page. You can search by company name, category or keyword.



■ For more information, contact RSNA Technical Exhibits at (1-800) 381-6660 x7851 or [exhibits@rsna.org](mailto:exhibits@rsna.org).

# RSNA.org



## Renew Your RSNA Membership Online

**Y**OU CAN PAY YOUR 2006 RSNA membership dues quickly and easily online.

Because online access to *Radiology* and *RadioGraphics* is tied to membership status, if your payment has not been received by December 31, 2005,

your online subscriptions will be automatically inactivated.

To pay your dues online, go to [RSNA.org/renew](http://RSNA.org/renew) and enter your user name and password. ❶ Review your membership renewal order and click Continue to proceed. ❷

For more information or to renew by phone, contact the RSNA Membership and Subscriptions Department toll free at (1-877) RSNA-MEM or at (1-630) 571-7873, or send an e-mail to [membership@rsna.org](mailto:membership@rsna.org).

## OTHER WEB NEWS

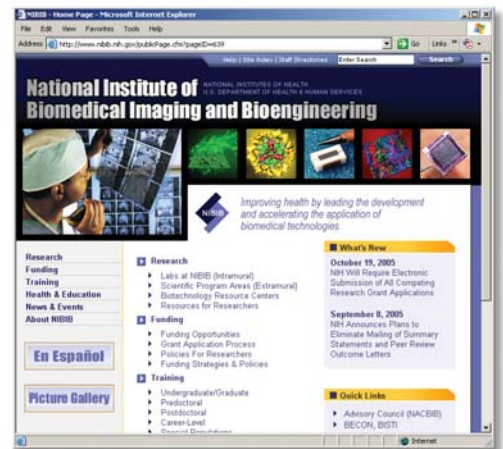
### NIBIB Launches New Web Site

The Web site of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) has a new format and fresh appearance.

The site, at [www.nibib.nih.gov](http://www.nibib.nih.gov), contains more patient-oriented information on technology-based medical procedures and expanded information for prospective and current grantees.

“The Internet is an integral part of NIBIB’s plan to communicate mission-

related activities, timely information, and accomplishments to researchers, advocacy groups, students, media, and the general public,” said institute director Roderic I. Pettigrew, Ph.D., M.D. “In addition to extensive online information, it also serves as a showcase for NIBIB grantees, whose work is featured in the e-advance section and whose stunning visuals are compiled in a picture gallery and used throughout the site.”



## Connections

Your online links to RSNA

[RSNA.org](http://RSNA.org)

### Radiology Online

[RSNA.org/radiologyjnl](http://RSNA.org/radiologyjnl)

### Radiology Manuscript Central

[RSNA.org/radiologyjnl/submit](http://RSNA.org/radiologyjnl/submit)

### RadioGraphics Online

[RSNA.org/radiographics](http://RSNA.org/radiographics)

### RSNA News

[rsnanews.org](http://rsnanews.org)

### Education Portal

[RSNA.org/education](http://RSNA.org/education)

### CME Credit Repository

[RSNA.org/cme](http://RSNA.org/cme)

### CME Gateway

[CMEgateway.org](http://CMEgateway.org)

### RSNA Medical Imaging Resource Center

[RSNA.org/mirc](http://RSNA.org/mirc)

### RSNA Career Connections

[RSNA.org/careers](http://RSNA.org/careers)

### RadiologyInfo™

RSNA-ACR patient information Web site  
[radiologyinfo.org](http://radiologyinfo.org)

### RSNA Press Releases

[RSNA.org/media](http://RSNA.org/media)

### RSNA Online Products and Services

[RSNA.org/member/services](http://RSNA.org/member/services)

### RSNA Research & Education Foundation

Make a Donation  
[RSNA.org/donate](http://RSNA.org/donate)

### Community of Science

[RSNA.org/cos](http://RSNA.org/cos)

### Membership Applications

[RSNA.org/mbrapp](http://RSNA.org/mbrapp)

### RSNA Membership Directory

[RSNA.org/directory](http://RSNA.org/directory)

### RSNA 2005

[rsna2005.rsna.org](http://rsna2005.rsna.org)

### NEW

### RSNA 2006

[rsna2006.rsna.org](http://rsna2006.rsna.org)

# Medical Meetings

## January – May 2006

**JANUARY 7-13**

**RSNA Clinical Trials Methodology Workshop, J.W. Marriott Desert Ridge Resort, Scottsdale, Ariz.**  
 • [RSNA.org/research/educational\\_courses.cfm](http://RSNA.org/research/educational_courses.cfm)

**JANUARY 19-21**

Radiation Therapy Oncology Group (RTOG), Annual Meeting, Fontainebleau Hilton Resort, Miami Beach, Fla. • [www.rtog.org](http://www.rtog.org)

**JANUARY 30-FEBRUARY 1**

European Society of Gastrointestinal and Abdominal Radiology (ESGAR), 4th Hands-on Workshop on CT-Colonography, Roxburghe Hotel, Edinburgh, United Kingdom • [www.esgar.org](http://www.esgar.org)

**FEBRUARY 1-5**

Sociedad Mexicana de Radiología e Imagen (SMRI), 40th Annual Course of Radiology and Imaging, Sheraton Centro Histórico Hotel, Mexico City • [www.smri.org.mx](http://www.smri.org.mx)

**FEBRUARY 24-25**

4th Biomedical Imaging Research Opportunities Workshop (BIROW 4), Bethesda North Marriott, Bethesda North, Md.  
 • [www.birow.org](http://www.birow.org)

**MARCH 3-7**

European Congress of Radiology (ECR), ECR 2006, Austria Center Vienna • [www.myeocr.org](http://www.myeocr.org)

**MARCH 12-15**

3rd International Conference on Translational Research (ICTR Congress) and Pre-Clinical Strategies in Radio-Oncology, Conference Center - Palazzo Congressi, Lugano, Switzerland  
 • [www.iosi.ch/ictr2006.html](http://www.iosi.ch/ictr2006.html)

**MARCH 19-24**

World Federation of Neuroradiological Societies (WFNRS), XVIII Symposium Neuroradiologicum, Adelaide Convention Centre, Adelaide, South Australia • [www.snr2006.sa.gov.au](http://www.snr2006.sa.gov.au)

**MARCH 23-26**

American Institute of Ultrasound in Medicine (AIUM), 2006 Annual Convention, Marriott Wardman Park, Washington, D.C.  
 • [www.aium.org](http://www.aium.org)

**MARCH 25-29**

Academy of Molecular Imaging (AMI), 2006 Annual Conference, Graylord Palms Resort & Convention Center, Orlando  
 • [www.ami-imaging.org](http://www.ami-imaging.org)

**MARCH 30-APRIL 4**

Society of Interventional Radiology (SIR), 31st Annual Scientific Meeting, Metro Toronto Convention Center, Ontario, Canada • [www.sirweb.com](http://www.sirweb.com)

**APRIL 4**

Molecular Biology for Imagers, National Institutes of Health (NIH)/Association of University Radiologists (AUR), Hilton Austin, Texas • [www.aur.org](http://www.aur.org)

**APRIL 5-8**

AUR 54th Annual Meeting, Hilton Austin, Texas • [www.aur.org](http://www.aur.org)

**APRIL 7-9**

Japan Radiological Society (JRS), 65th Annual Meeting, Yokohama, Japan • [www.radiology.or.jp/english/index.html](http://www.radiology.or.jp/english/index.html)

**APRIL 10-12**

International Electronic Portal Imaging Workshop, EPI2K6, Carlton Crest Hotel and Conference Centre, Melbourne, Australia • [www.epi2k6.org.au](http://www.epi2k6.org.au)

**APRIL 20-23**

São Paulo Radiological Meeting, ITM Expo Convention Center, São Paulo, Brazil • [www.spr.org.br](http://www.spr.org.br)

**APRIL 27-30**

Society for Computer Applications in Radiology (SCAR), Annual Meeting, Hilton Austin Hotel & Austin Convention Center, Texas • [www.scarnet.org](http://www.scarnet.org)

**APRIL 28-30**

American College of Radiology (ACR), National Conference on Breast Cancer, Manchester Grand Hyatt, San Diego  
 • [www.acr.org](http://www.acr.org)

**APRIL 29-MAY 5**

American Society of Neuroradiology (ASNR), 44th Annual Meeting, San Diego Convention Center, Calif. • [www.asnr.org](http://www.asnr.org)

**APRIL 30-MAY 5**

American Roentgen Ray Society (ARRS), 106th Annual Meeting, Vancouver Convention and Exhibition Centre, British Columbia, Canada • [www.arrs.org](http://www.arrs.org)

**NOVEMBER 26-DECEMBER 1**

**RSNA 2006, 92nd Scientific Assembly and Annual Meeting, McCormick Place, Chicago • [rsna2006.rsna.org](http://rsna2006.rsna.org)**

**RSNA**News

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